

Sex, Race, and Ethnic Diversity of U.S. Health Occupations (2011-2015)

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Key Findings

- Female workers represent the majority in 25 of the 30 U.S. health occupations analyzed here.
- There is considerable variation in racial and ethnic diversity by occupational groups.
- All minority groups, except Asians are underrepresented in *Health Diagnosis and Treating* occupations.
- Hispanics, Asians and Native Hawaiian/Pacific Islanders are underrepresented among Counselors and Social Workers (*Community and Social Service* occupation).
- *Personal Care and Service Occupations* is the most diverse occupational group, followed by occupations belonging to the *Healthcare Support* group.

Background

Health Resources and Service Administration’s (HRSA) primary mission is to improve health and achieve health equity through access to quality services, a skilled health workforce and innovative programs.¹ One key component of this mission is to strengthen the health workforce to meet the needs of an increasingly diverse U.S. population.^{2,3,4} Ensuring the nation has a diverse health workforce—especially in terms of male/female representation, as well as cultural and linguistic representation--is strategically essential, as

¹ About HRSA from <https://www.hrsa.gov/about/index.html>.

² COGME report ([Link](#)) “Supporting Diversity in the Health Professions.”
<https://www.hrsa.gov/advisorycommittees/bhpradvisory/cogme/Publications/diversityresourcepaper.pdf>

³ U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions. (2006). The rationale for diversity in the health professions: A review of the evidence. Retrieved from <http://bhpr.hrsa.gov/healthworkforce/reports/diversityreviewevidence.pdf>

⁴ Wakefield M. Improving the Health of the Nation: HRSA’s Mission to Achieve Health Equity. Public Health Reports. 2014;129(Suppl 2):3-4.

it has been shown to improve patient satisfaction, patient-clinician communication, and access to care for patient belonging to minority populations.^{2,3,4}

The purpose of this brief is to provide an update to HRSA's 2015 report⁵ on the distribution of sex, and race/ethnicity,⁶ among 30 health occupations in the U.S. using 2011-2015 American Community Survey (ACS) data. These health occupations are grouped into six categories according to the 2010 Standard Occupational Classification (SOC) system⁷, which is used by federal statistical agencies to classify workers into occupational categories for the purpose of data collection and analysis. (Exhibit 1). The ACS survey reports the sex of an individual as either male or female and this brief will follow the ACS format and use the term sex to refer to male or female.

Diversity in health occupations is measured by the representation of minority groups in a health occupation relative to their representation in the U.S. workforce. A lower representation of racial and ethnic group members in a health occupation relative to their numbers in the general population signifies that the racial or ethnic group is underrepresented in the occupation. The *U.S. workforce* is defined as those who are 16 years or older, and are currently employed or seeking employment. The 30 health occupations presented in this brief represent 10 percent of the nation's workforce.

Not all components of the health workforce are included or fully represented in this brief. Occupations on which data are not collected, or reported separately, by the U.S. Census Bureau are excluded. For example, data for public health nurses are not collected separately from other types of nurses. The brief also does not include some other important health occupations because of the small sample size. These include public-health oriented disciplines including epidemiologists, laboratorians and environmental health professionals.

⁵ U.S. Department of Health and Human Services, Health Resources and Services Administration, National Center for Health Workforce Analysis. Sex, Race, and Ethnic Diversity of U.S. Health Occupations (2010-2012), Rockville, Maryland; 2014. <https://bhwh.hrsa.gov/sites/default/files/bhw/nchwa/diversityushealthoccupations.pdf>

⁶ Race/ethnic categories are Hispanic (regardless of race) non-Hispanic White, non-Hispanic Black/African-American, non-Hispanic Asian, non-Hispanic American Indians and Alaska Natives, non-Hispanic Native Hawaiians and Other Pacific Islanders, and non-Hispanic Multiple/Other Race. The race/ethnicity categories are consistent with OMB regulations. For further details see the technical documentation at <https://bhwh.hrsa.gov/sites/default/files/bhw/nchwa/diversityushealthoccupationstechnical.pdf>.

⁷ <https://www.bls.gov/soc/>

Exhibit 1. U.S. Health Occupations

Occupation Categories ¹	Occupations
Community and Social Services	Counselors -Social Workers
Life, Physical, and Social Sciences	-Psychologists
Health Diagnosing and Treating Practitioners	-Advanced Practice Registered Nurses ² -Chiropractors -Dentists -Dietitians and Nutritionists -Optometrists -Pharmacists -Physicians -Physician Assistants -Occupational Therapists -Physical Therapists -Respiratory Therapists -Speech-Language Pathologists -Registered Nurse
Health Technologists and Technicians	-Dental Hygienists -Diagnostic Related Technologists and Technicians -Emergency Medical Technicians (EMTs) and Paramedics -Health Practitioner Support Technologists and Technicians -Licensed Practical/Vocational Nurses -Medical and Clinical Laboratory Technologists and Technicians -Medical Records and Health Information Technicians -Opticians, Dispensing
Healthcare Support	-Dental Assistants -Massage Therapists -Medical Assistants -Nursing, Psychiatric and Home Health Aides -Physical Therapist Assistants and Aides
Personal Care and Services	-Personal Care Aides

Notes: ¹Occupations are titled and grouped as in U.S. Government's SOC system.

²Advanced Practice Registered Nurses include Nurse Anesthetist, Midwives, and Nurse Practitioners.

Findings

Sex

The data presented in Table 1 show the distribution by sex of the U.S. workforce among the 30 identified health occupations. Although males represent a larger proportion of the U.S. workforce (52.8 percent), females represent the majority in 25 of the 30 health occupations. However, women are underrepresented in 4 *Health Diagnosing and Treating Practitioners* occupations: Dentists (27.4 percent), Chiropractors (28.2 percent), Physicians (34.9 percent), and Optometrists (40.1 percent). Women are also underrepresented in 2 *Health Technologists and Technicians* occupations: Emergency Medical Technicians (EMT) and Paramedics (31.5 percent). Men have the lowest representation among Dental Hygienists (3.6 percent), Speech–Language Pathologists (4.0 percent), and Dental Assistants (5.4 percent).

Race and Ethnicity

Whites make up the majority of the U.S. workforce (64.4 percent) compared to Hispanics (16.1 percent), Blacks or African Americans (11.6 percent), Asians (5.3 percent), and individuals reporting Multiple and Other races (1.8 percent). American Indians and Alaska Natives, and Native Hawaiians and Other Pacific Islanders represent less than 1 percent of the U.S. workforce (0.6 percent and 0.2 percent, respectively). Table 2).

As in the U.S. workforce as a whole, White workers represent the majority component of all 30 health occupations studied, representing over 50 percent of workers in almost every occupation. Compared to their representation in the U.S. workforce, Whites are overrepresented in 23 of the 30 occupations. However, the representation of racial and ethnic minority groups varies by occupational Categories. The racial and ethnic diversity in each health occupation group is discussed below.

Community and Social Service Occupations

Counselors are professionals that provide counseling to individuals, couples, families and groups with issues including substance abuse, mental health disorders, parenting concerns and

relationship problems. Professional counselors must have a master's degree in counseling in most states, but the licensure requirements vary by state. Social workers help people solve and cope with problems in their everyday lives. One group of social workers—clinical social workers—also diagnose and treat mental, behavioral, and emotional issues. Although most social workers need a bachelor's degree in social work, clinical social workers must have a master's degree and 2 years of post-master's experience in a supervised clinical setting. Clinical social workers must be licensed in the state in which they practice.⁸

Among Counselors and Social Workers, Hispanics, Asians, and American Indians and Alaska Natives are underrepresented. On the other hand, Blacks have nearly twice their representation in these occupations (Counselor 18.8 percent; Social Workers 21.5 percent) compared to their representation in the U.S. workforce. The proportion of White workers reflects their overall contribution in the national workforce.

Life, Physical, and Social Sciences, Health Diagnosing and Treating Practitioners, and Health Technologists and Technicians Occupations

Occupations in the *Life, Physical, and Social Sciences* and *Health Diagnosing and Treating Practitioners* groups often require many years of education and training. Whites are heavily concentrated in the *Life, Physical, and Social Sciences* and *Health Diagnosing and Treating Practitioners* occupations. For example, Whites constitute almost 84 percent of the Psychologist workforce. Hispanics (6.3 percent), Blacks (4.9 percent), Asians (3.4 percent) and American Indians and Alaska Natives (0.2 percent) all have a substantially lower representation among Psychologists than in the U.S. workforce.

Hispanics are significantly underrepresented in all of the occupations in *Health Diagnosing and Treating Practitioners* occupations. Among Non-Hispanics, Blacks are underrepresented in all occupations, except among Dietitians and Nutritionists (15.0 percent), and Respiratory Therapists (12.8 percent). Asians are underrepresented Speech–Language Pathologists (2.2 percent), and Advanced Practice Registered Nurses (APRN) (4.1 percent). American Indians and Alaska Natives, are underrepresented in all occupations except Physician Assistants, and have the lowest

⁸ <https://www.bls.gov/ooh/community-and-social-service/social-workers.htm>

representation among Physicians and Dentists (0.1 percent in each occupation). To the extent it can be reliably reported, data also show that Native Hawaiians and Other Pacific Islanders are underrepresented in all occupations in *Health Diagnosing and Treating Practitioners* group. Individuals reporting Multiple or Other race have lower representation in eight of the occupations in this group. Multiple or Other race individuals have the lowest representation among speech language pathologist (1.0 percent), occupational therapists (1.1 percent), and APRNs (1.3 percent).

When compared to the racial/ethnic distribution of the U.S. workforce, minority groups are underrepresented in many of the occupations in the *Health Technologists and Technicians* category. Hispanics are underrepresented in all occupations in this group; Blacks are underrepresented in four occupations (Dental Hygienists, 3.1 percent; Dispensing Opticians, 5.5 percent; EMT paramedics, 6.3 percent; and Diagnostic Related Technologists and Technicians, 7.8 percent). Asians are underrepresented in all but two occupations in the group: Medical and Clinical Laboratory Technologists and Technicians (11.8 percent) and Health Practitioner Support Technologist and Technicians (6.9 percent). American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and individuals reporting Multiple Race are underrepresented in three to five occupations in this group. Whites on the other hand, are overrepresented in all occupations in this group except among Licensed Practical/Vocational Nurses (60.8 percent) and Medical/Clinical Laboratory Technologists and Technicians (62.0 percent).

Healthcare Support and Personal Care and Services Occupations

In contrast to other occupational groups, minority groups are well represented in occupations belonging to the *Healthcare Support and Personal Care and Services* occupational categories. Hispanics have their highest representation among Medical Assistants (26.1 percent), Dental Assistants (22.7 percent), and Personal Care Aides (18.2 percent). Blacks have their highest representation in Nursing, Psychiatric and Home Health Aides (32.0 percent). Asians are underrepresented among Medical Assistants (4.2 percent) and Nursing, Psychiatric and Home Health Aides (4.5 percent) but are overrepresented among Massage Therapists (7.5 percent)

and Personal Care Aides (7.2 percent). In these occupations, American Indians and Alaska Natives, and Native Hawaiian and Other Pacific Islanders are also well represented as compared to their representation in the U.S. workforce. American Indians and Alaska Natives along with Native Hawaiians and Other Pacific Islanders have their largest proportion of workers (1.1 percent and 0.5 percent, respectively) among Personal Care Aides.

Compared to their distributions in the U.S. workforce, Whites are underrepresented in all *Healthcare Support* and *Personal Care Services* Occupations except Massage Therapists (72.9 percent), and Physical Therapist Assistants and Aides (76.0 percent). The occupations in which Whites are most underrepresented are Nursing, Psychiatric and Home Health Aides (46.8 percent); Personal Care Aides (48.7 percent)

Discussion

This brief provides information on the diversity of the U.S. health workforce with regard to sex, race and ethnicity, compared to the general U.S. workforce. The results demonstrate that there is little balance in terms of the sex of an individual in the health workforce when there are proportionately more females in 25 of the 30 occupations. However, there is considerable variation in racial/ethnic diversity by occupational groups. In the *Life, Physical and Social Sciences* and *Health Diagnosing and Treating Practitioners* groupings, there are predominantly more White individuals represented, while the participation of this racial group is the smallest among *Healthcare Support* and *Personal Care and Services* occupations. Asians are well represented in *Health Diagnosing and Treating Practitioners* occupations, but other minority groups are underrepresented in these occupations. Blacks, American Indians and Alaska Natives, and Multiple Race groups are well represented among Counselors and Social Workers in *Community and Social Services* occupations, but Hispanics and Asians are underrepresented. Hispanics are underrepresented in all *Health Technologists and Technician* occupations. Other minority groups are also underrepresented in multiple occupations in this occupational category. However, Hispanics, Blacks, American Indians and Alaska Natives are well represented in *Healthcare Support* and *Personal Care and Service* occupations. Indeed *Personal Care and Services* is the most diverse occupational group, followed by occupations belonging to the *Healthcare Support* group.

In the absence of more specific data, this brief does not seek to explain why variations in racial and ethnic composition of occupations exist; nor does the brief draw conclusions about how diversity in health workforce affects access to health care and health outcomes. However, the 2009 IOM Subcommittee on Standardized Collection of Race/Ethnicity Data for Healthcare Quality report emphasized that inadequate data on race, ethnicity, and language lowers the likelihood of effective actions to address health disparities.⁹

Compared to our January 2015 report, there have been minor improvements in minority group representation in the health occupations, with a small decrease of White individuals in every occupation and a small increase in representation in one or more of the other five racial categories in every occupation. By examining the time trend, the information presented in this brief can be used to evaluate HHS initiatives aimed at increasing diversity, thereby supporting Goal II of the HHS Action Plan to Reduce Racial and Ethnic Health Disparities Action Plan: Strengthen the Nation’s Health and Human Services Infrastructure and Workforce.¹⁰ It could also be used to develop and refine policies and programs that seek to diversify the health workforce. For example, the information presented here can be useful for policy making about increasing diversity in several types of HRSA programs including the NHSC and NURSE Corp programs which aim to improve access to health care workers, particularly among underserved populations.

Overall, the brief supports a continuation of efforts to improve the participation of racial and ethnic minority groups in the U.S. health workforce.

⁹ IOM Subcommittee on Standardized Collection of Race/Ethnicity Data for Healthcare Quality. Race, Ethnicity, and Language Data: Standardization for Health Care Quality Improvement. Washington, DC: The National Academies Press; 2009.

¹⁰ U.S. Department of Health and Human Services (HHS) Action Plan to Reduce Racial and Ethnic Health Disparities. Available at https://minorityhealth.hhs.gov/assets/pdf/hhs/HHS_Plan_complete.pdf. accessed July 6, 2015.

Table 1: U.S. Health Occupations¹ by Sex, 2011-2015

	Male (%)	Female (%)	Total Workforce ²
U.S. Workforce ²	52.8	47.2	159,824,883
Health Occupations³			
Community and Social Services Occupations			
Counselors	30.2	69.8	888,801
Social Workers	19.3	80.7	936,663
Life, Physical, and Social Sciences Occupations			
Psychologists	29.4	70.6	217,449
Health Diagnosing and Treating Practitioners Occupations			
Advanced Practice Registered Nurses ⁴	14.9	85.1	152,629
Chiropractors	71.8	28.2	59,525
Dentists	72.6	27.4	182,012
Dietitians and Nutritionists	10.6	89.4	105,575
Optometrists	59.9	40.1	38,233
Pharmacists	45.5	54.5	316,183
Physicians	65.1	34.9	961,098
Physician Assistants	32.2	67.8	125,771
Occupational Therapists	9.7	90.3	108,412
Physical Therapists	29.2	70.8	235,238
Respiratory Therapists	35.4	64.6	118,675
Speech-Language Pathologists	4.0	96.0	156,512
Registered Nurses	9.6	90.4	3,327,165
Health Technologists and Technicians Occupations			
Dental Hygienists	3.6	96.4	187,444
Diagnostic Related Technologists and Technicians	28.8	71.2	370,539
Emergency Medical Technicians (EMTs) and Paramedics	68.5	31.5	225,887
Health Practitioner Support Technologists and Technicians	21.7	78.3	674,868
Licensed Practical/Vocational Nurses	9.8	90.2	893,583
Medical and Clinical Laboratory Technologists and Technicians	26.4	73.6	393,230
Medical Records and Health Information Technicians	10.8	89.2	167,149
Opticians, Dispensing	28.0	72.0	63,415
Healthcare Support Occupations			
Dental Assistants	5.4	94.6	347,689
Massage Therapists	18.0	82.0	200,185
Medical Assistants	7.8	92.2	574,389
Nursing, Psychiatric and Home Health Aides	12.8	87.2	2,845,496
Physical Therapist Assistants and Aides	28.5	71.5	90,768
Personal Care and Services Occupations			
Personal Care Aides	15.4	84.6	1,649,003

Source: HRSA estimates from American Community Survey 2011-2015

Note: ¹Occupations are grouped and titled in accordance with the U.S. Government Standard Occupational Classification system. ²Population 16 years of age or older who are employed or seeking employment. ³Self-reported occupation. ⁴Include Nurse Anesthetists, Midwives, and Nurse Practitioners

Table 2: U.S. Health Occupations¹ by Race/Ethnicity, 2011-2015

	Hispanic	Non-Hispanic						Multiple/ Other Race
		White	Black	Asian	American Indian/ Alaska Native	Native Hawaiian and Other Pacific Islander		
U.S. Workforce ² (#)	25,776,728	102,850,895	18,597,223	8,534,837	902,977	251,578	2,910,645	
U.S. Workforce ² (%)	16.1	64.4	11.6	5.3	0.6	0.2	1.8	
Health Occupations³								
Community and Social Services Occupations								
Counselors	10.7	64.6	18.8	2.8	0.8	0.1	2.2	
Social Workers	12.0	60.6	21.5	3.0	0.8	0.1	2.0	
Life, Physical, and Social Sciences Occupations								
Psychologists	6.3	83.5	4.9	3.4	0.2	(0.0)	1.6	
Health Diagnosing and Treating Practitioners Occupations								
Advanced Practice Registered Nurses ⁴	4.5	84.0	5.7	4.1	0.2	NR	1.3	
Chiropractors	3.7	86.7	1.9	5.4	0.5	NR	1.8	
Dentists	6.1	74.8	3.0	14.3	(0.1)	NR	1.7	
Dietitians and Nutritionists	8.5	68.7	15.0	6.0	0.3	(0.1)	1.4	
Optometrists	3.9	78.4	1.8	13.7	NR	NR	1.8	
Pharmacists	3.7	70.4	5.9	17.9	0.2	0.1	1.8	
Physicians	6.3	67.0	4.8	19.6	0.1	0.0	2.1	
Physician Assistants	10.0	72.7	7.1	7.3	0.6	NR	2.2	
Occupational Therapists	4.0	83.8	4.4	6.6	0.2	NR	1.1	
Physical Therapists	4.8	77.8	4.4	11.1	0.2	(0.1)	1.6	
Respiratory Therapists	7.9	70.1	12.8	7.0	0.5	NR	1.7	
Speech-Language Pathologists	6.2	86.1	4.1	2.2	0.3	NR	1.0	
Registered Nurses	5.7	73.5	10.4	8.4	0.4	0.1	1.5	
Health Technologists and Technicians Occupations								
Dental Hygienists	7.5	83.4	3.1	4.2	0.2	NR	1.5	
Diagnostic Related Technologists and Technicians	9.6	75.7	7.8	4.9	0.4	(0.1)	1.5	

Emergency Medical Technicians and Paramedics	10.3	78.9	6.3	1.9	0.6*	0.1	1.9
Health Practitioner Support Technologist and Technicians	12.3	65.5	12.8	6.9	0.5	0.1	1.9
Licensed Practical/Vocational Nurses	9.4	60.8	23.1	4.0	0.7	0.1	1.9
Medical and Clinical Laboratory Technologists and Technicians	9.4	62.0	13.7	11.8	0.5	0.2	2.2
Medical Records and Health Information Technicians	11.8	65.3	15.3	5.1	0.8	0.2	1.5
Opticians, Dispensing	12.1	75.9	5.5	4.4	0.7	NR	1.3
Healthcare Support Occupations							
Dental Assistants	22.7	62.1	6.9	5.5	0.7	0.1	2.1
Massage Therapists	11.0	72.9	5.5	7.5	0.5	(0.1)	2.5
Medical Assistants	26.1	53.6	13.4	4.2	0.5	0.3	1.9
Nursing, Psychiatric and Home Health Aides	13.7	46.8	32.0	4.5	0.8	0.2	2.1
Physical Therapist Assistants and Aides	8.9	76.0	7.1	5.3	0.5	(0.2)	2.1
Personal Care and Services Occupations							
Personal Care Aides	18.2	48.7	22.1	7.2	1.1	0.5	2.2

Source: HRSA estimates from American Community Survey 2011-2015.

Notes: ¹ Occupations are titled and grouped as in the U.S. Government's Standard Occupation Classification system. ² Population 16 years and older who are employed or seeking employment. ³ Self-reported occupations. ⁴ Includes Nurse Anesthetists, Midwives, and Nurse Practitioners. NR: data not reported because relative standard errors (RSE) ≥ 30 ; estimate does not meet standards of reliability or data not present. Numbers in parenthesis represent estimates with relative standard errors (RSE) ≥ 20 percent and should be interpreted with caution. Not all totals equal to 100 percent due to rounding.

About the Data

The American Community Survey (ACS), conducted by the U.S. Census Bureau, surveys approximately one (1) percent of U.S. households annually and obtains information on individuals' occupations and location. The 2011-2015 ACS 5-year file was selected over a single-year file for 2015 in order to improve the precision of estimates. In some occupations and population subgroups, small sample size may lead to unreliable estimates. In this brief, percent relative standard errors (RSEs) of 20 or greater are noted.

The sex, race, and Hispanic or Latino ethnicity categories available in the ACS are based on the 1997 standards outlined by the Office of Management and Budget (OMB) and are consistent with the HHS guidelines on data collection standards released in October 2011.

The 30 occupations included in this brief were selected based on the following criteria: (1) the occupation is among those with the largest number of jobs as identified by the SOC code, (2) the occupation is among the fastest growing occupations as projected by the U.S. Bureau of Labor Statistics (BLS), and/or (3) the occupation is among the top 30-35 occupations that have adequate data (i.e., sample sizes) available in the 5-year, 2011 to 2015 ACS PUMS file. These determinations were made based on data from the BLS Occupational Employment Statistics National May 2010 Employment and Wage Estimates.

The majority of occupations included in this brief are found within the Major SOC groups of 29-0000 (Healthcare Practitioners and Technical Occupations and 31-000 (Healthcare Support Occupations). Additionally, two occupations --Counselors and Social Workers-- were selected from the Major SOC group 21-000 (Community and Social Services Occupations). For Counselors, and Social Workers, the ACS data used are limited to individuals working in Medical and "Individual and Family Services" settings. More detailed information on the work settings can be found on the U.S. Census website:

<http://www.census.gov/eos/www/naics/>.

For more detailed information on the data sources, definitions, methods, and SOC categories, see *Sex, Race, and Ethnic Diversity of U.S. Health Occupations (2010-2012) Technical Documentation* at <http://bhw.hrsa.gov/sites/default/files/bhw/nchwa/diversityushealthoccupationstechnical.pdf>.