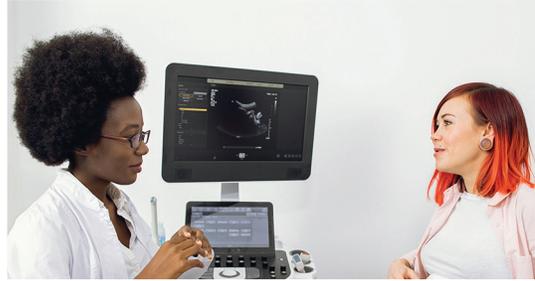
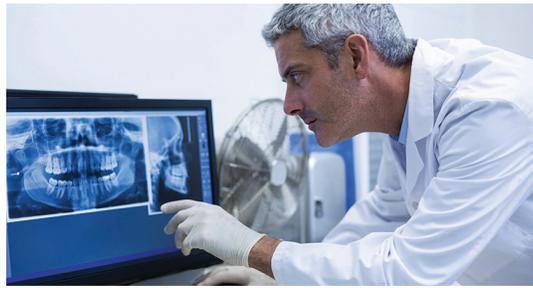


Health Professions Education Program Outcomes, 2011-2020



Health Professions Education Program Outcomes, 2011-2020

December 2022



Center for Health Workforce Studies
School of Public Health, University at Albany
State University of New York
1 University Place, Suite 220
Rensselaer, NY 12144-3445

Phone: (518) 402-0250
Web: www.healthworkforceta.org
Email: info@healthworkforceta.org

PREFACE

This chartbook uses data from the Integrated Postsecondary Education Data System (IPEDS) to describe education program outcomes for 32 health professions between the years 2011 and 2020. It contains information on the number of awards conferred and the gender and race/ethnicity of individuals completing the programs.

This report was prepared by Jinman Pang and David Armstrong of the Health Workforce Technical Assistance Center (HWTAC), with layout design by Trish Galvin.

HWTAC was established in 2013 to support the efforts of the National Center for Health Workforce Analysis (NCHWA) and it provides technical assistance to states and organizations that engage in health workforce planning. HWTAC conducts several projects each year designed to provide expert assistance with health workforce data collection, analysis, and dissemination. HWTAC is based at the Center for Health Workforce Studies (CHWS) at the School of Public Health, University at Albany, State University of New York.

HWTAC is supported by the Health Resources and Services Administration (HRSA) of the US Department of Health and Human Services (HHS) as part of an award totaling \$450,000 with 0% financed with nongovernmental sources. The contents in this compendium are those of the authors and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS, or the US Government. For more information, visit <https://www.hrsa.gov>.

December 2022

SUGGESTED CITATION

Pang J, Armstrong D. *Health Professions Education Program Outcomes, 2011-2020*. Rensselaer, NY: Health Workforce Technical Assistance Center, Center for Health Workforce Studies, School of Public Health, SUNY Albany; December 2022.

TABLE OF CONTENTS

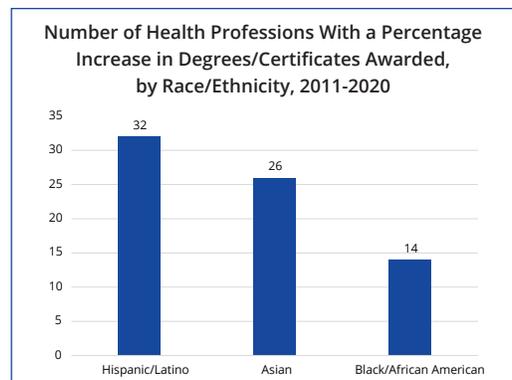
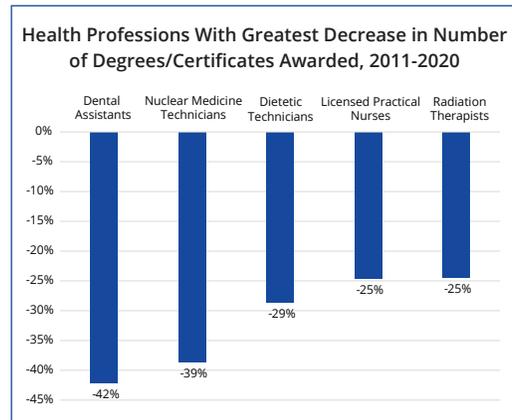
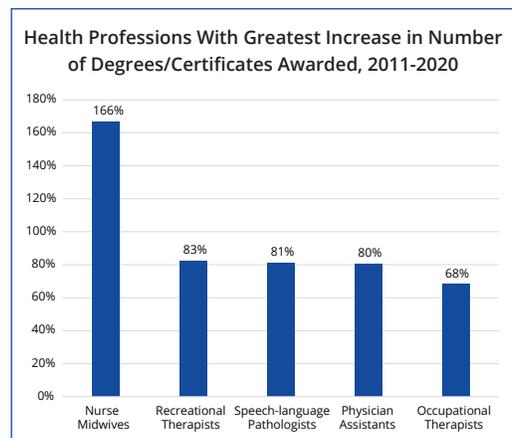
| | |
|---|----|
| INTRODUCTION..... | 1 |
| KEY FINDINGS..... | 1 |
| PROFESSIONS..... | 2 |
| Audiologists..... | 3 |
| Chiropractors..... | 4 |
| Clinical Psychologists..... | 5 |
| Dental Assistants..... | 6 |
| Dental Hygienists..... | 7 |
| Dentists..... | 8 |
| Diagnostic Medical Sonographers..... | 9 |
| Dietitians and Nutritionists..... | 10 |
| Dietetic Technicians..... | 11 |
| Licensed Practical Nurses..... | 12 |
| Medical and Clinical Laboratory Technologists..... | 13 |
| Nuclear Medicine Technicians..... | 14 |
| Nurse Anesthetists..... | 15 |
| Nurse Midwives..... | 16 |
| Occupational Therapy Assistants..... | 17 |
| Occupational Therapists..... | 18 |
| Optometrists..... | 19 |
| Pharmacists..... | 20 |
| Paramedics/Emergency Medical Technicians..... | 21 |
| Physical Therapist Assistants..... | 22 |
| Physical Therapists..... | 23 |
| Physician Assistants..... | 24 |
| Physicians..... | 25 |
| Podiatrists..... | 26 |
| Psychologists..... | 27 |
| Radiation Therapists..... | 28 |
| Radiologic Technologists and Technicians..... | 29 |
| Recreational Therapists..... | 30 |
| Registered Nurses..... | 31 |
| Respiratory Therapists..... | 32 |
| Social Workers..... | 33 |
| Speech-language Pathologists..... | 34 |
| APPENDIX: CIP Codes, Minimum Education Requirements, and Award Level Codes by Profession..... | 35 |

INTRODUCTION

A robust and diverse supply of new health professionals is crucial for our health care delivery system. This chartbook uses Integrated Postsecondary Education Data System (IPEDS) data to describe education program outcomes for 32 health professions between the years 2011 and 2020. For each health profession, the number of degrees awarded, and the gender and race/ethnicity of the individuals completing the programs are displayed. Information for the year 2020 is considered preliminary. Information on the CIP Codes and award levels used to identify each health profession is reported in the footer of each page. Descriptions of award level codes can be found in the Appendix.

KEY FINDINGS

- The number of degrees/certificates awarded increased for the majority of health professions between 2011 and 2020.
 - The professions that experienced the greatest percentage **increase** in the number of degrees/certificates awarded included: nurse midwives, recreational therapists, speech-language pathologists, physician assistants, and occupational therapists.
 - The professions that experienced the greatest percentage **decrease** in the number of degrees/certificates awarded included: dental assistants, nuclear medicine technicians, dietetic technicians, licensed practical nurses, and radiation therapists.
- The percentage of female graduates increased for 20 of 32 health professions between 2011 and 2020.
- Between 2011 and 2020, all health professions became more diverse.
 - The percentage of Hispanic/Latinos increased for all 32 professions.
 - The percentage of Asians increased for 26 professions.
 - The percentage of Blacks/African Americans increased for 14 professions.



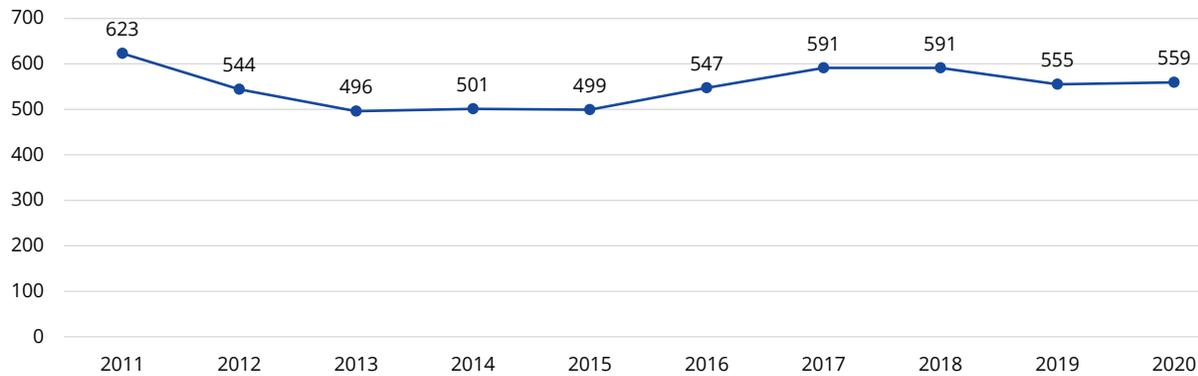


PROFESSIONS

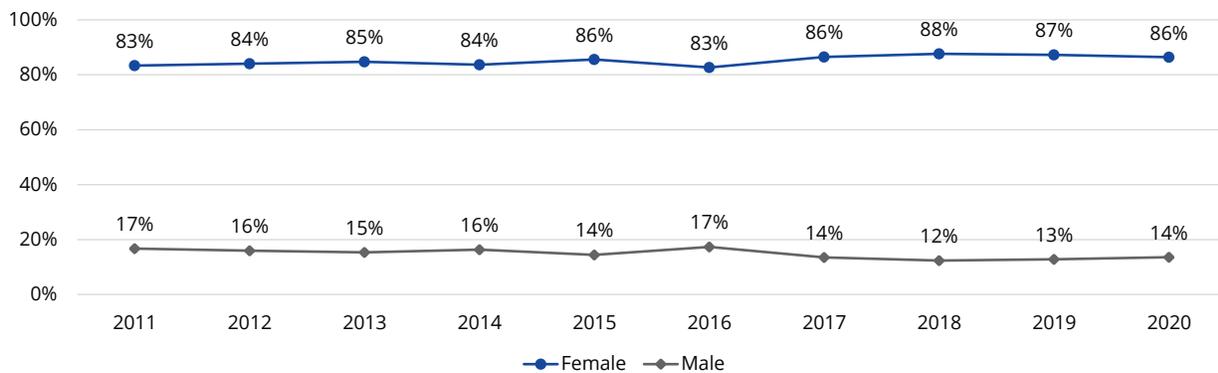
AUDIOLOGISTS



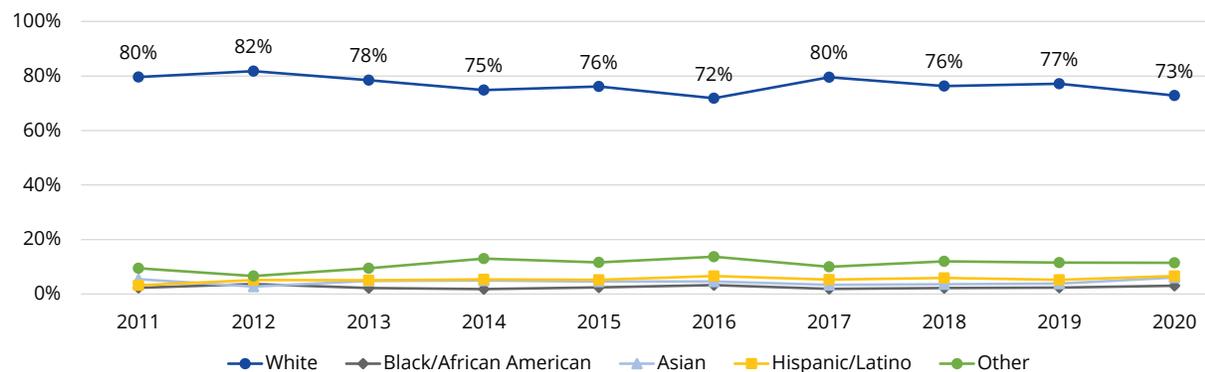
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

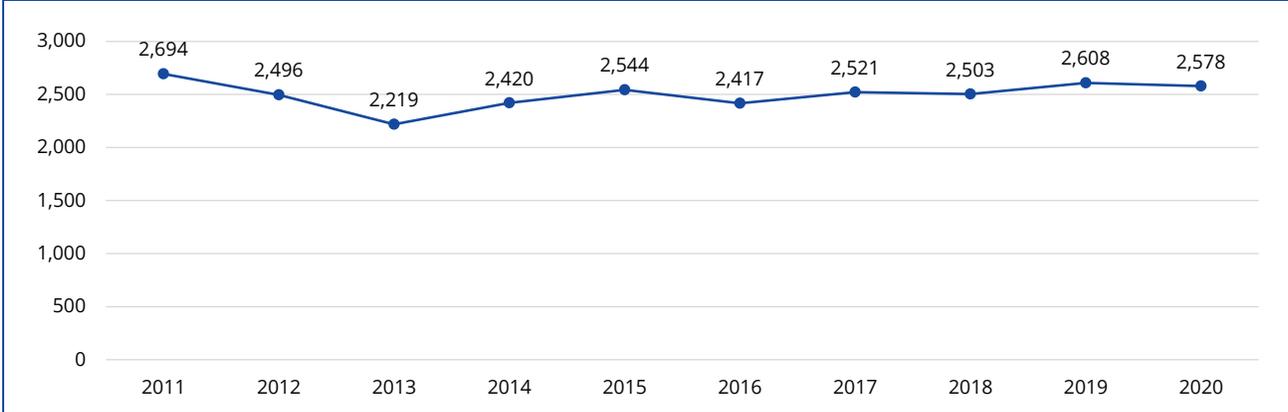


CIP Code: 51.0202; Minimum Education: Professional degree (doctoral level); Award Level Code(s): 18 and 19.

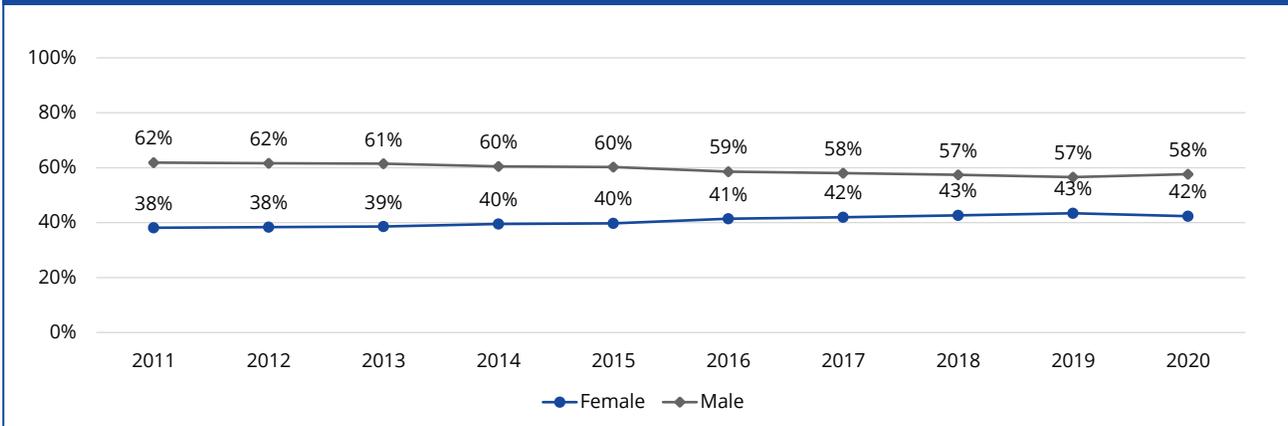
CHIROPRACTORS



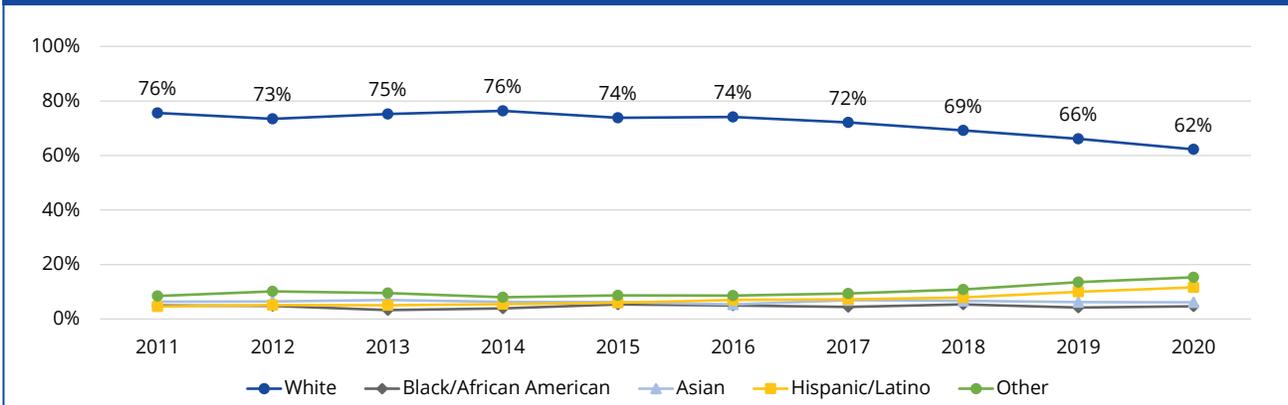
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

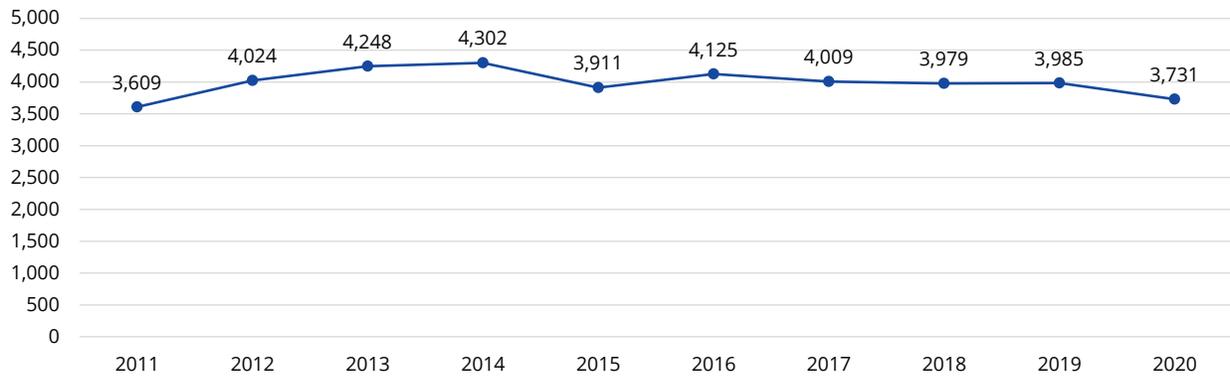


CIP Code: 51.0101; Minimum Education: Professional degree (doctoral level); Award Level Code(s): 18 and 19.

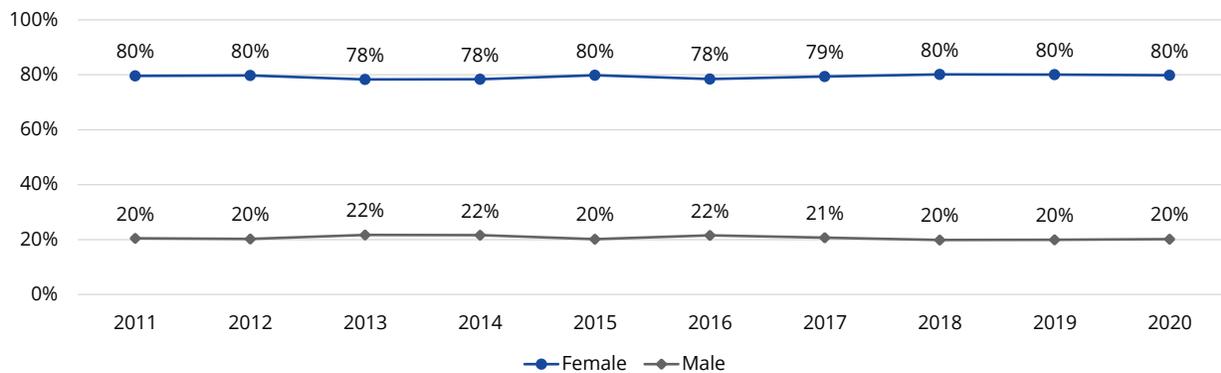
CLINICAL PSYCHOLOGISTS



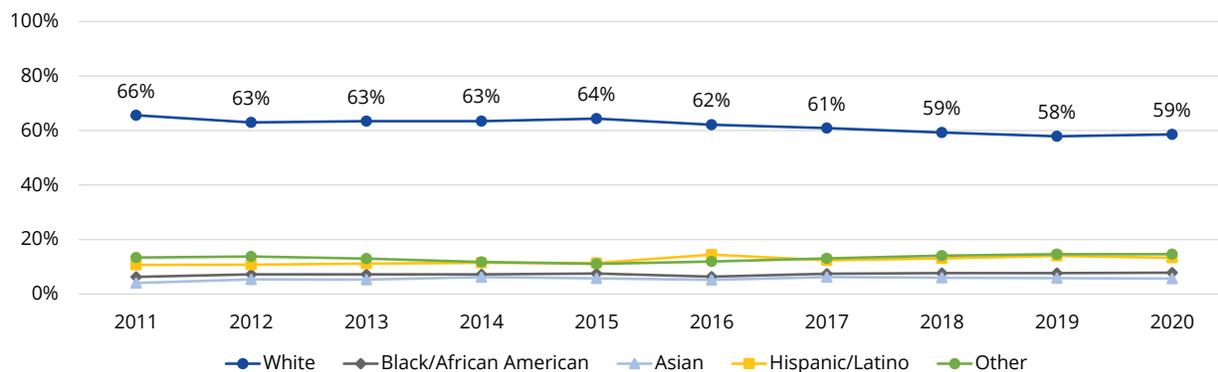
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

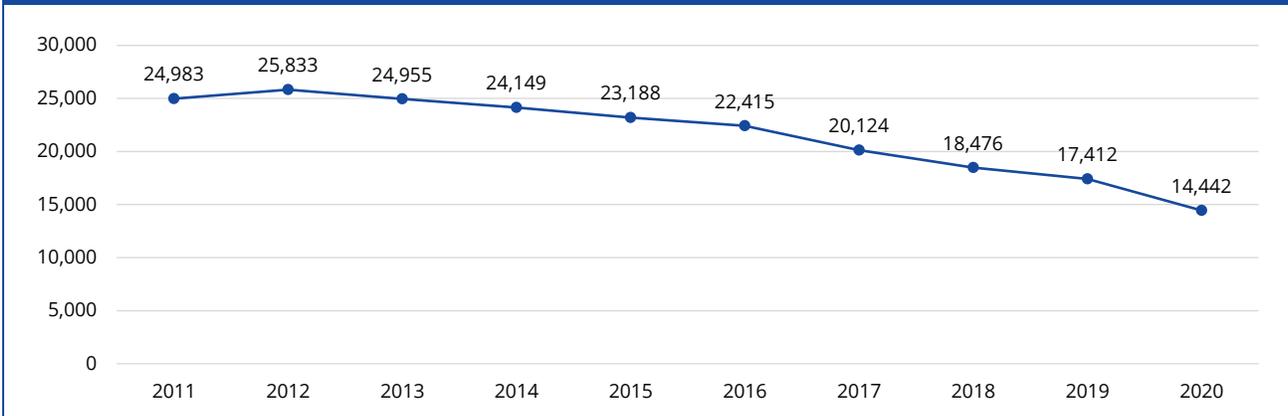


CIP Code: 42.2801; Minimum Education: Professional degree (master's level); Award Level Code(s): 7, 8, 18, 19.

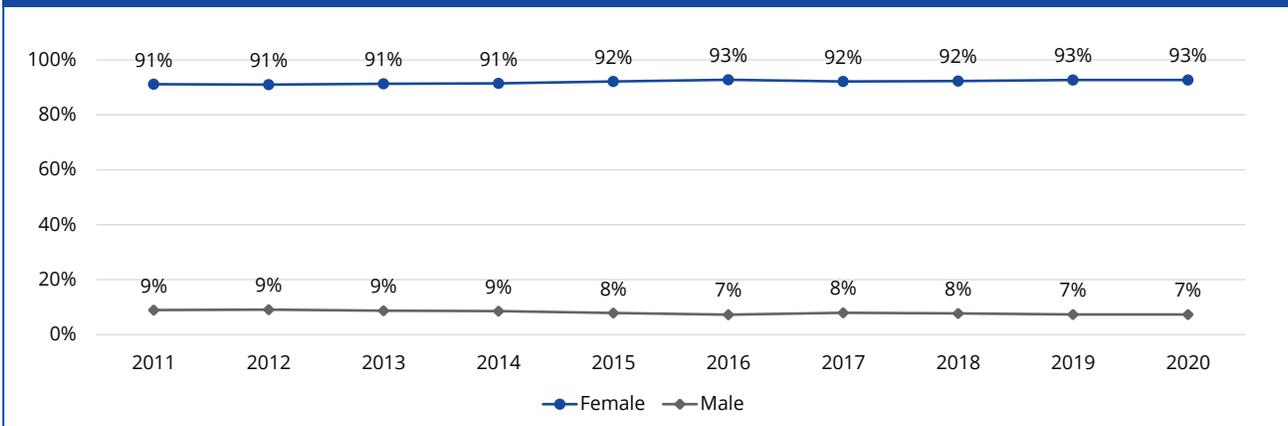
DENTAL ASSISTANTS



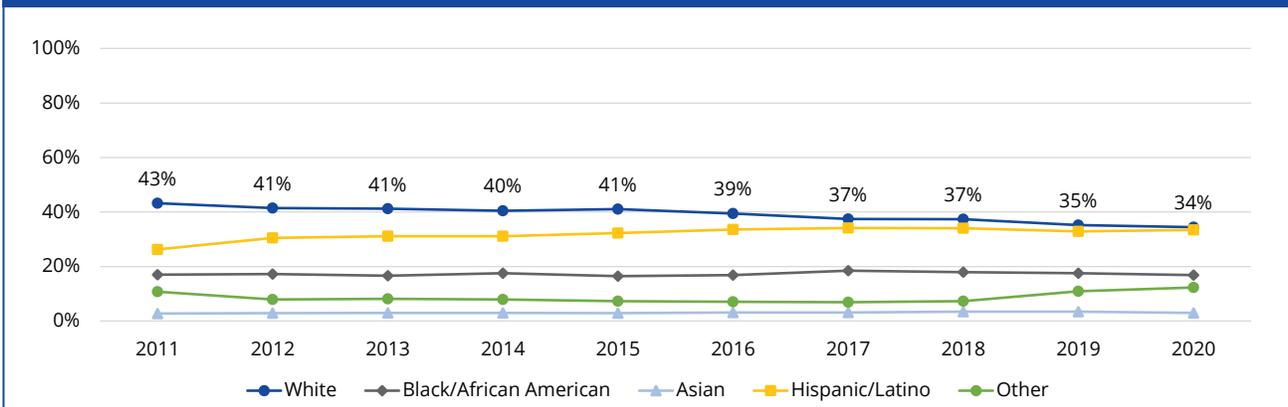
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

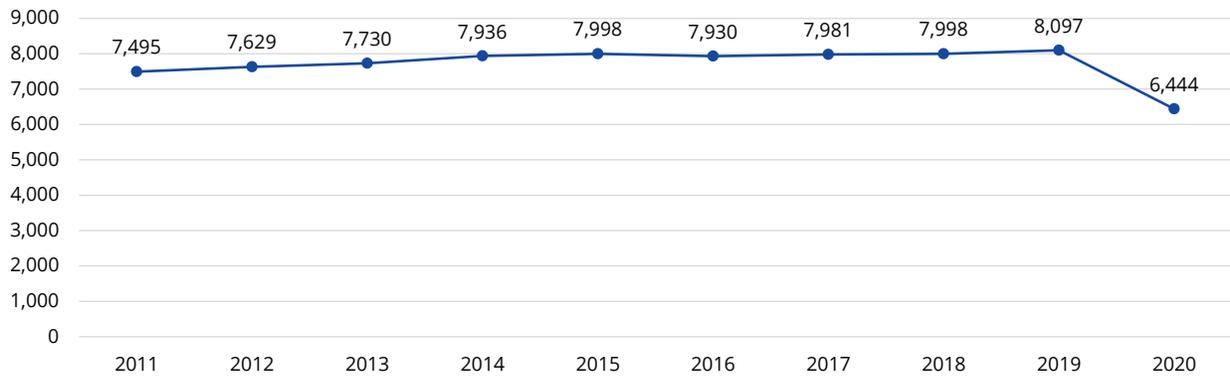


CIP Code: 51.0601; Minimum Education: Post-secondary certificate; Award Level Code(s): 1-5, 20, 21.

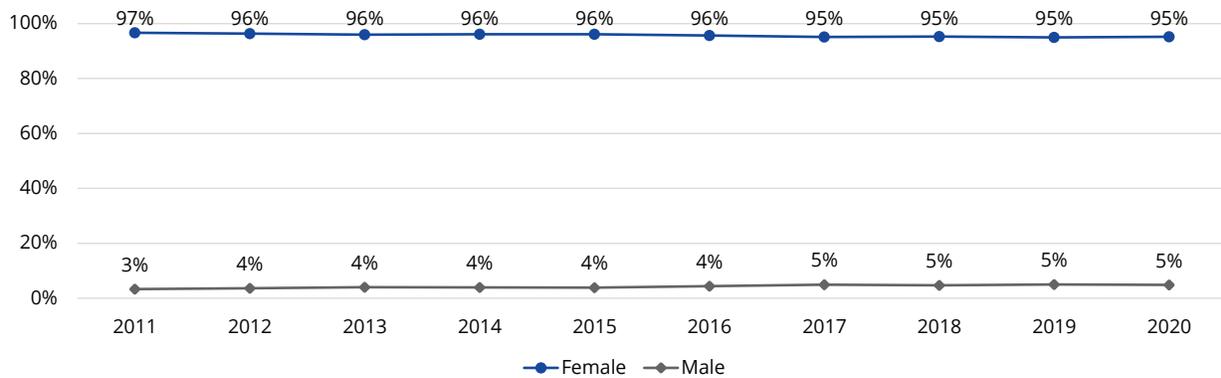
DENTAL HYGIENISTS



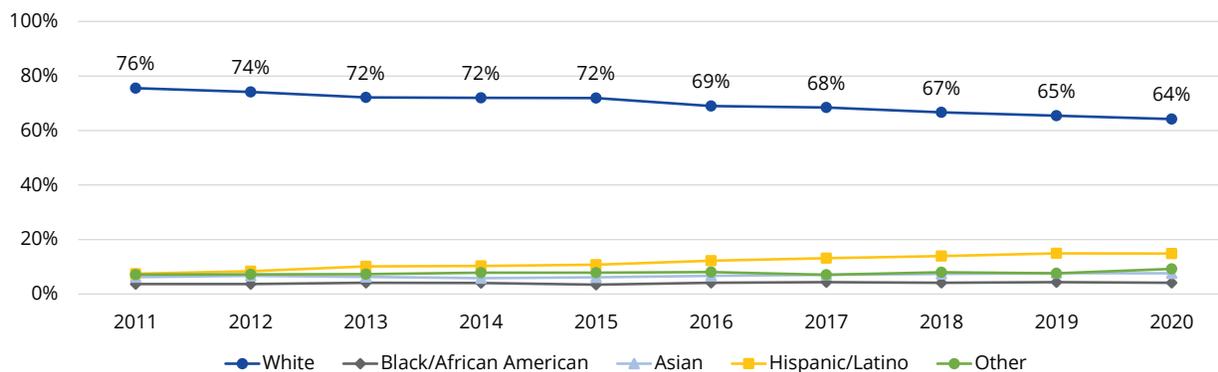
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER

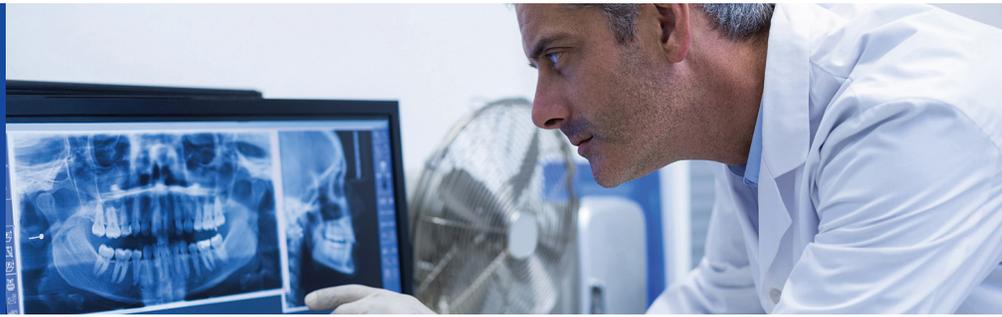


RACE/ETHNICITY

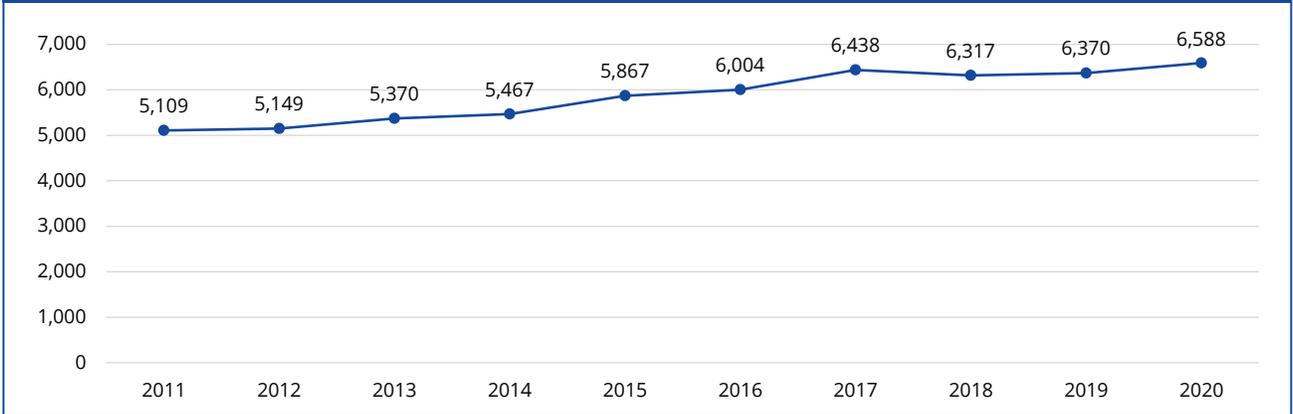


CIP Code: 51.0602; Minimum Education: Associate's degree; Award Level Code(s): 3, 5.

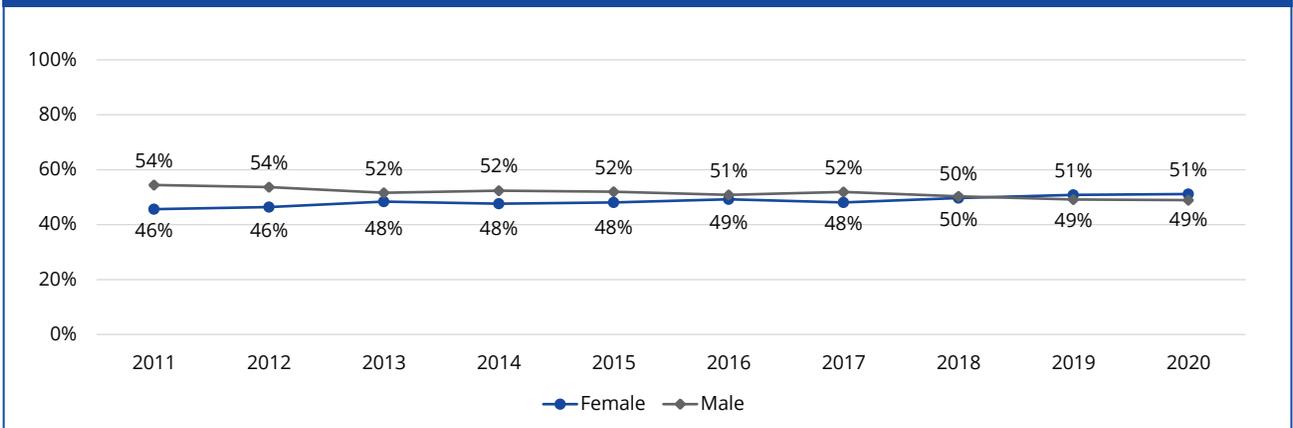
DENTISTS



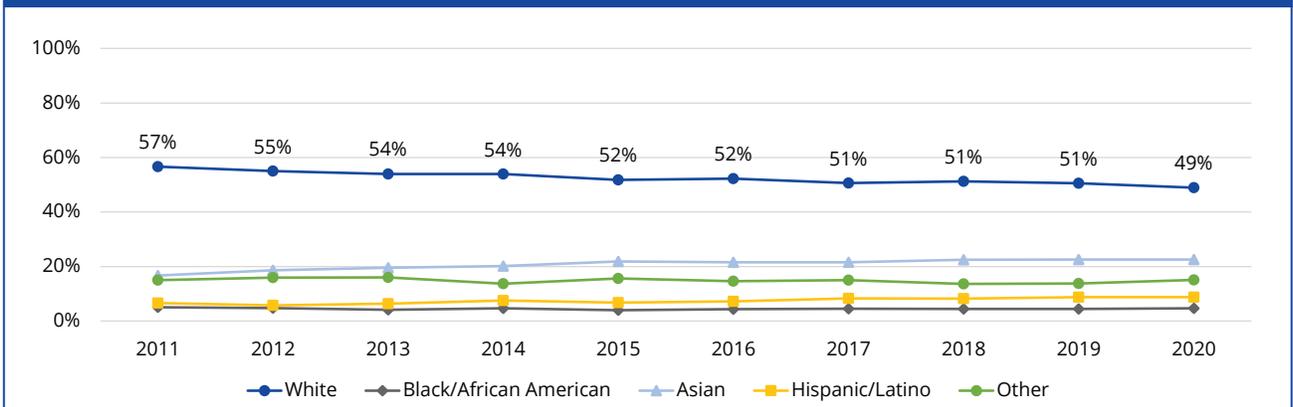
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

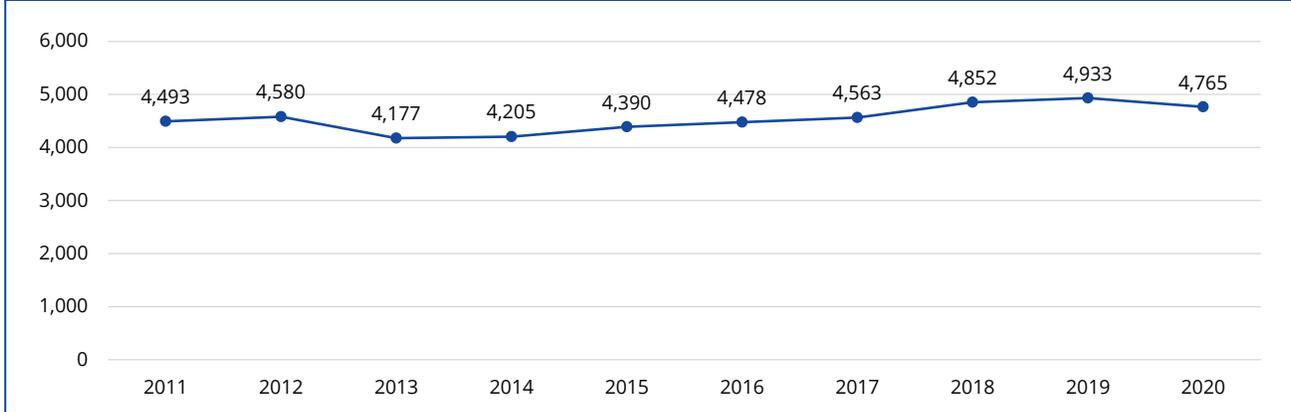


CIP Code: 51.0401; Minimum Education: Professional degree (doctoral level); Award Level Code(s): 18, 19.

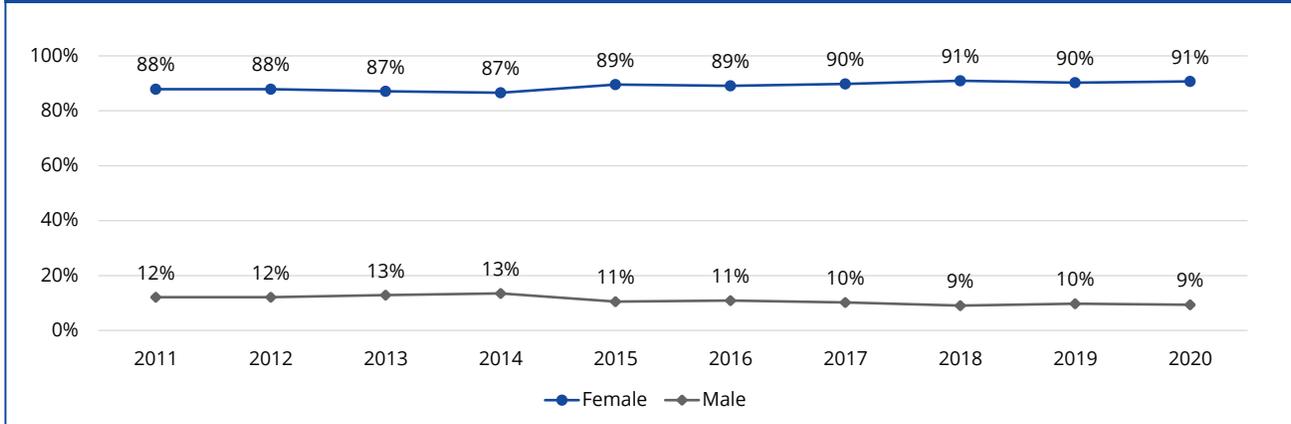
DIAGNOSTIC MEDICAL SONOGRAPHERS



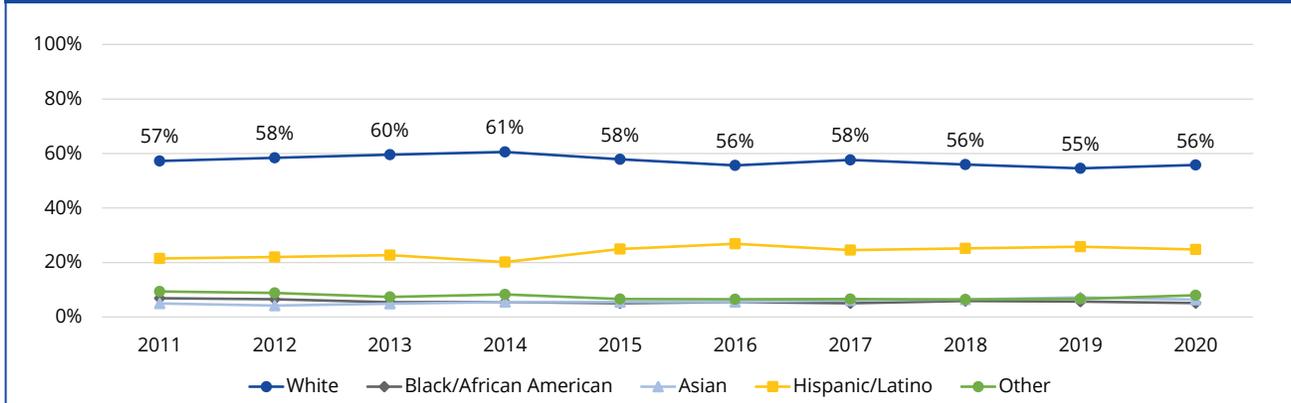
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

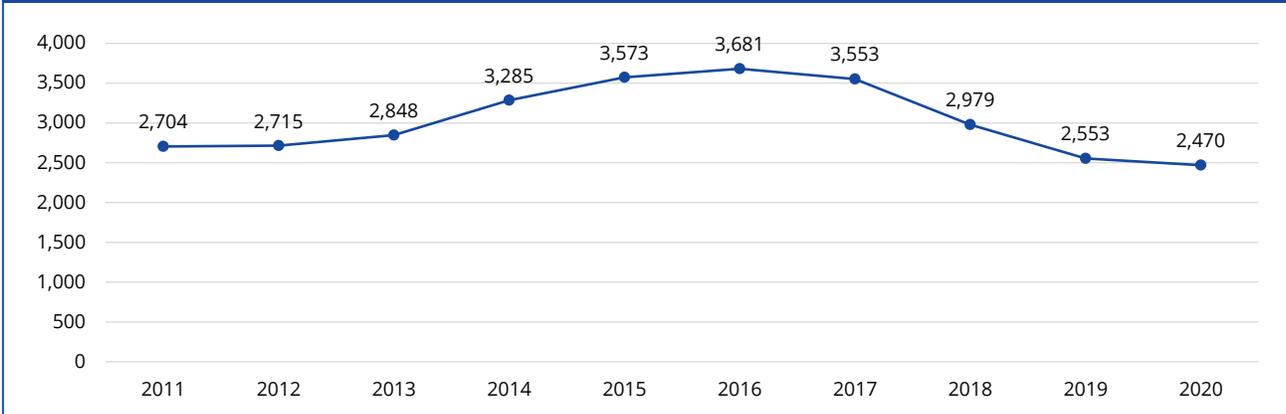


CIP Code: 51.0910; Minimum Education: Associate's degree; Award Level Code(s): 3, 4, 5.

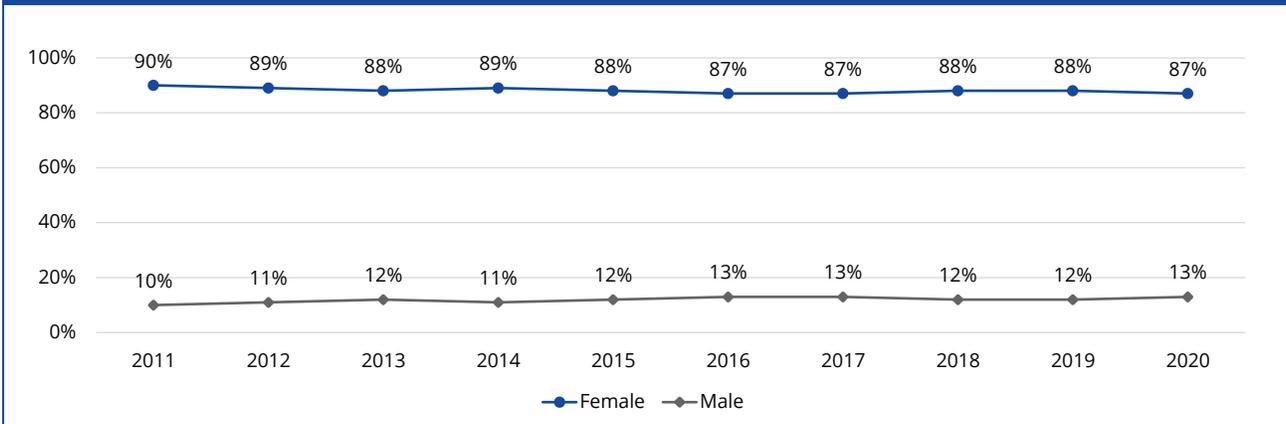
DIETITIANS AND NUTRITIONISTS



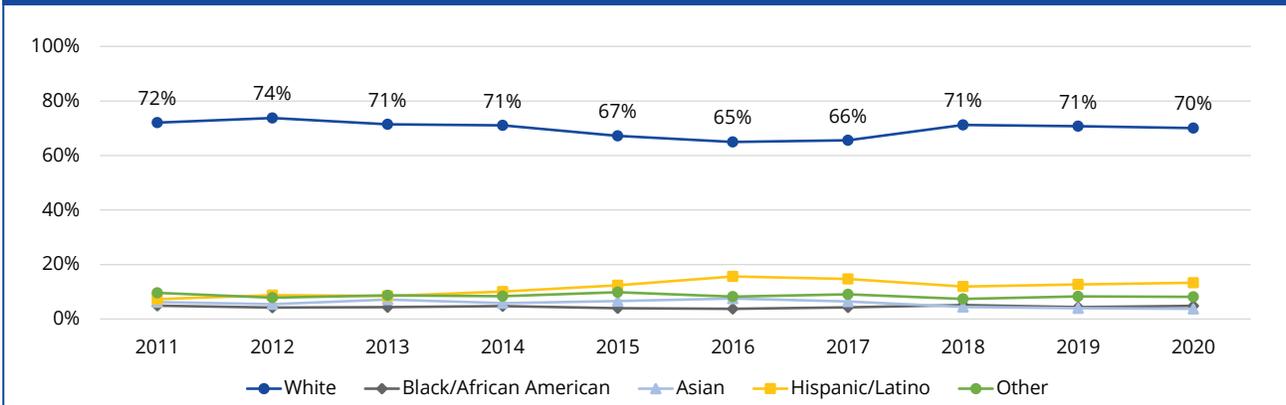
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

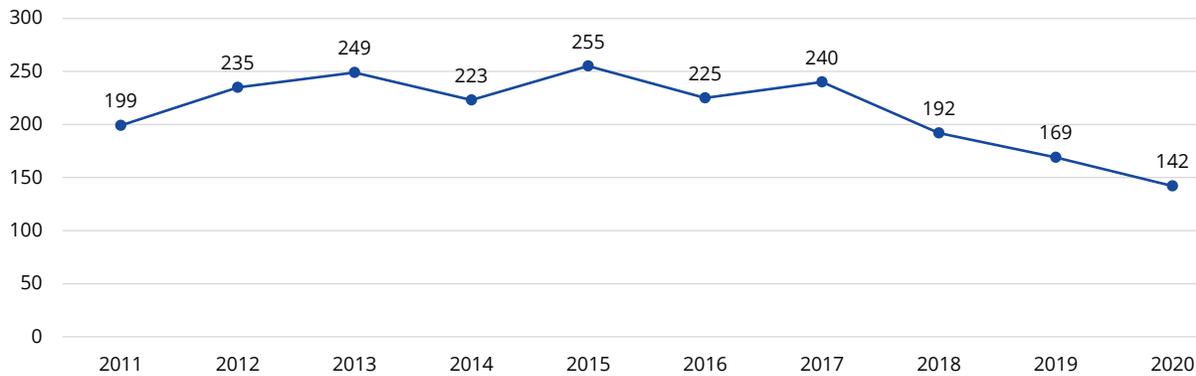


CIP Code: 51.3101; 51.3102; Minimum Education: Bachelor's degree; Award Level Code(s): 5.

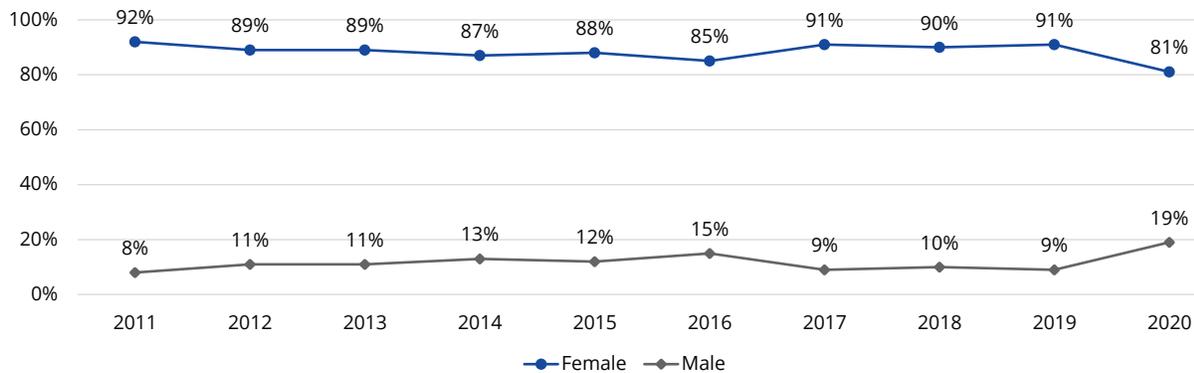
DIETETIC TECHNICIANS



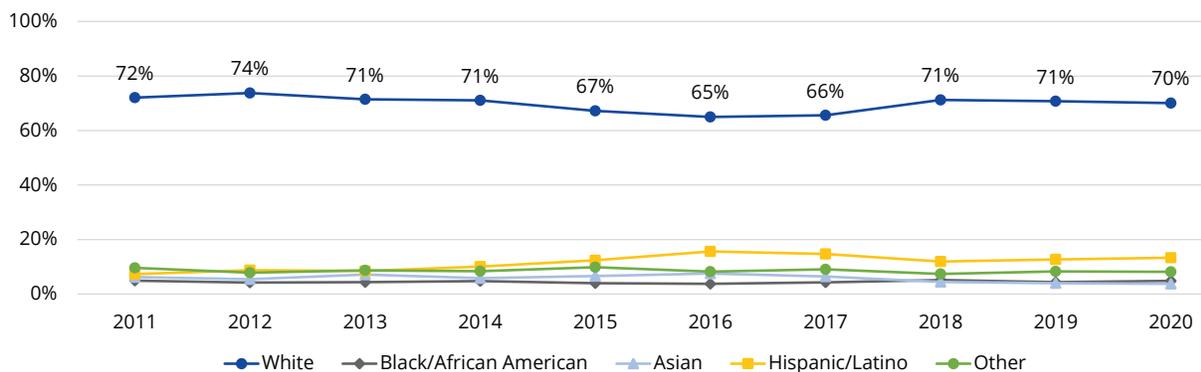
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

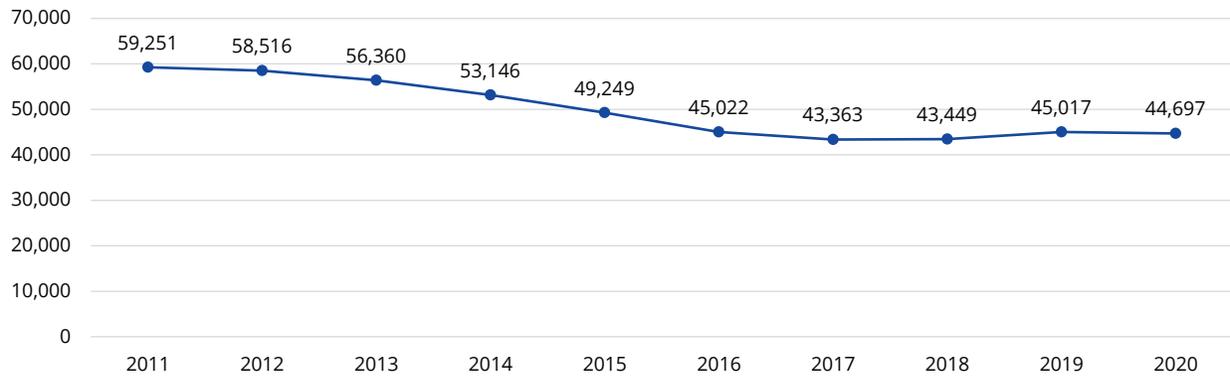


CIP Code: 51.3103; Minimum Education: Associate's degree; Award Level Code(s): 3.

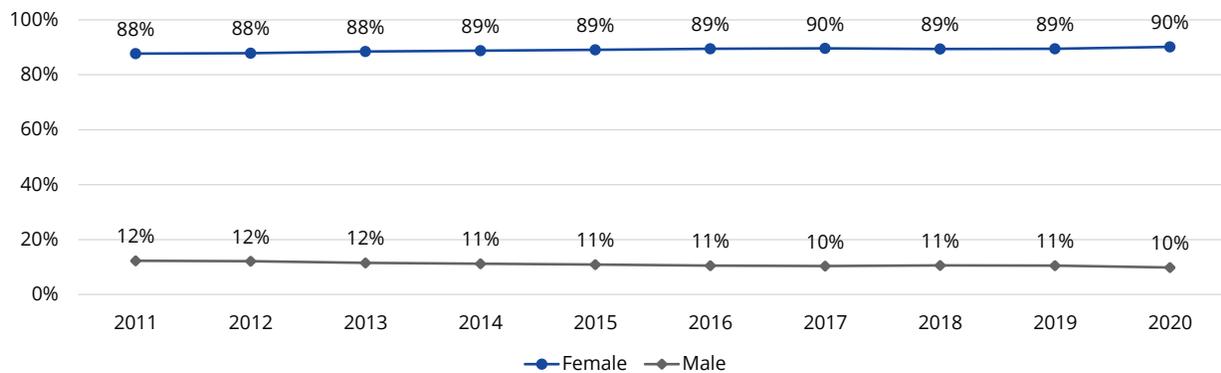
LICENSED PRACTICAL NURSES



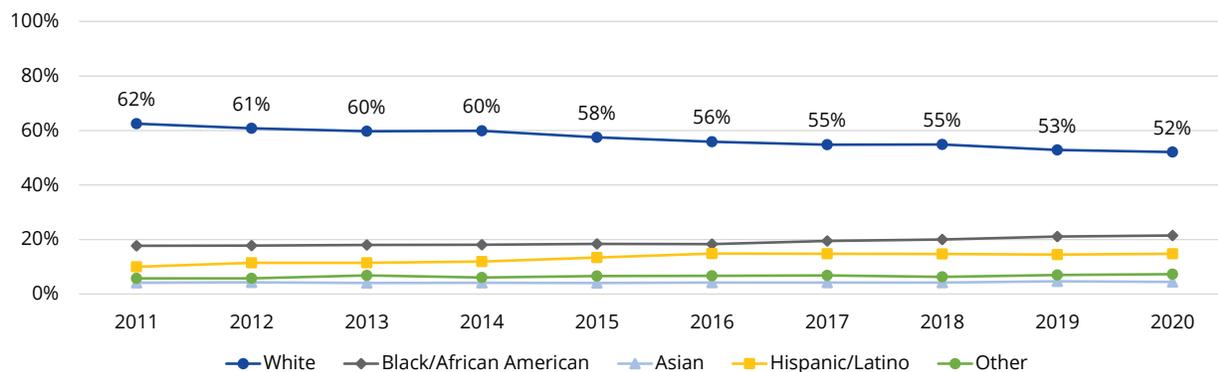
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

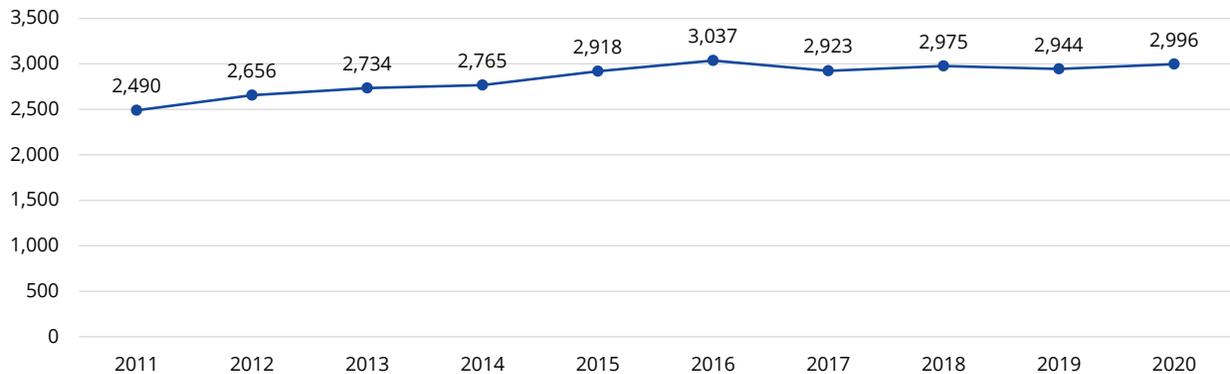


CIP Code: 51.3901; Minimum Education: Post-secondary certificate; Award Level Code(s): 1, 2, 3, 20, 21.

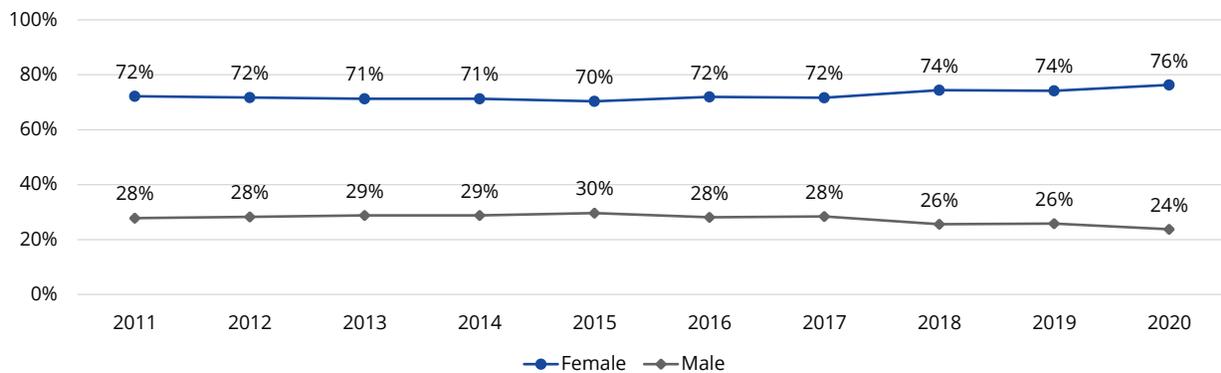
MEDICAL AND CLINICAL LABORATORY TECHNOLOGISTS



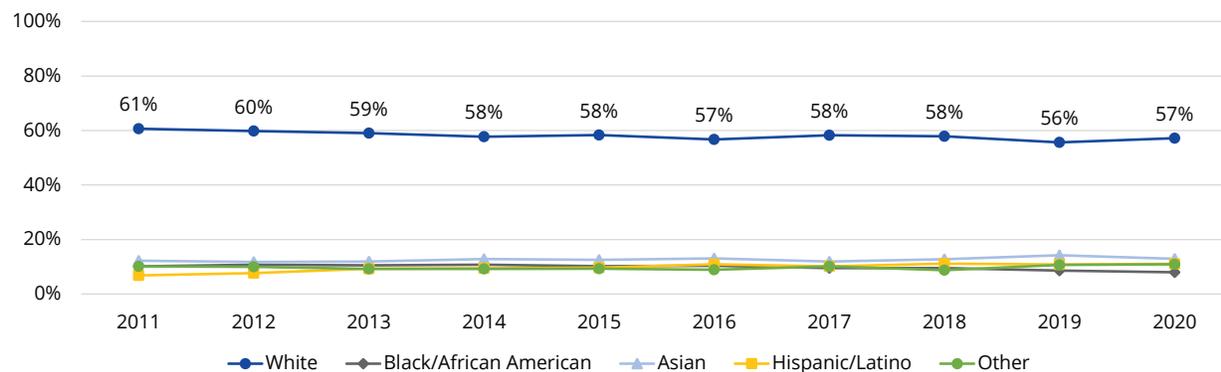
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

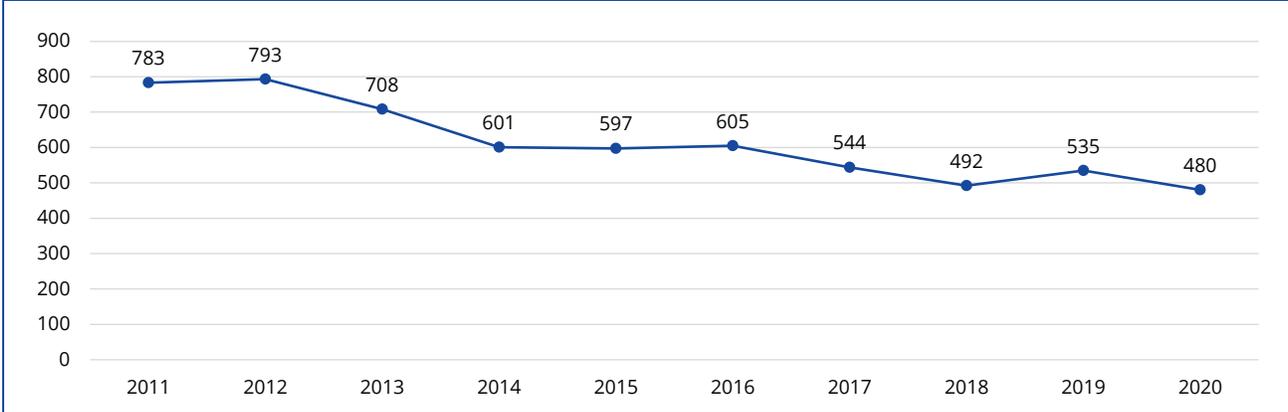


CIP Code: 51.1005; Minimum Education: Bachelor's degree; Award Level Code(s): 5.

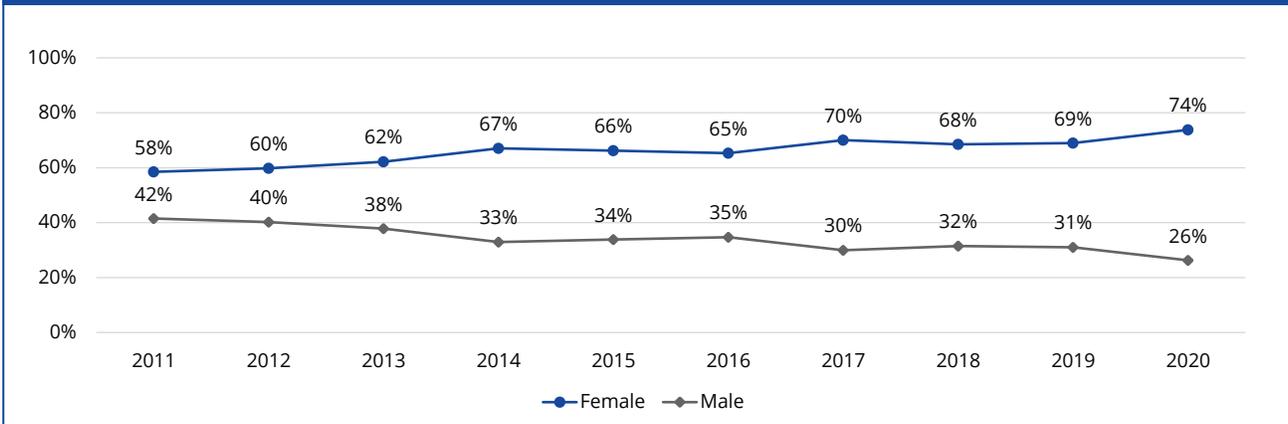
NUCLEAR MEDICINE TECHNICIANS



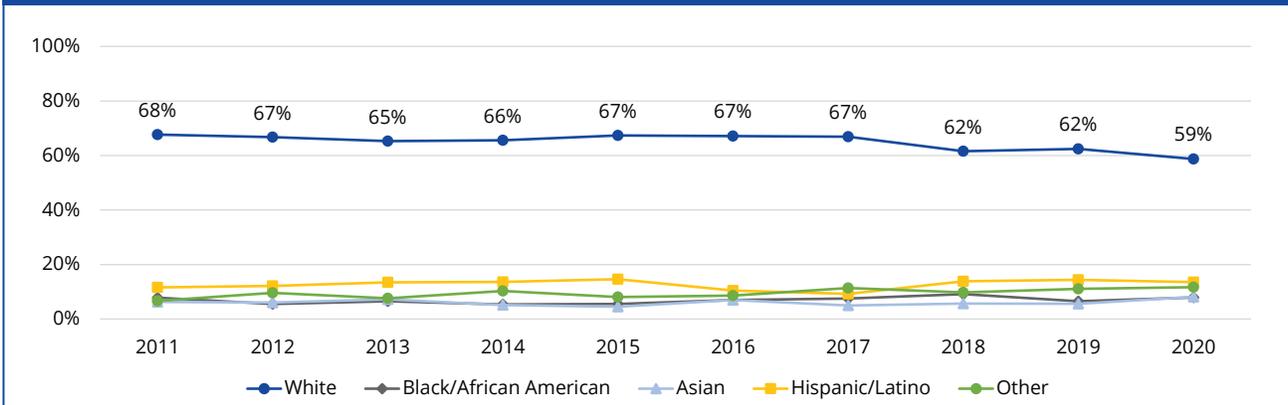
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

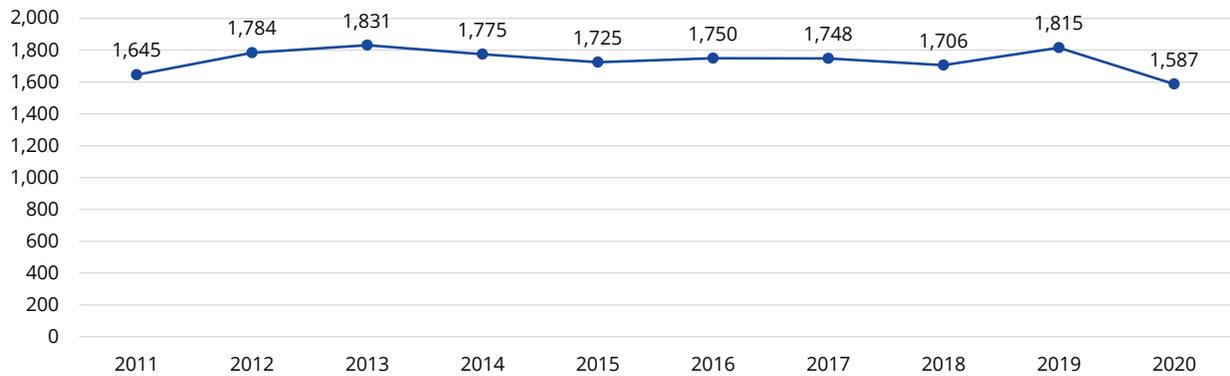


CIP Code: 51.0905; Minimum Education: Associate's degree; Award Level Code(s): 3, 5.

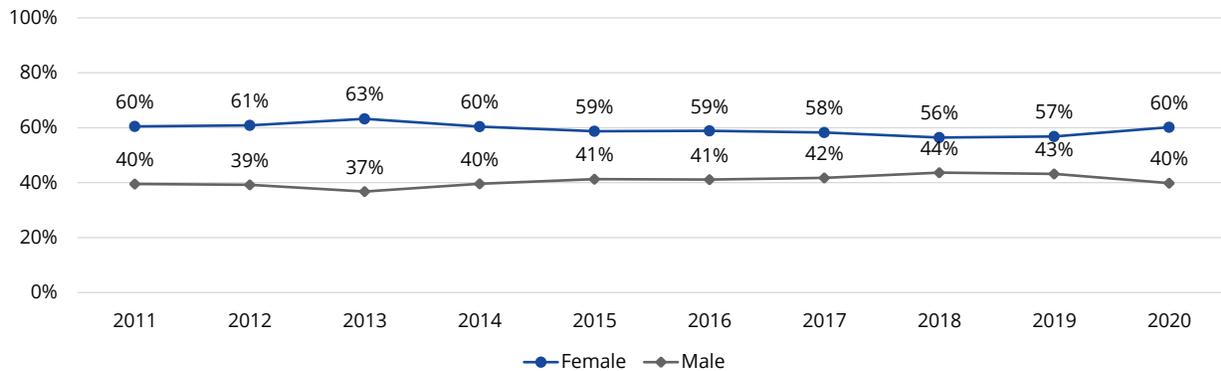
NURSE ANESTHETISTS



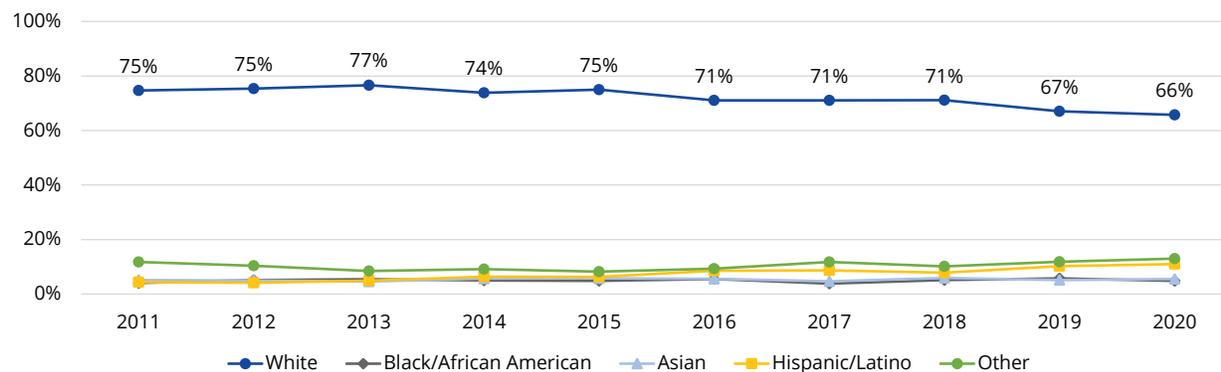
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

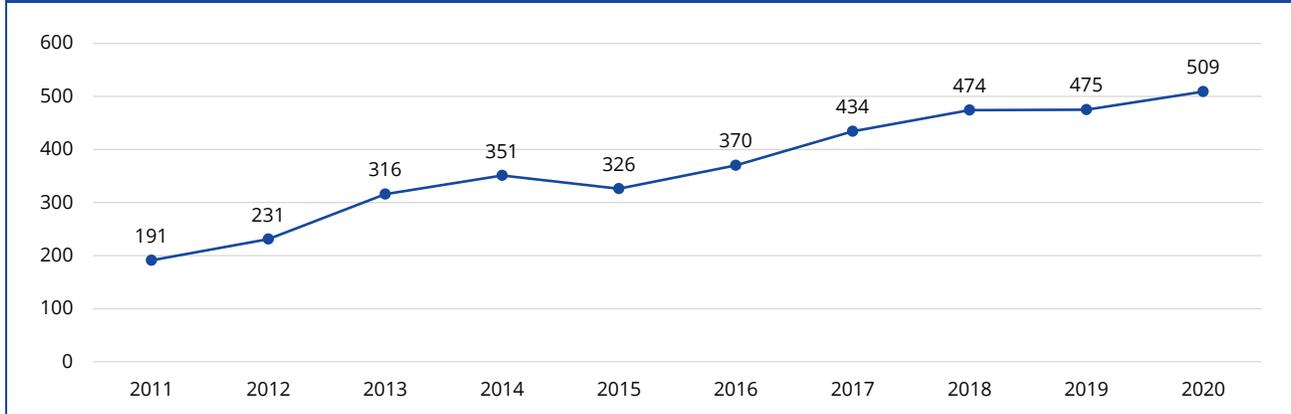


CIP Code: 51.3804; Minimum Education: Professional degree (master's level); Award Level Code(s): 7, 8, 18, 19.

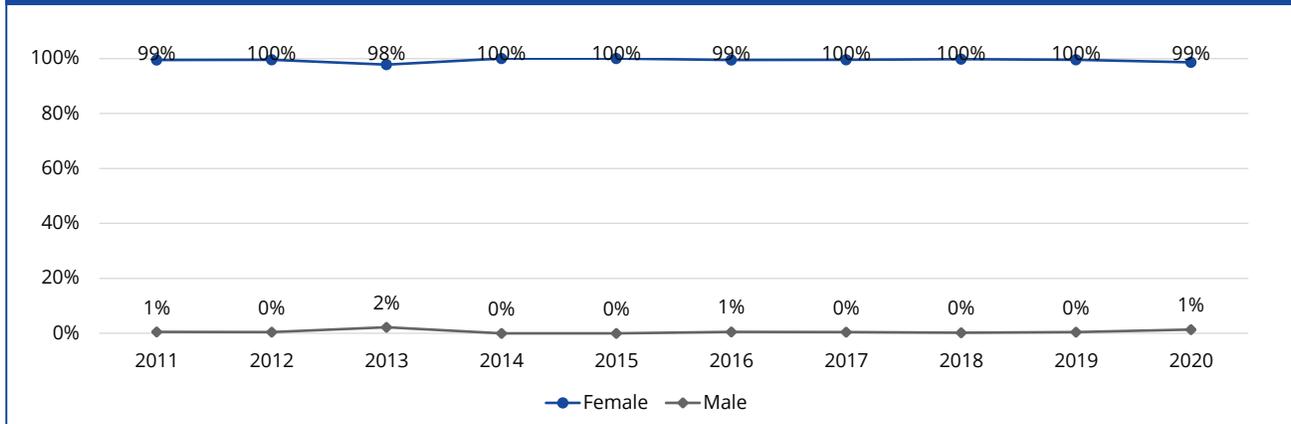
NURSE MIDWIVES



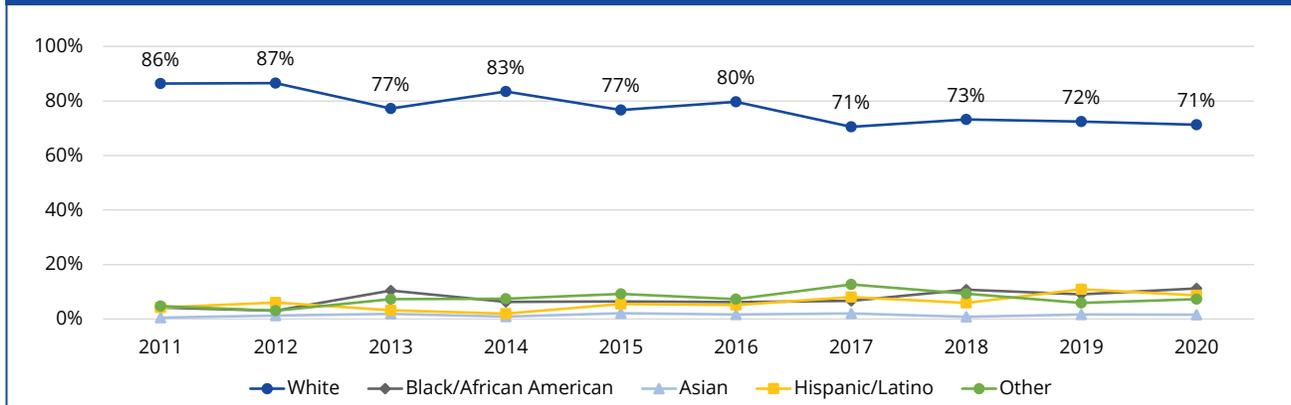
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

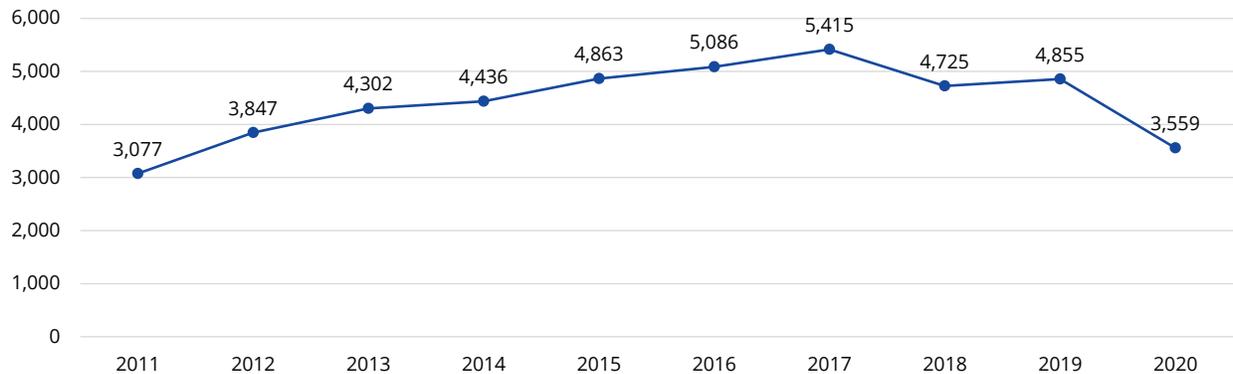


CIP Code: 51.3807; Minimum Education: Professional degree (master's level); Award Level Code(s): 7, 8, 18, 19.

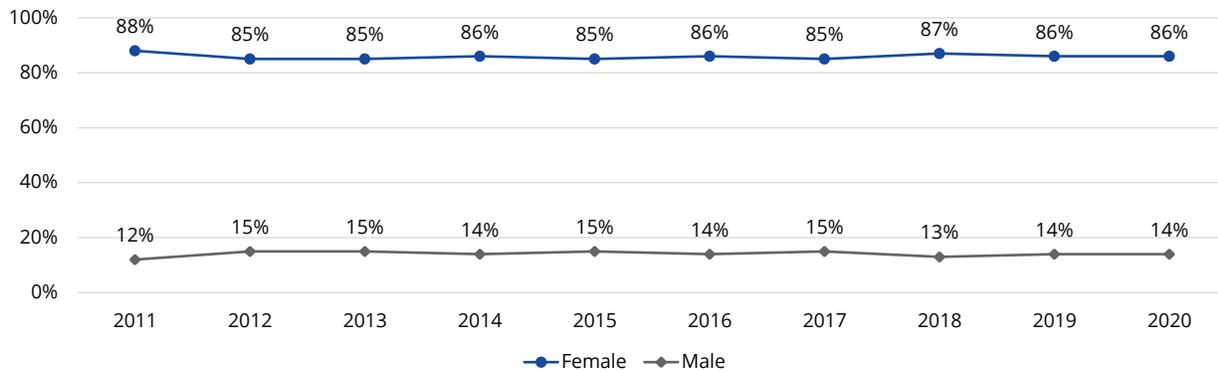
OCCUPATIONAL THERAPY ASSISTANTS



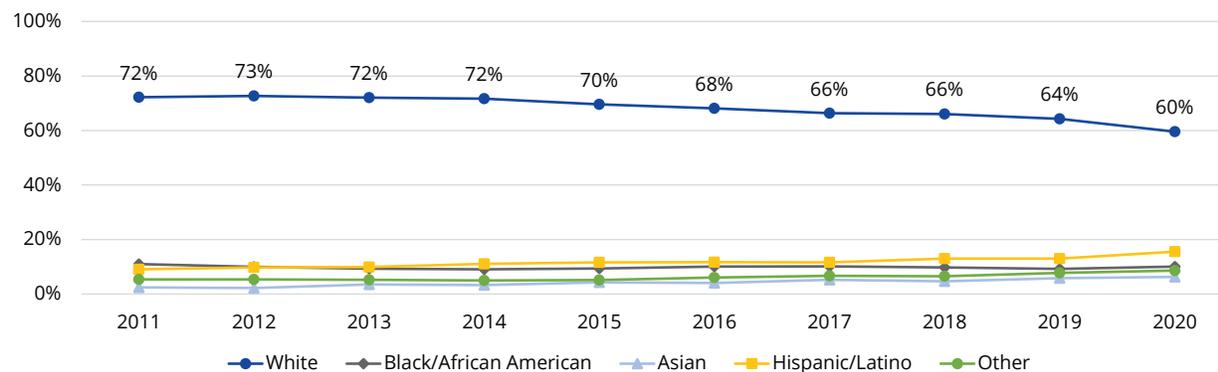
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

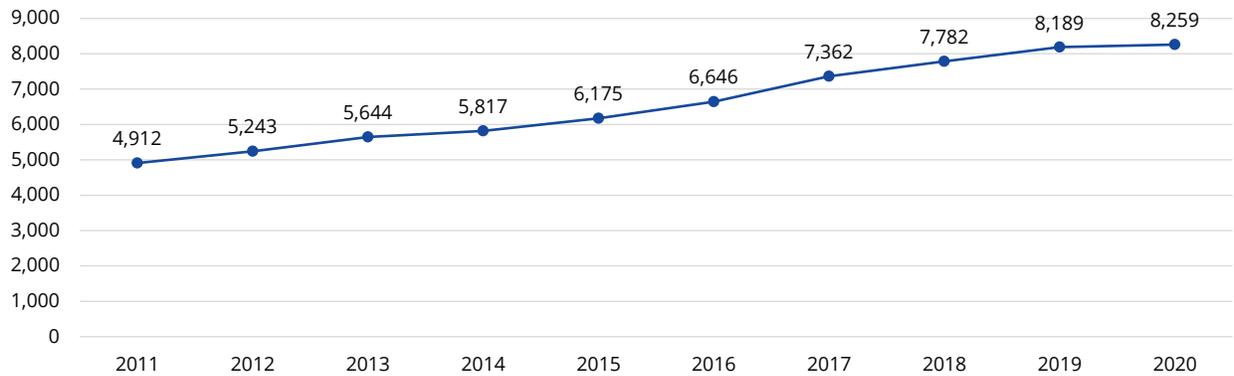


CIP Code: 51.0803; Minimum Education: Associate's degree; Award Level Code(s): 3.

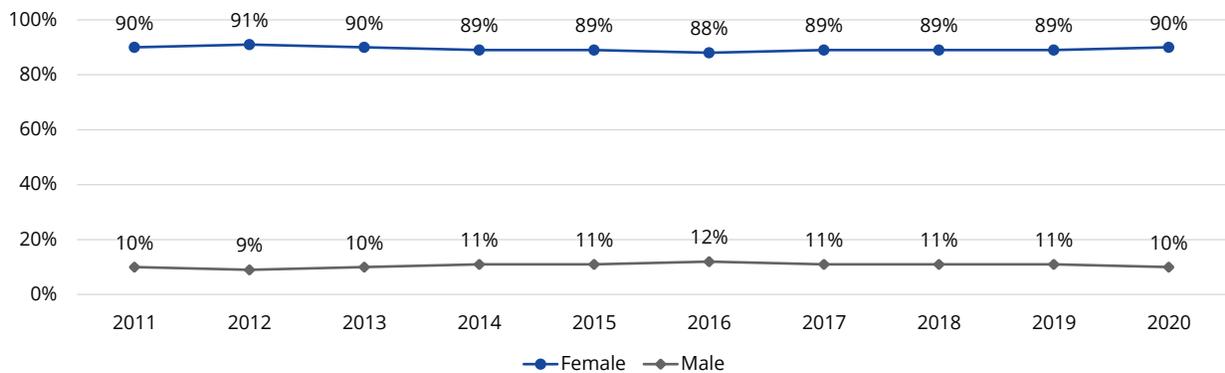
OCCUPATIONAL THERAPISTS



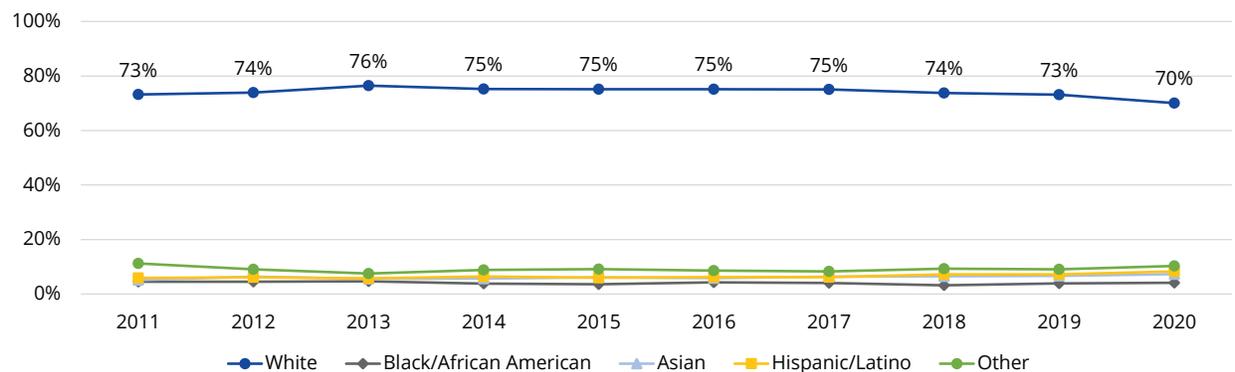
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

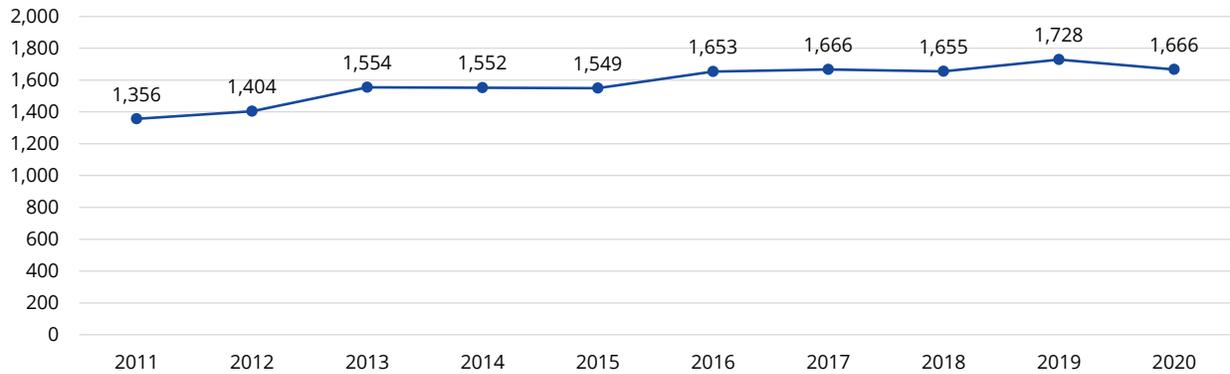


CIP Code: 51.2306; Minimum Education: Professional degree (master's level); Award Level Code(s): 7, 17, 18, 19.

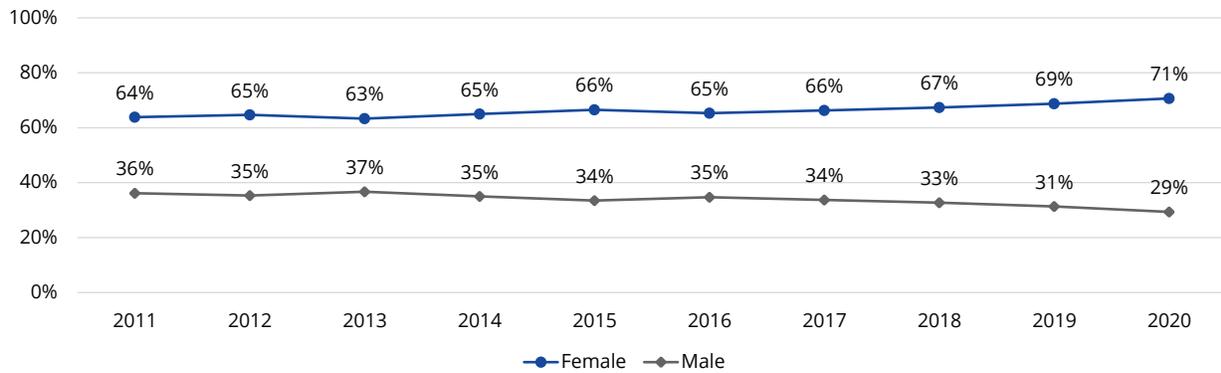
OPTOMETRISTS



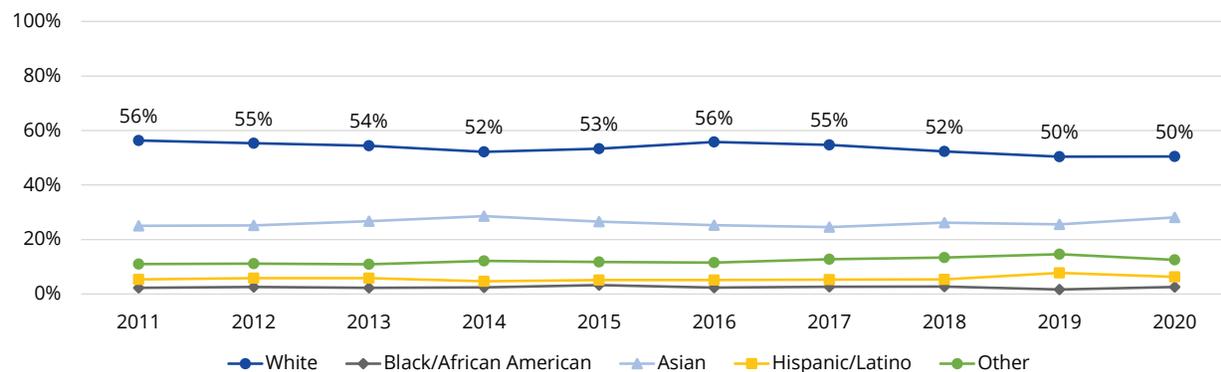
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

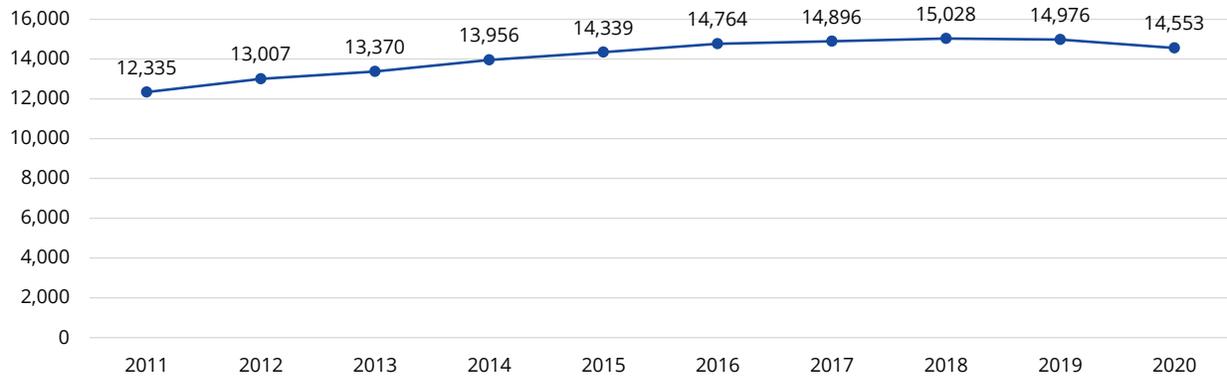


CIP Code: 51.1701; Minimum Education: Professional degree (doctoral level); Award Level Code(s): 18, 19.

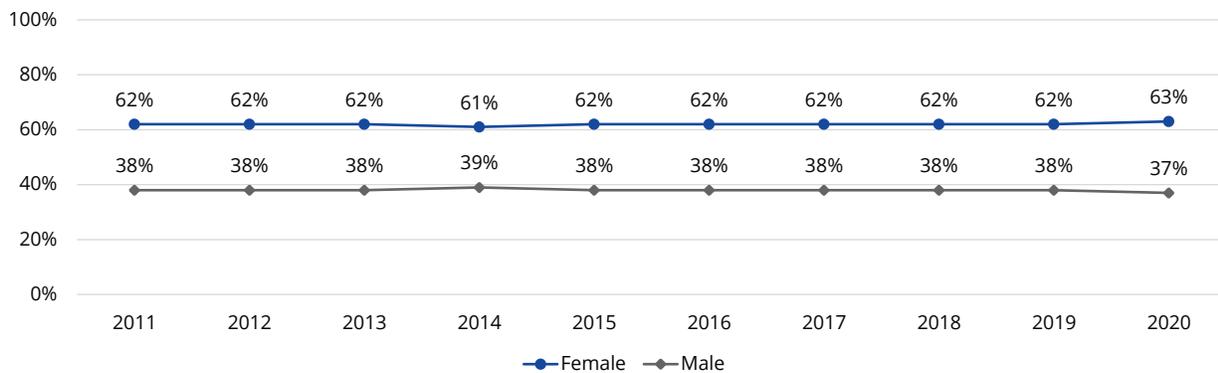
PHARMACISTS



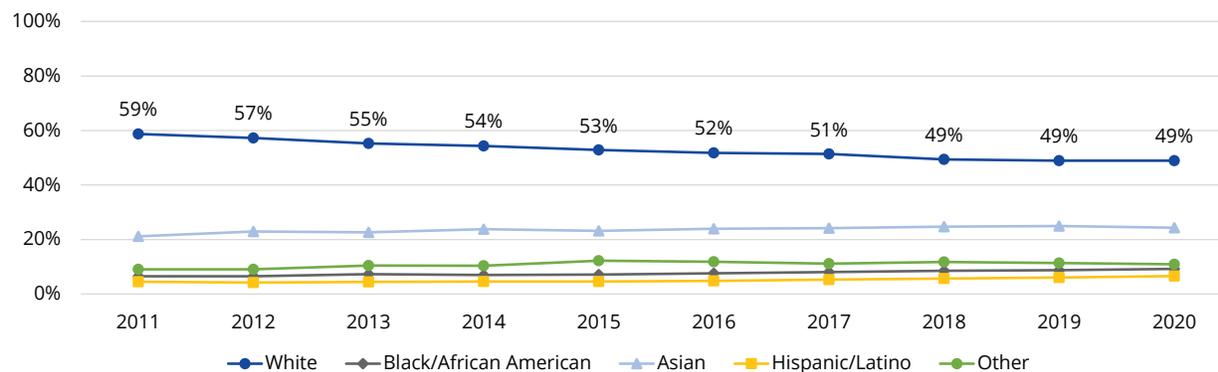
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

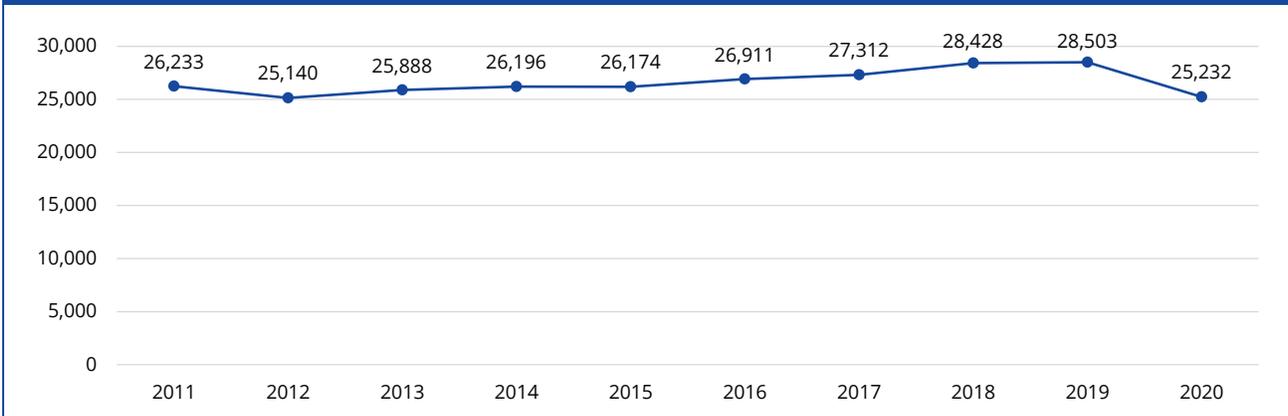


CIP Code: 51.2001; Minimum Education: Professional degree (doctoral level); Award Level Code(s): 18, 19.

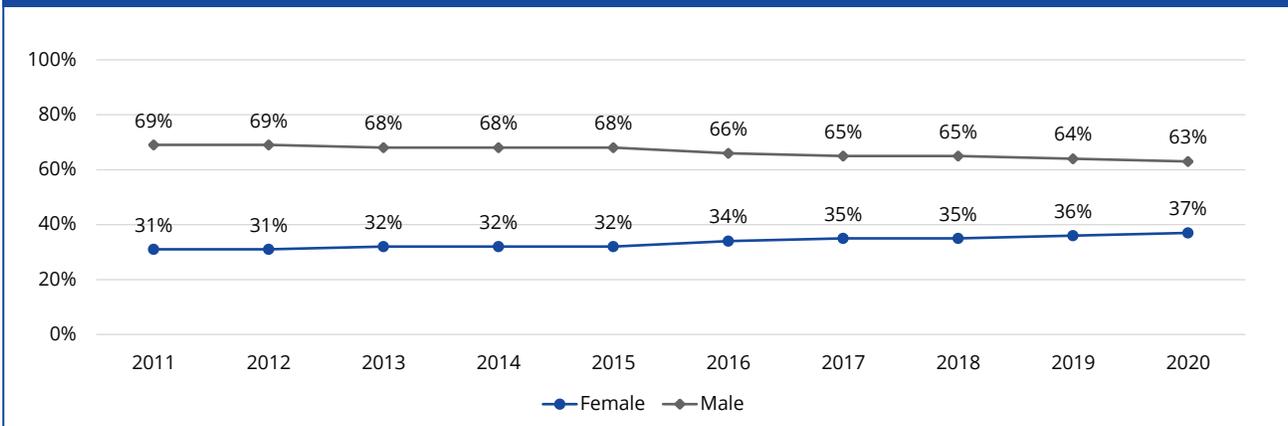
PARAMEDICS/ EMERGENCY MEDICAL TECHNICIANS



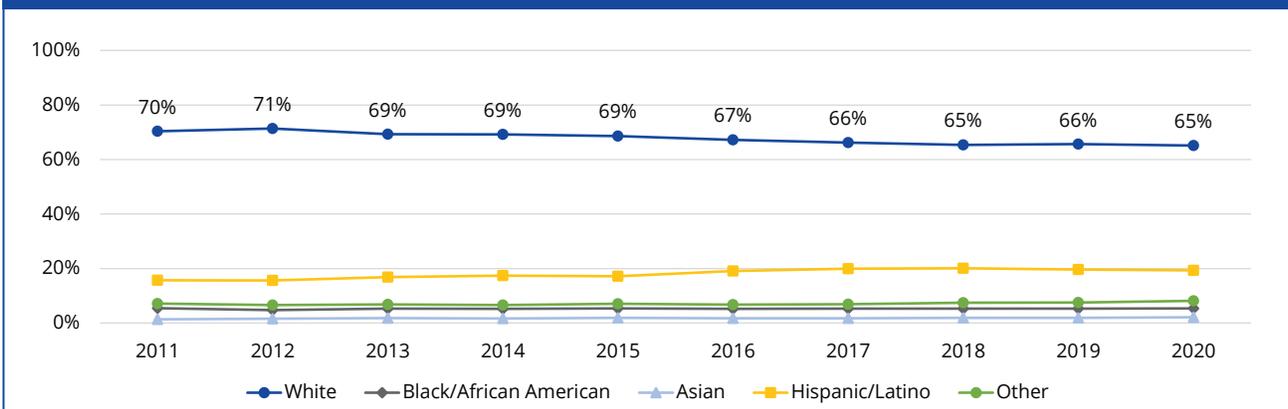
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

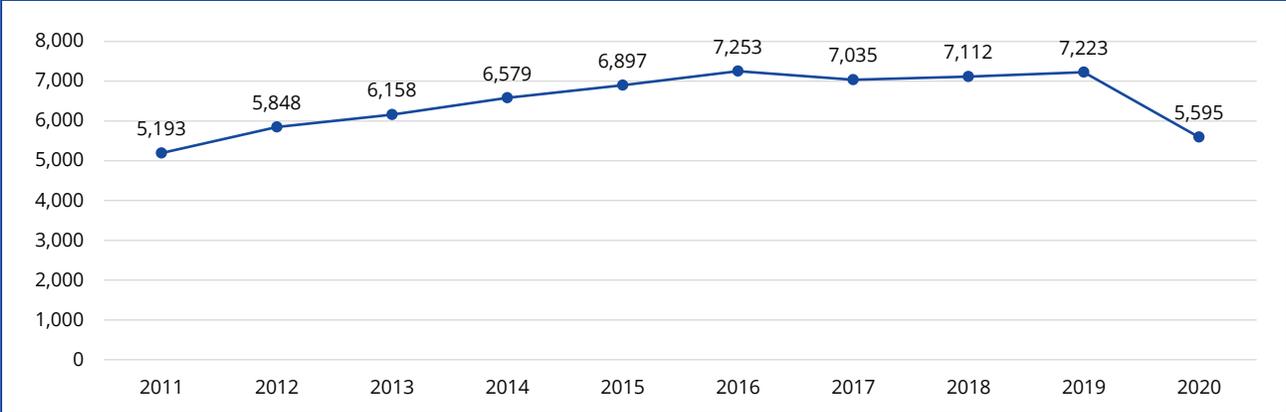


CIP Code: 51.0904; Minimum Education: Post-secondary certificate; Award Level Code(s): 1, 2, 3, 20, 21.

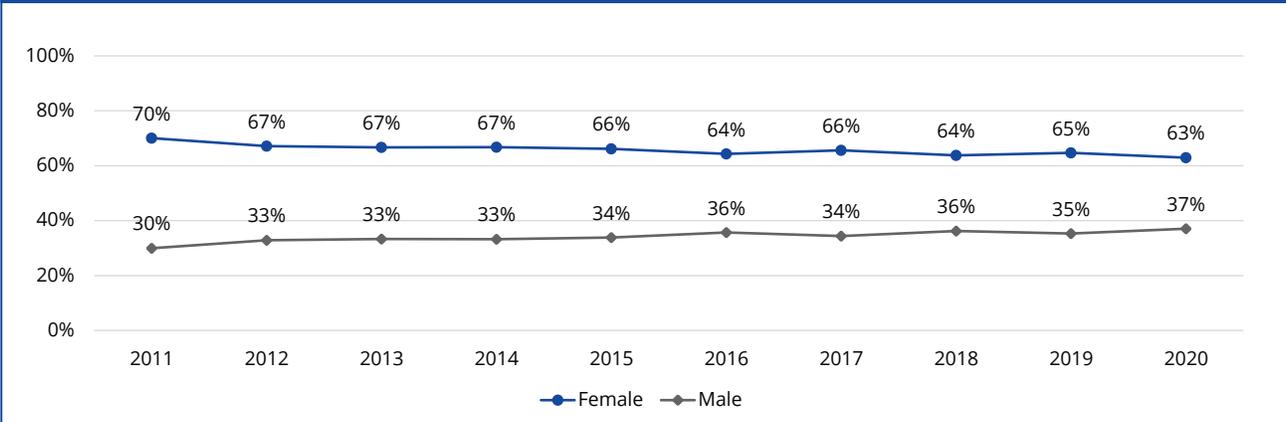
PHYSICAL THERAPIST ASSISTANTS



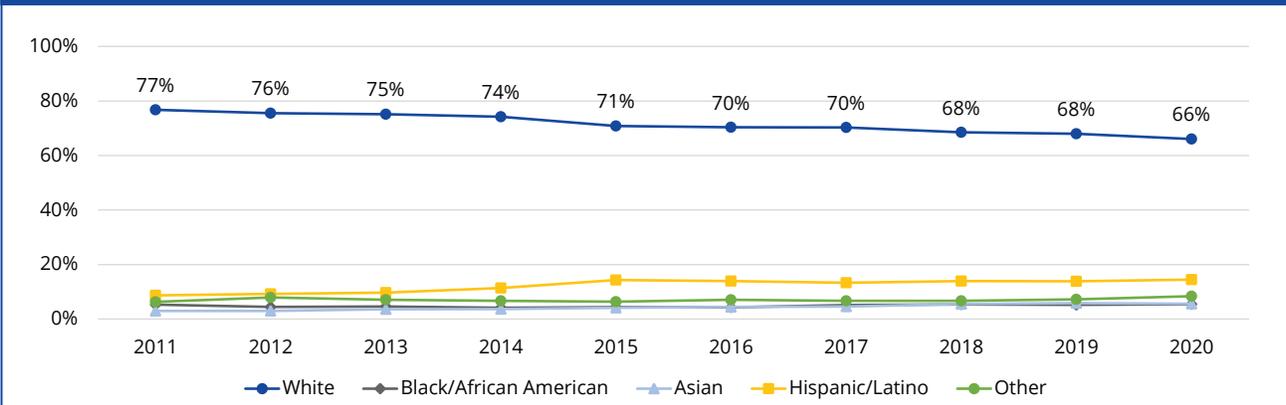
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

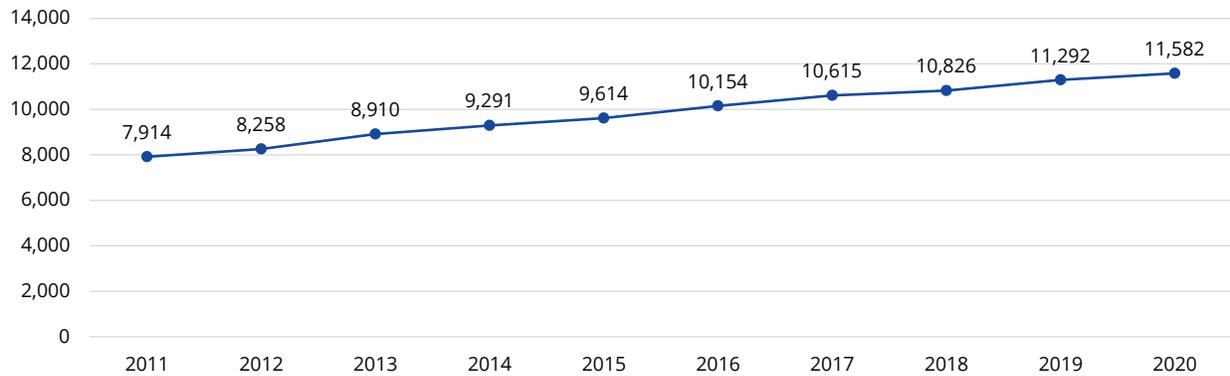


CIP Code: 51.0806; Minimum Education: Associate's degree; Award Level Code(s): 3.

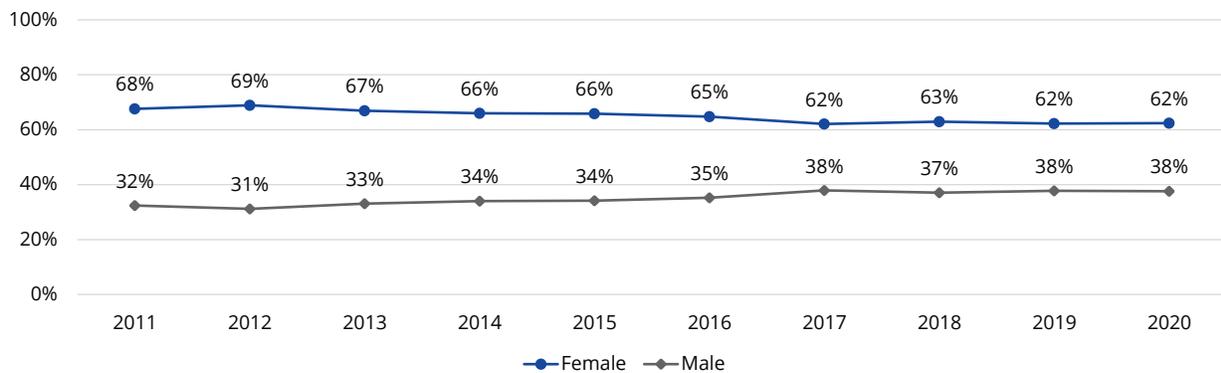
PHYSICAL THERAPISTS



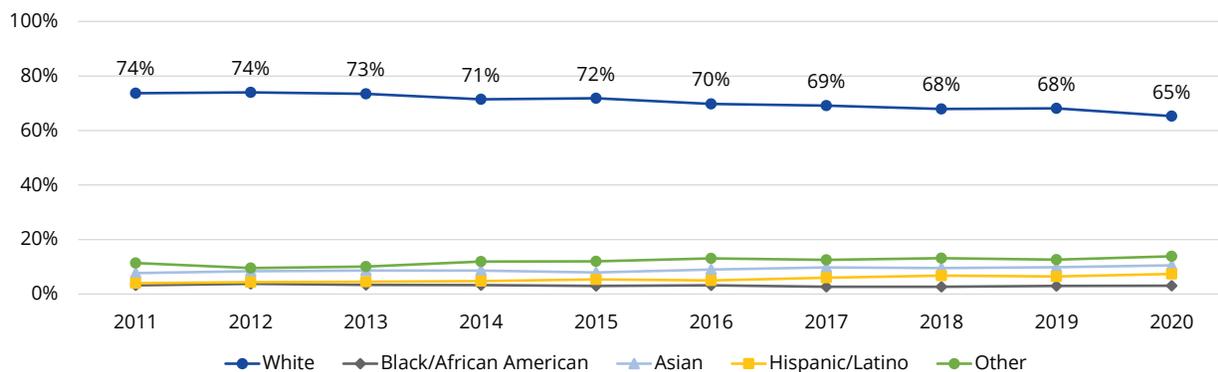
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

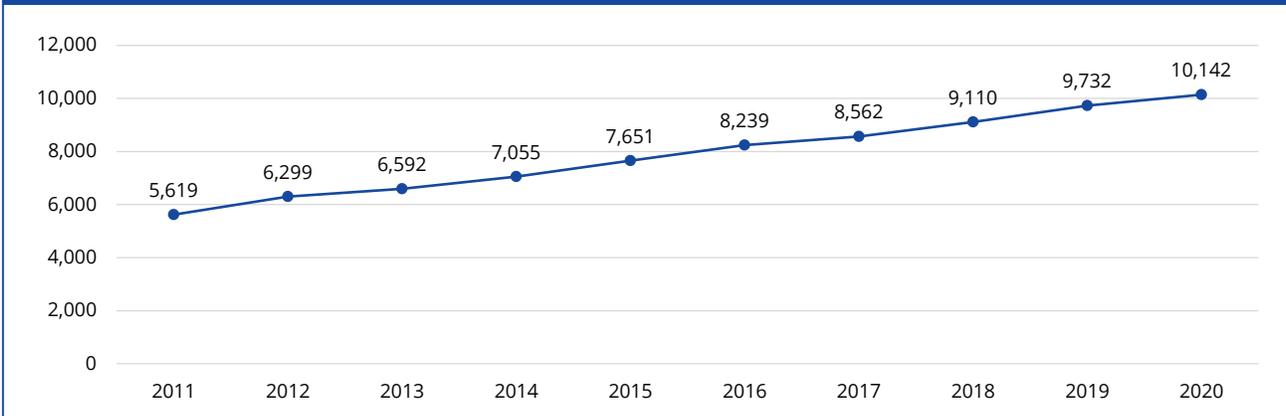


CIP Code: 51.2308; Minimum Education: Professional degree (doctoral level); Award Level Code(s): 18, 19.

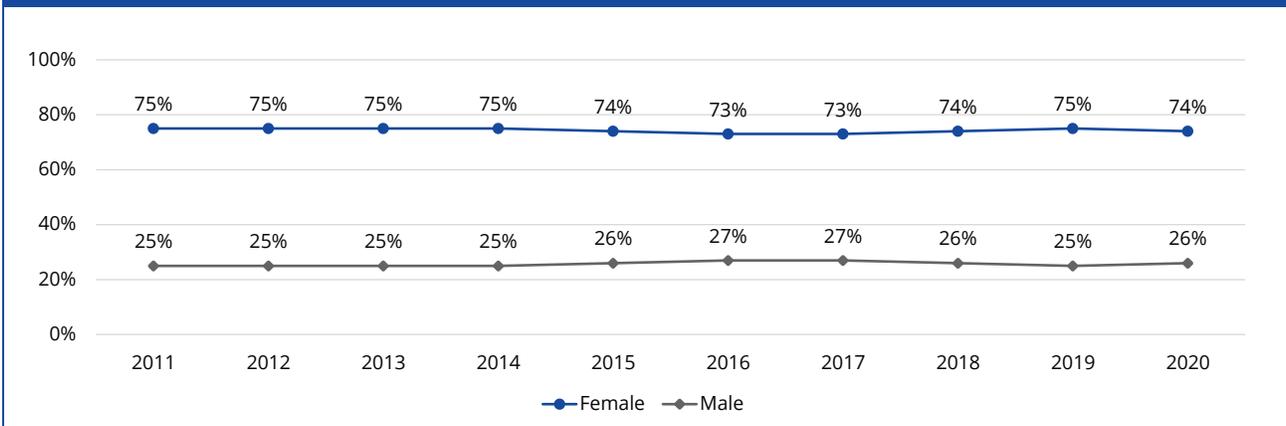
PHYSICIAN ASSISTANTS



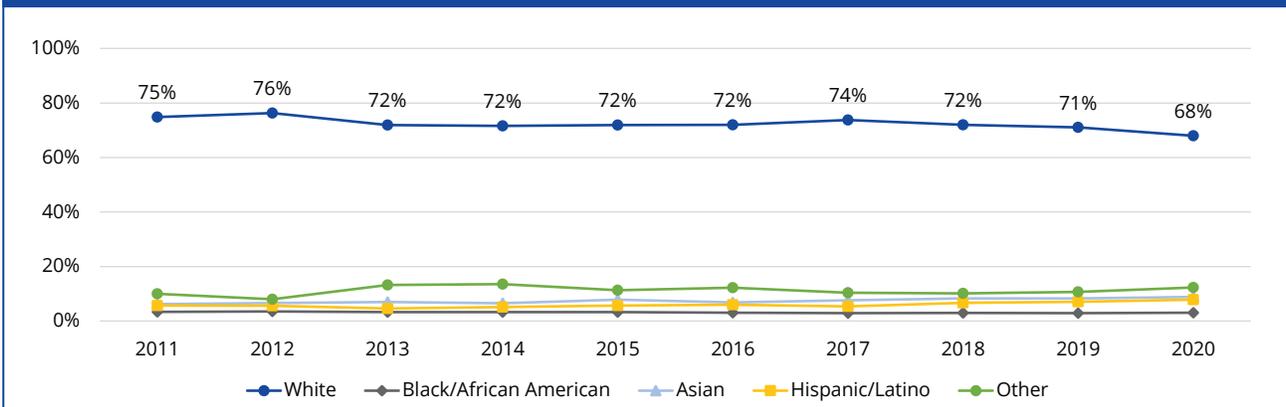
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

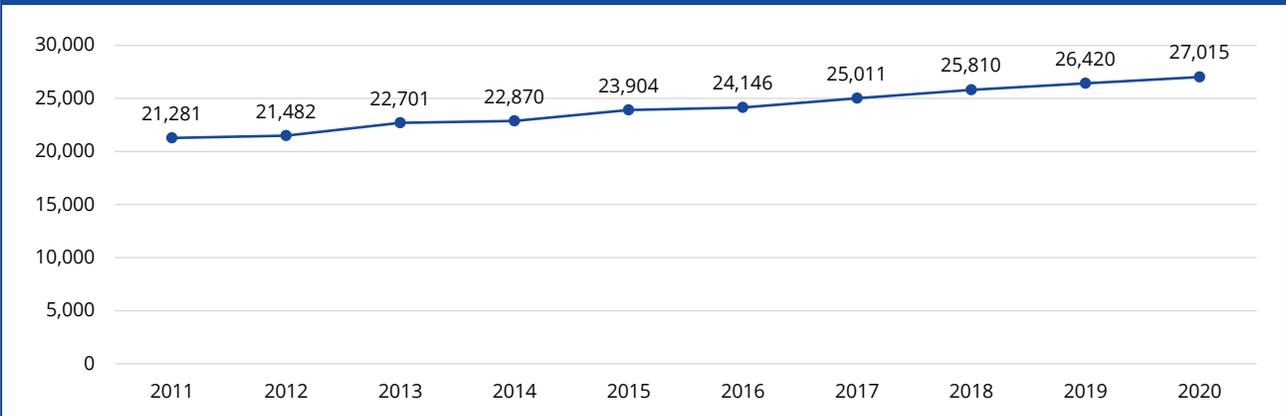


CIP Code: 51.0912; Minimum Education: Professional degree (master's level); Award Level Code(s): 5, 7.

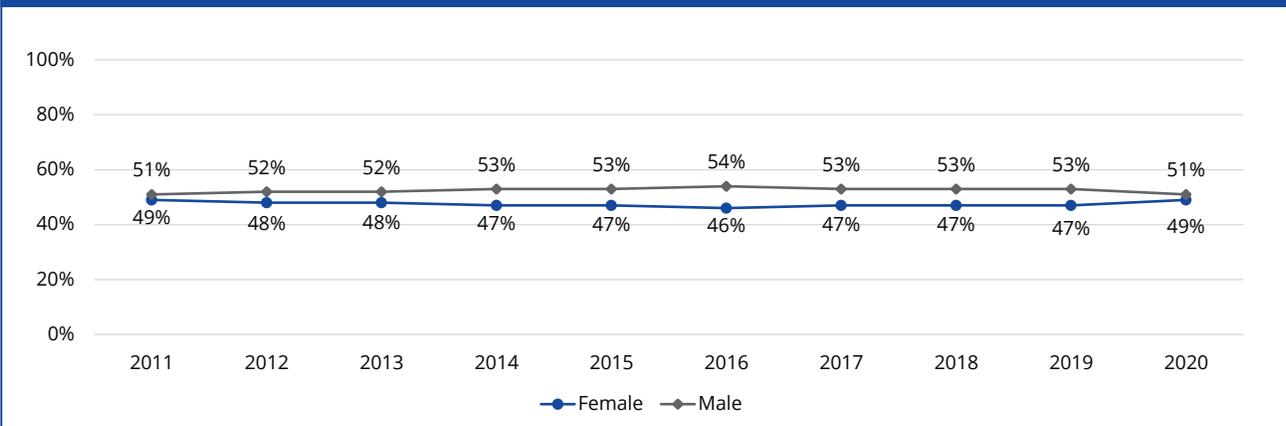
PHYSICIANS



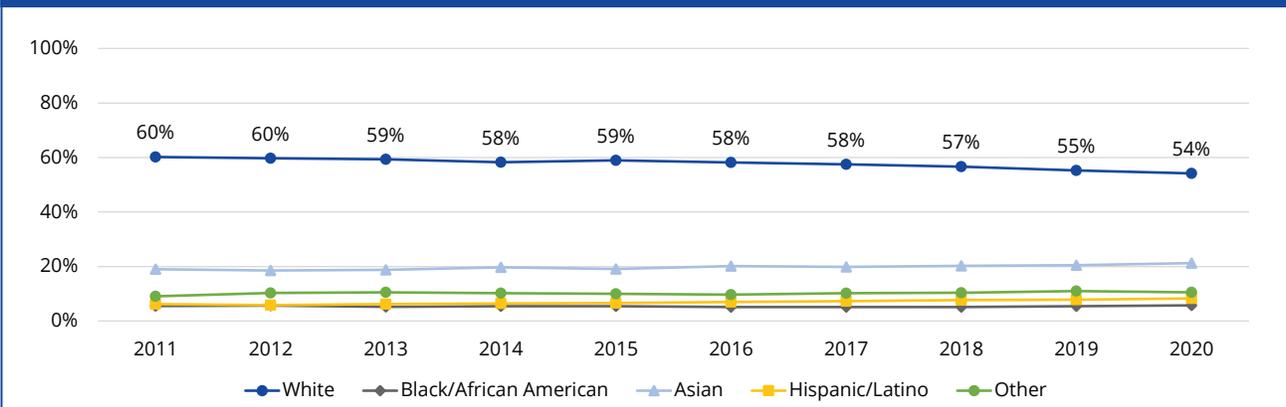
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

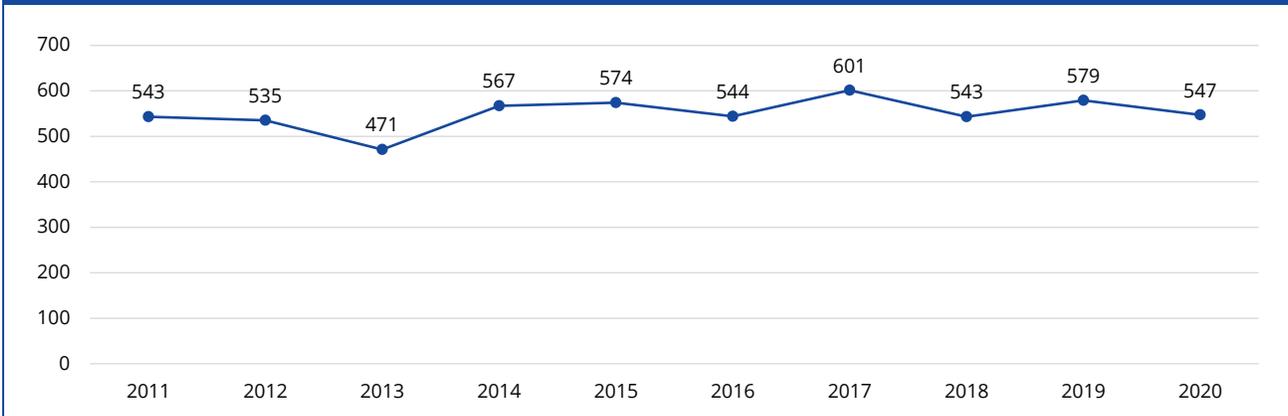


CIP Code: 51.1201; 51.1202; 51.1901; Minimum Education: Professional degree (doctoral level); Award Level Code(s): 18, 19.

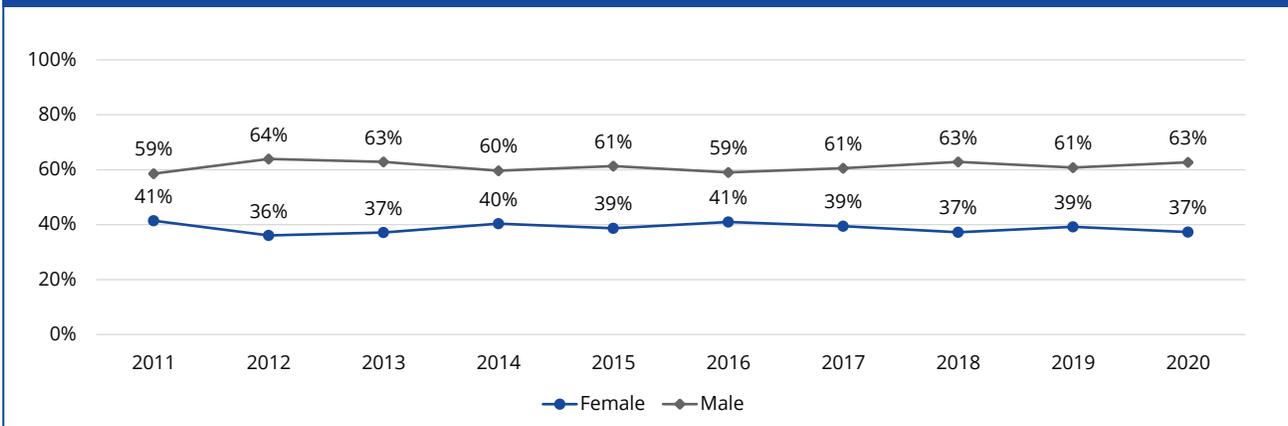
PODIATRISTS



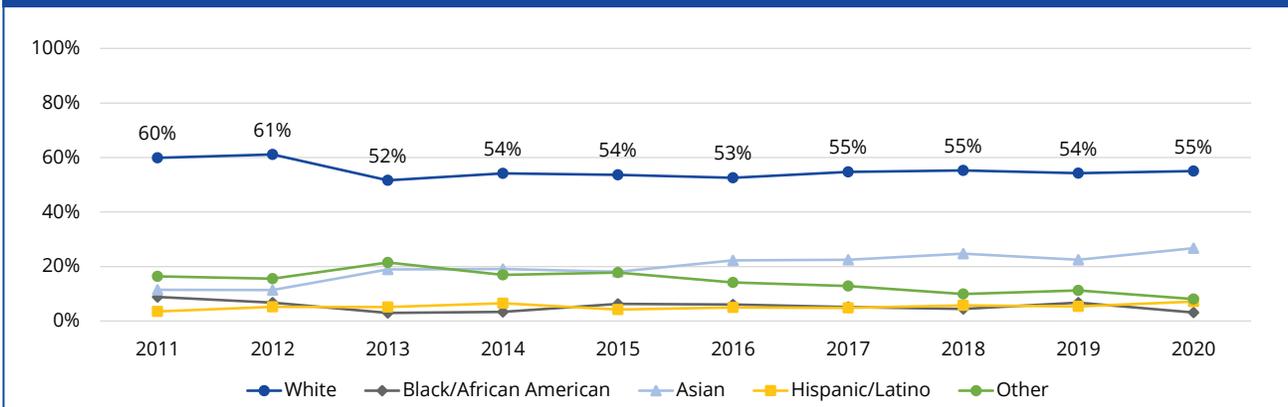
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

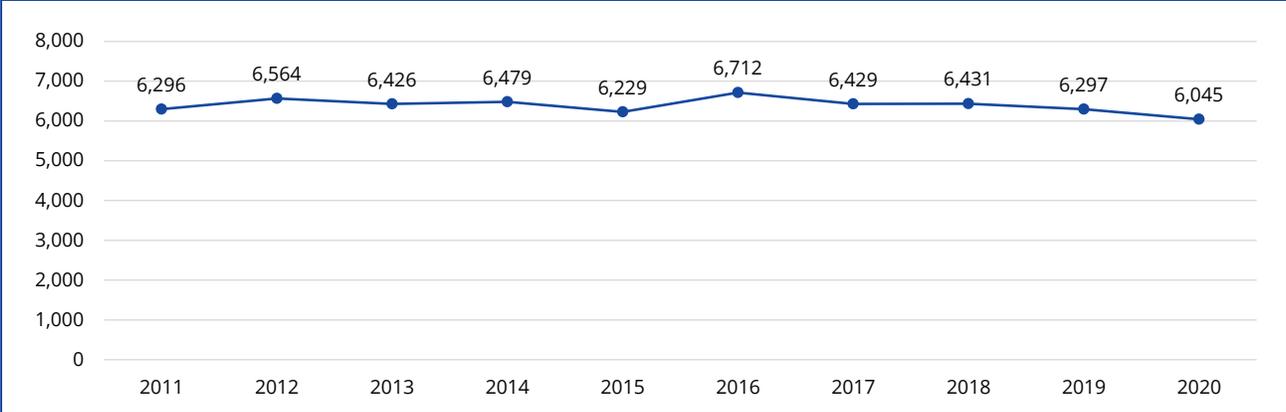


CIP Code: 51.1203; 51.2101; Minimum Education: Professional degree (doctoral level); Award Level Code(s): 18, 19.

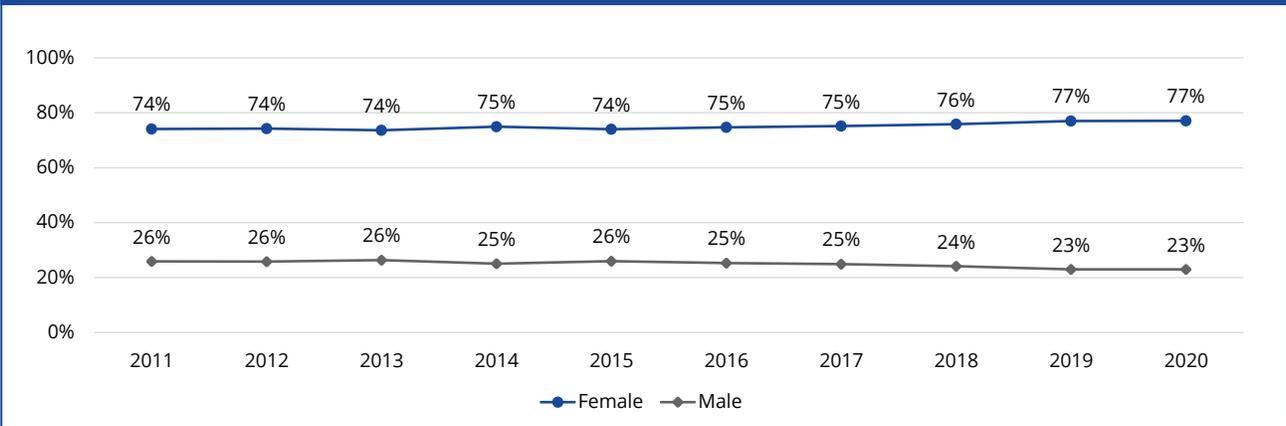
PSYCHOLOGISTS



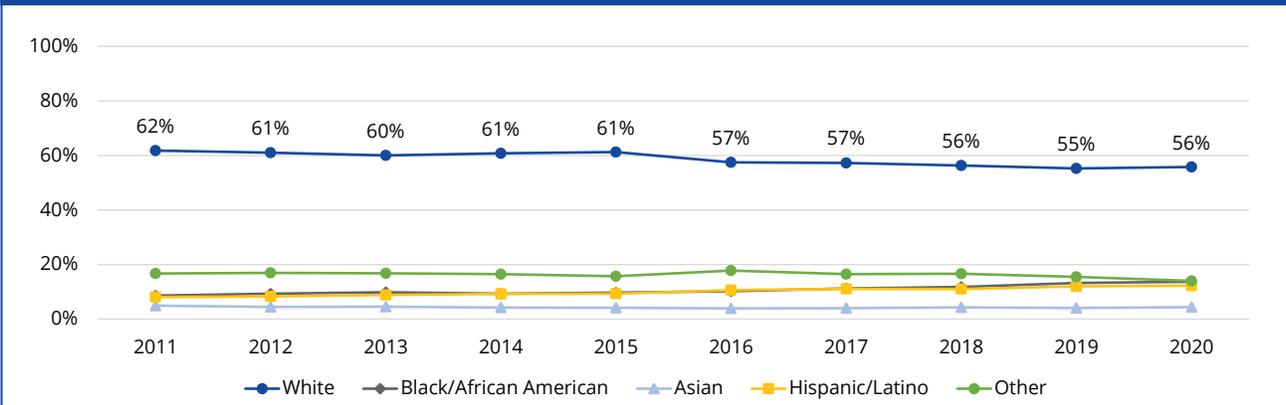
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

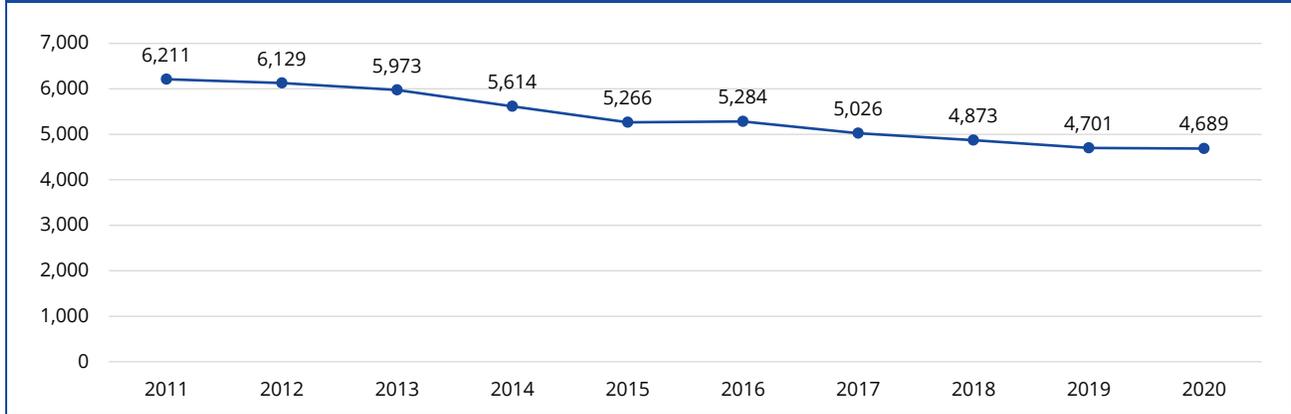


CIP Code: 42.0101; Minimum Education: Professional degree (master's level); Award Level Code(s): 7, 8, 18, 19.

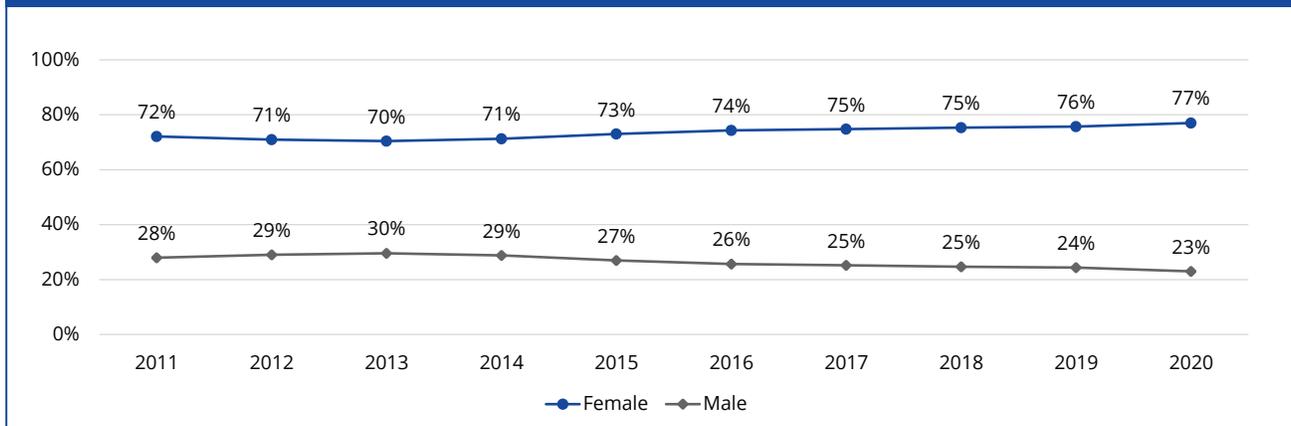
RADIATION THERAPISTS



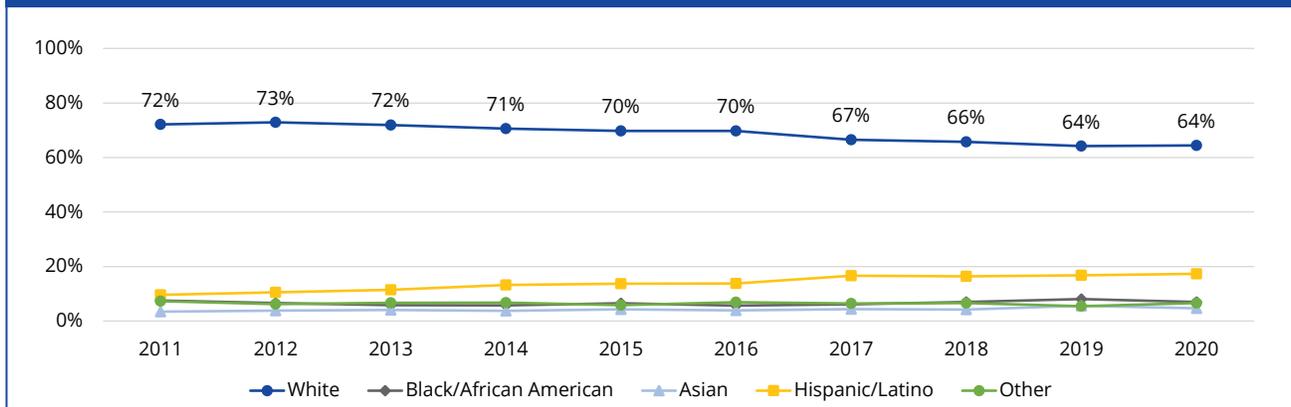
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

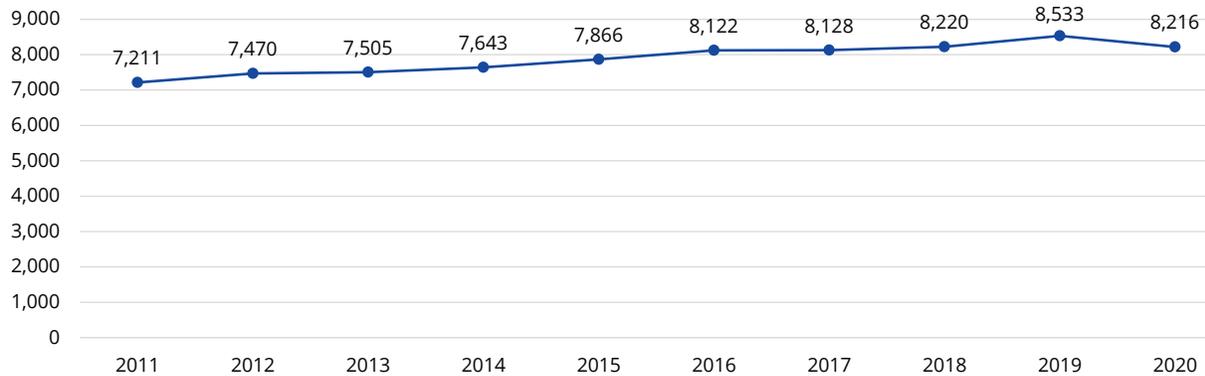


CIP Code: 51.0907; Minimum Education: Associate's degree; Award Level Code(s): 3, 5.

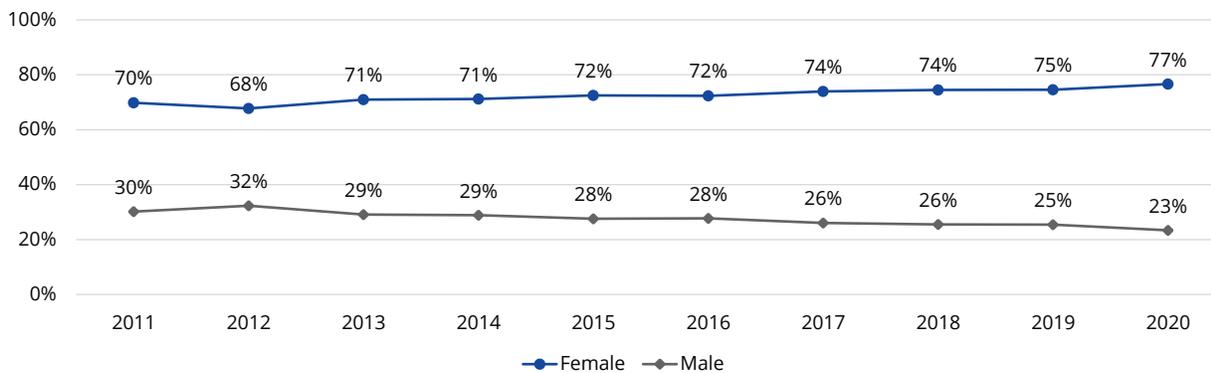
RADIOLOGIC TECHNOLOGISTS AND TECHNICIANS



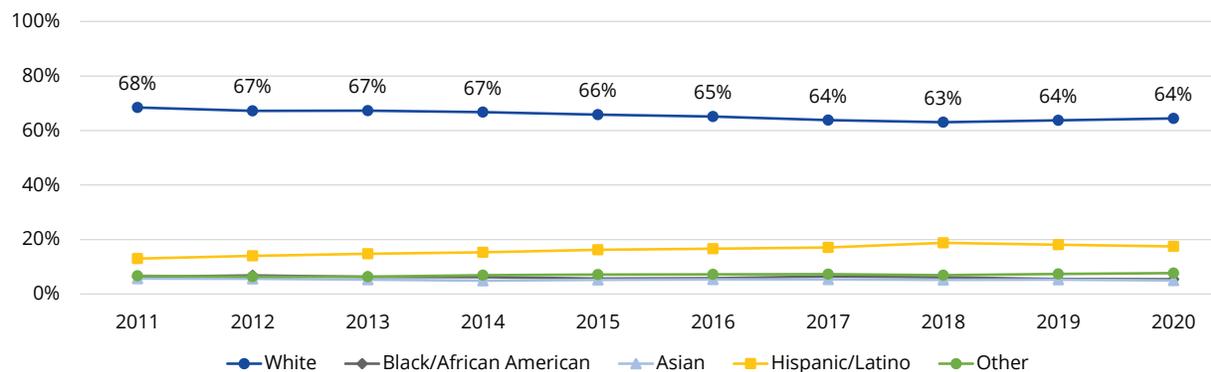
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

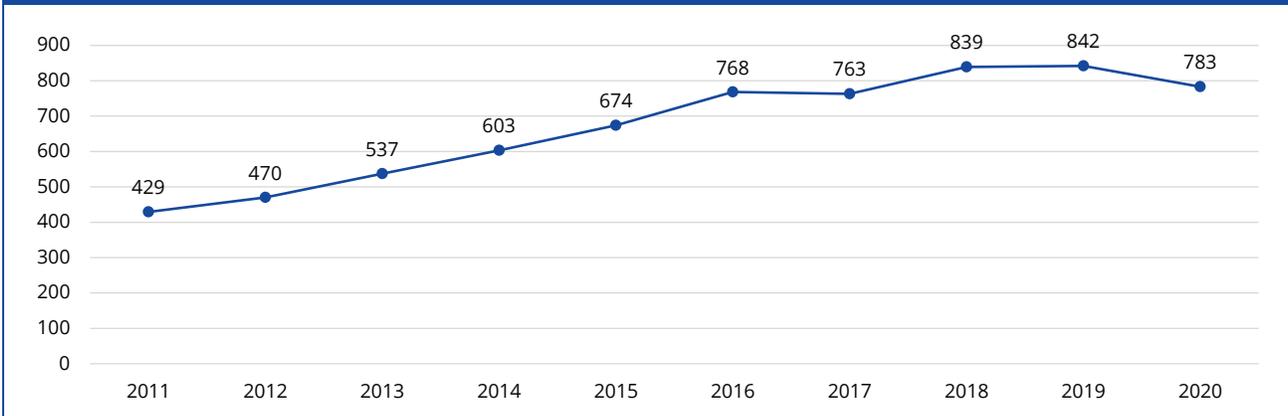


CIP Code: 51.0911; Minimum Education: Associate's degree; Award Level Code(s): 3, 4, 5.

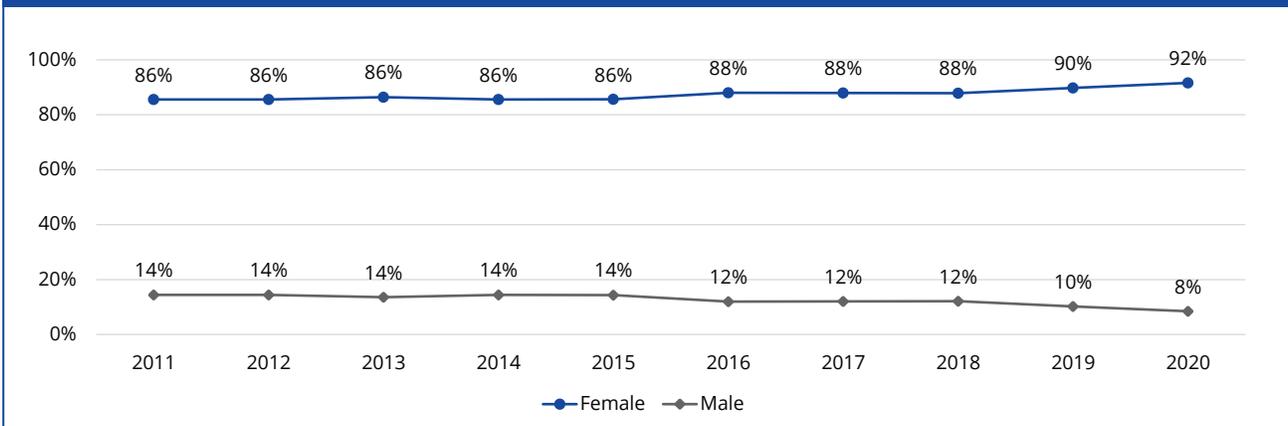
RECREATIONAL THERAPISTS



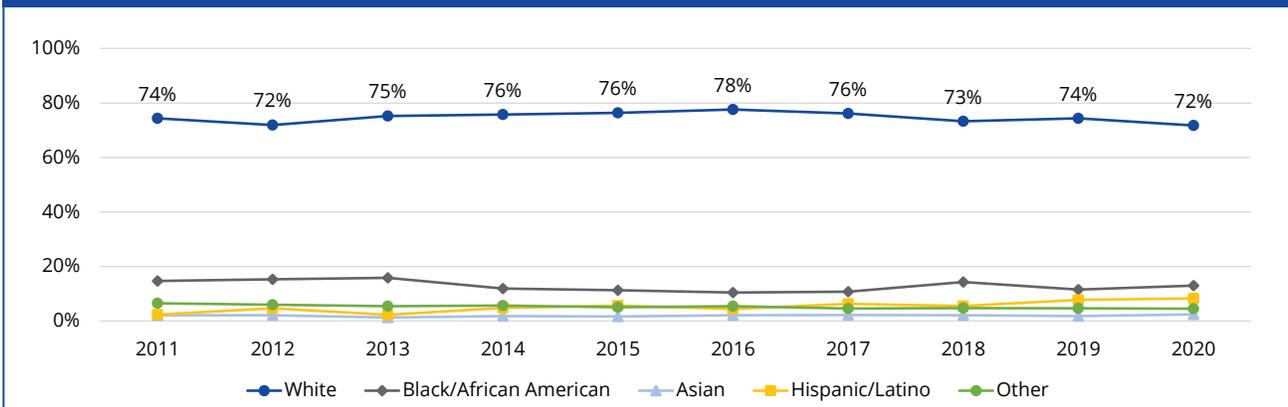
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

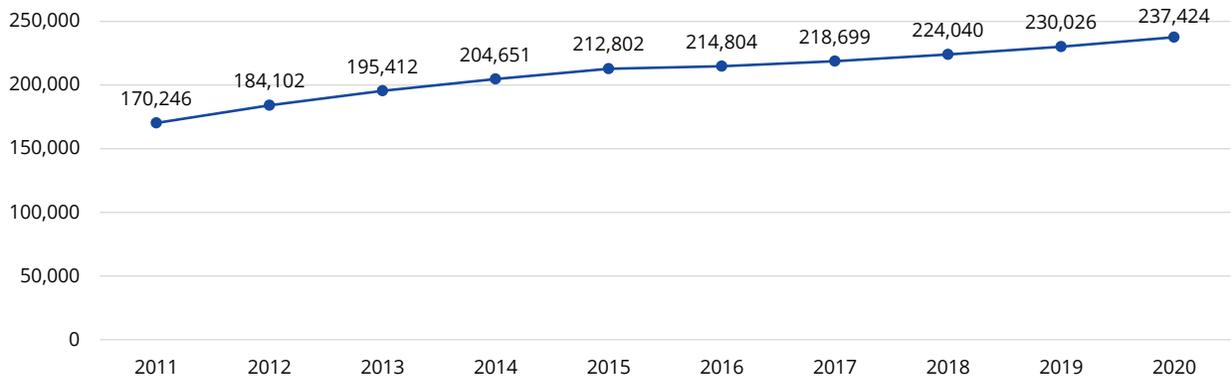


CIP Code: 51.2309; Minimum Education: Bachelor's degree; Award Level Code(s): 5.

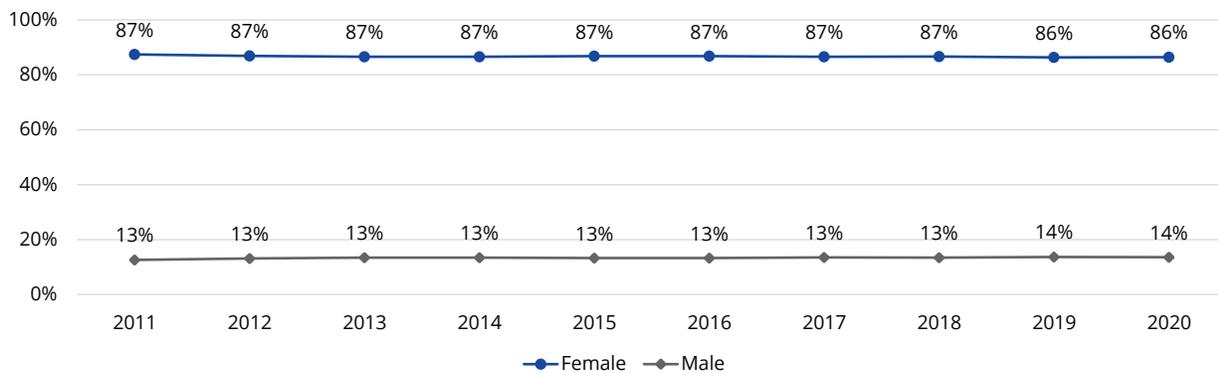
REGISTERED NURSES



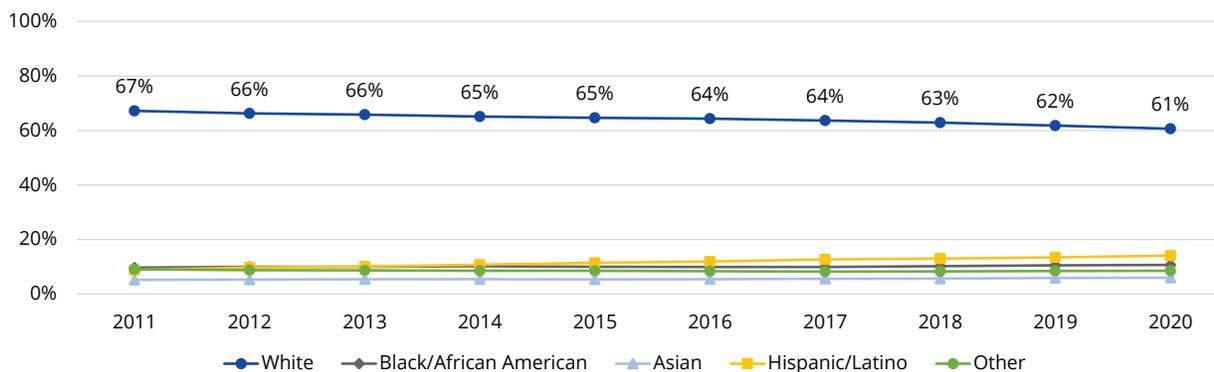
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

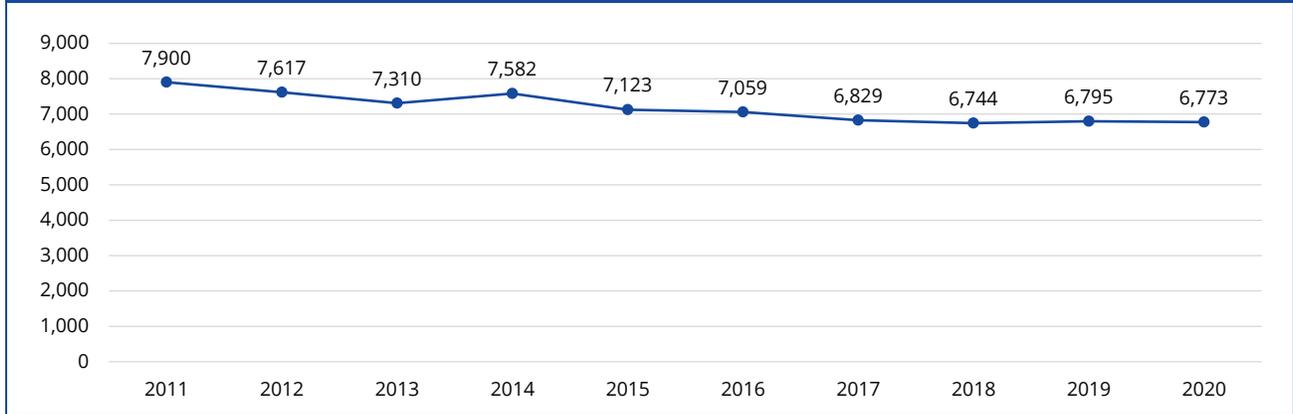


CIP Code: 51.3801; Minimum Education: Associate's degree; Award Level Code(s): 3, 4, 5.

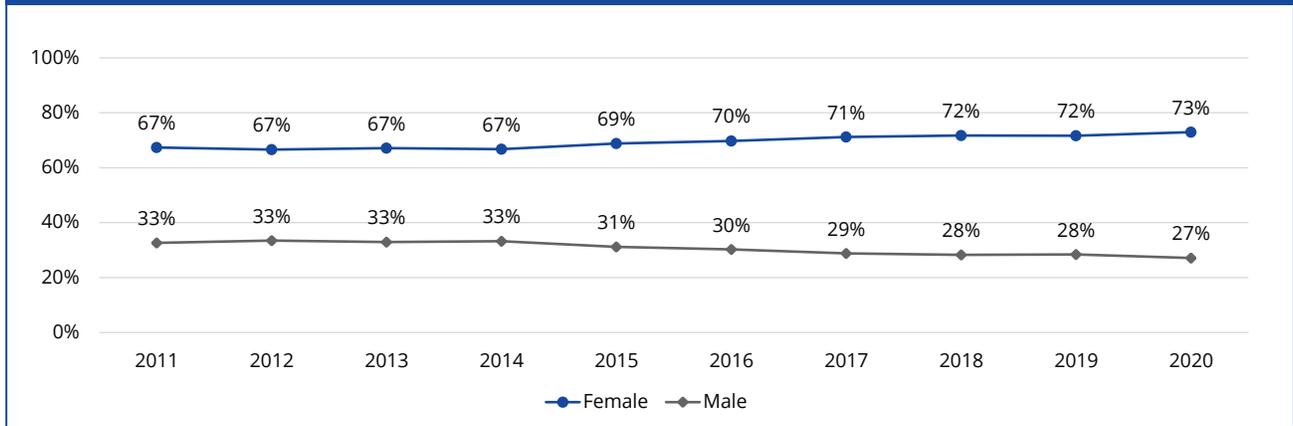
RESPIRATORY THERAPISTS



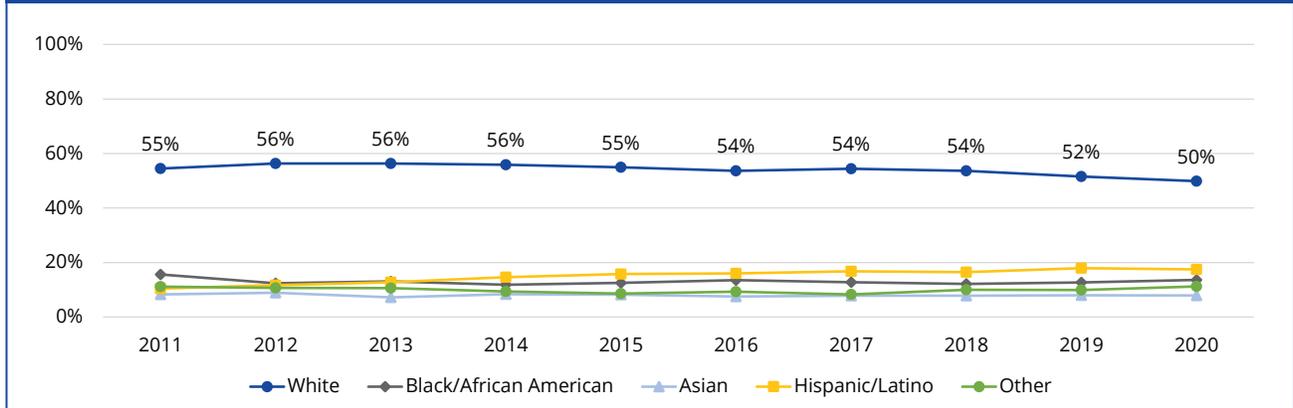
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

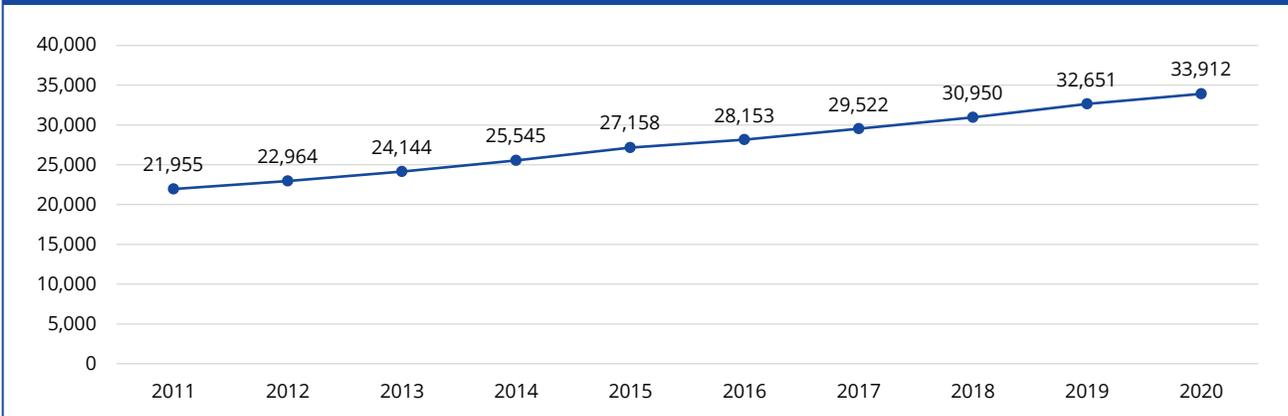


CIP Code: 51.0908; Minimum Education: Associate's degree; Award Level Code(s): 3, 5.

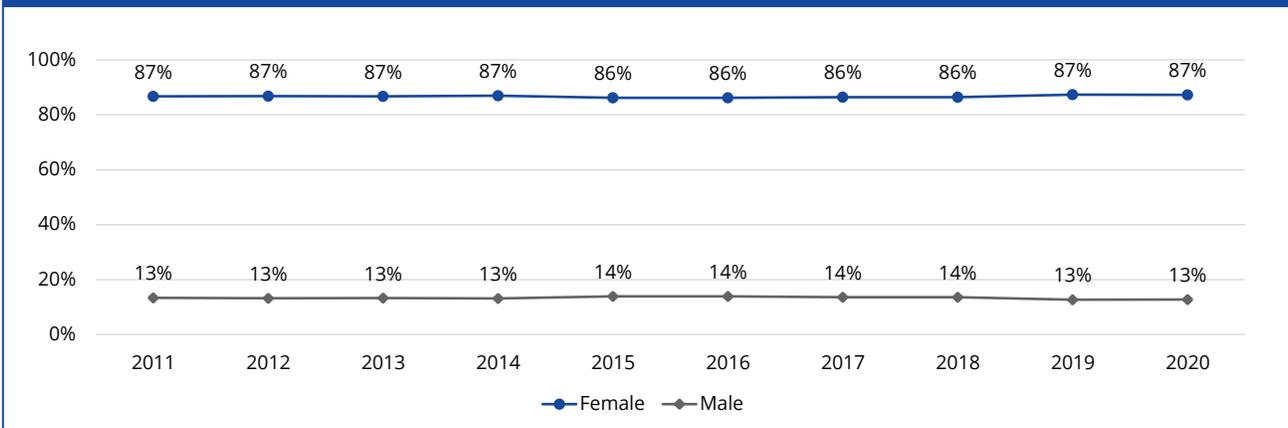
SOCIAL WORKERS



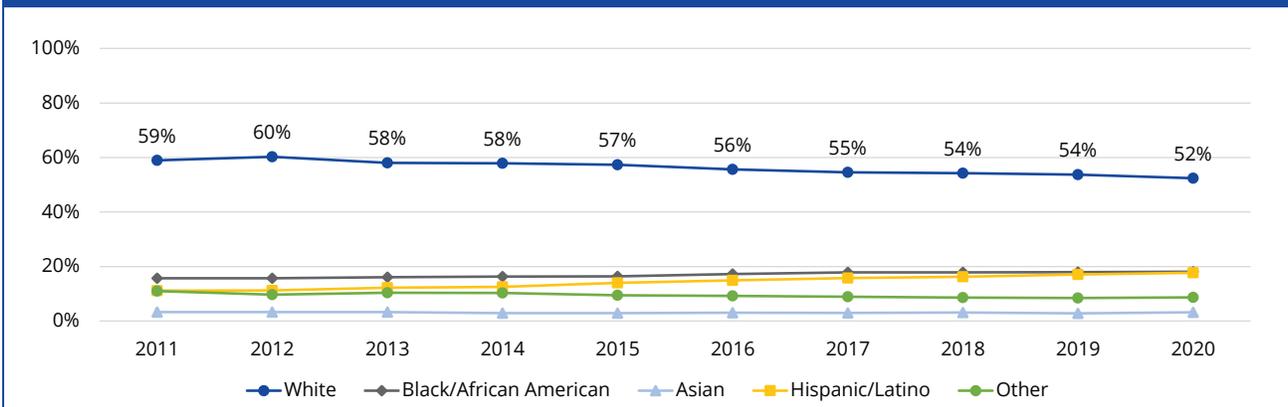
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY

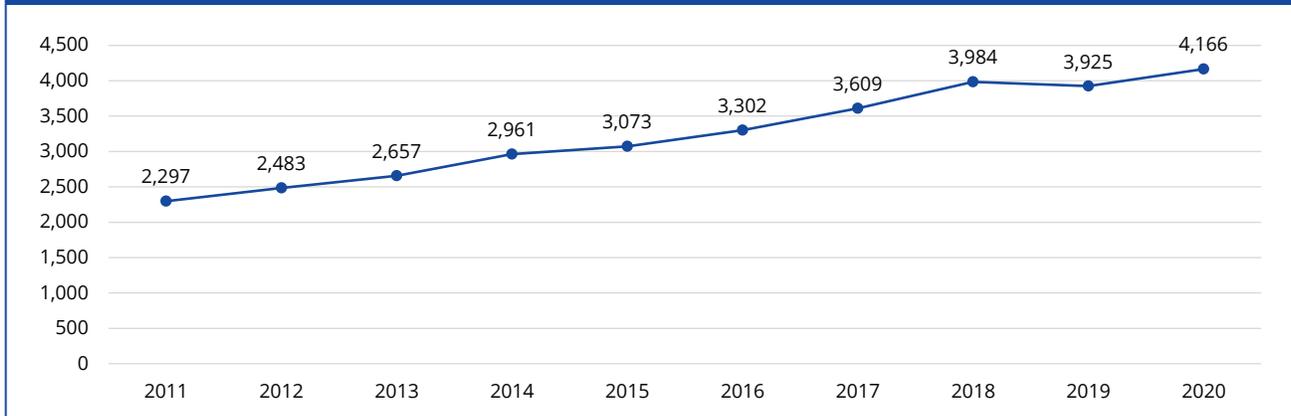


CIP Code: 51.1503; 44.0701; 44.0702; 44.0799; Minimum Education: Professional degree (master's level); Award Level Code(s): 7.

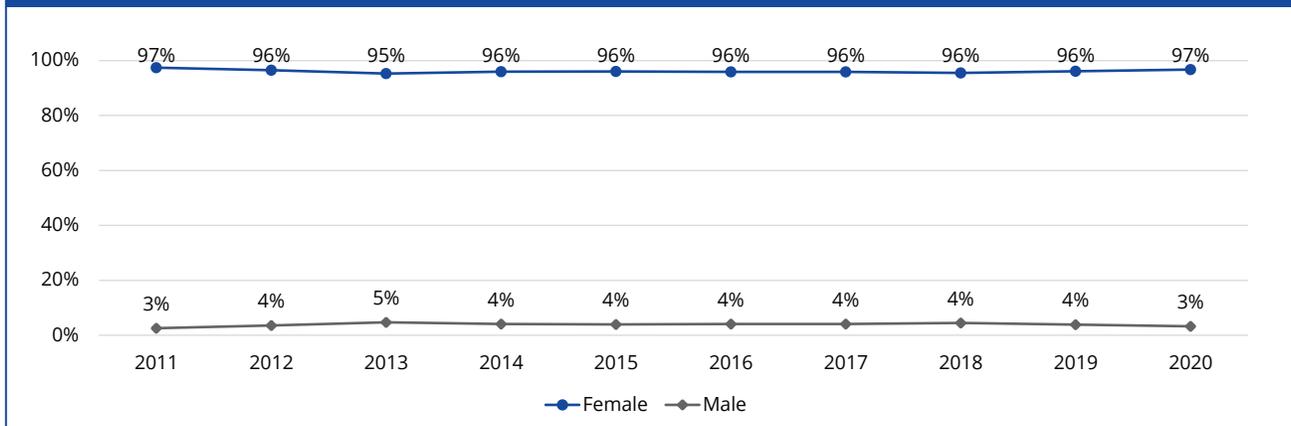
SPEECH-LANGUAGE PATHOLOGISTS



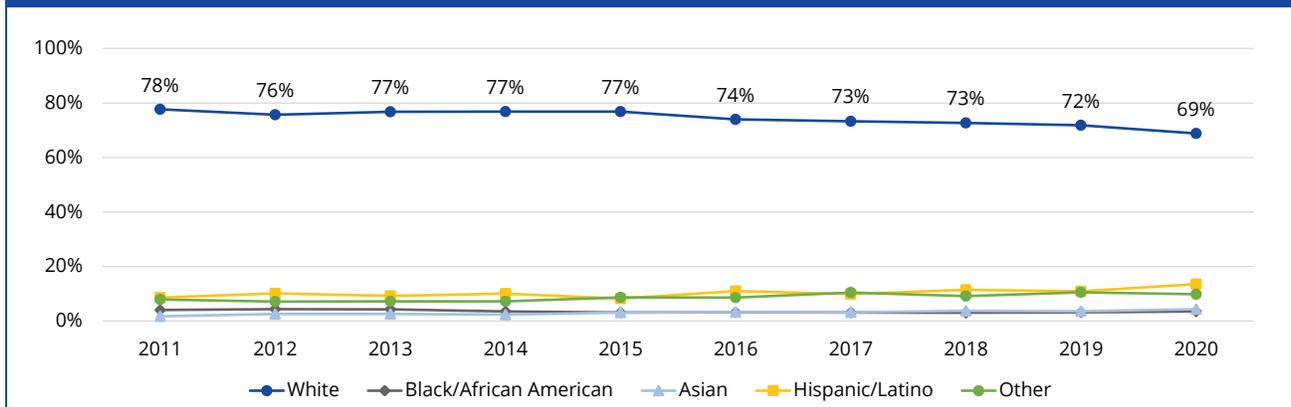
TOTAL NUMBER OF DEGREES/CERTIFICATES AWARDED



GENDER



RACE/ETHNICITY



CIP Code: 51.0203; Minimum Education: Professional degree (master's level); Award Level Code(s): 7.



APPENDIX

TABLE A-1: CIP Codes, Minimum Education Requirements, and Award Level Codes by Profession

| Occupation | CIP Code | Minimum Education | Award Level Codes |
|---|-------------------------------|--------------------------------------|-----------------------|
| Audiologists | 51.0202 | Professional degree (doctoral level) | 18, 19 |
| Chiropractors | 51.0101 | Professional degree (doctoral level) | 18, 19 |
| Clinical Psychologists | 42.2801 | Professional degree (master's level) | 7, 8, 18, 19 |
| Dental Assistants | 51.0601 | Post-secondary certificate | 1, 2, 3, 4, 5, 20, 21 |
| Dental Hygienists | 51.0602 | Associate's degree | 3, 5 |
| Dentists | 51.0401 | Professional degree (doctoral level) | 18, 19 |
| Diagnostic Medical Sonographers | 51.0910 | Associate's degree | 3, 4, 5 |
| Dietitians and Nutritionists | 51.3101 51.3102 | Bachelor's degree | 5 |
| Dietetic Technicians | 51.3103 | Associate's degree | 3 |
| Licensed Practical Nurses | 51.3901 | Post-secondary certificate | 1, 2, 3, 20, 21 |
| Medical and Clinical Laboratory Technologists | 51.1005 | Bachelor's degree | 5 |
| Nuclear Medicine Technicians | 51.0905 | Associate's degree | 3, 5 |
| Nurse Anesthetists | 51.3804 | Professional degree (master's level) | 7, 8, 18, 19 |
| Nurse Midwives | 51.3807 | Professional degree (master's level) | 7, 8, 18, 19 |
| Occupational Therapy Assistants | 51.0803 | Associate's degree | 3 |
| Occupational Therapists | 51.2306 | Professional degree (master's level) | 7, 17, 18, 19 |
| Optometrists | 51.1701 | Professional degree (doctoral level) | 18, 19 |
| Pharmacists | 51.2001 | Professional degree (doctoral level) | 18, 19 |
| Paramedics/Emergency Medical Technicians | 51.0904 | Post-secondary certificate | 1, 2, 3, 20, 21 |
| Physical Therapist Assistants | 51.0806 | Associate's degree | 3 |
| Physical Therapists | 51.2308 | Professional degree (doctoral level) | 18, 19 |
| Physician Assistants | 51.0912 | Professional degree (master's level) | 5, 7 |
| Physicians | 51.1201 51.1202 51.1901 | Professional degree (doctoral level) | 18, 19 |
| Podiatrists | 51.1203 51.2101 | Professional degree (doctoral level) | 18, 19 |

TABLE A-1: CIP Codes, Minimum Education Requirements, and Award Level Codes by Profession (cont.)

| Occupation | CIP Code | Minimum Education | Award Level Codes |
|--|--|--------------------------------------|-------------------|
| Psychologists | 42.0101 | Professional degree (master's level) | 7, 8, 18, 19 |
| Radiation Therapists | 51.0907 | Associate's degree | 3, 5 |
| Radiologic Technologists and Technicians | 51.0911 | Associate's degree | 3, 4, 5 |
| Recreational Therapists | 51.2309 | Bachelor's degree | 5 |
| Registered Nurses | 51.3801 | Associate's degree | 3, 4, 5 |
| Respiratory Therapists | 51.0908 | Associate's degree | 3, 5 |
| Social Workers | 51.1503 44.0701 44.0702 44.0799 | Professional degree (master's level) | 7 |
| Speech-language Pathologists | 51.0203 | Professional degree (master's level) | 7 |

Award Level Codes

- 1 Award of less than 1 academic year
- 2 Award of at least 1 but less than 2 academic years
- 3 Associate's degree
- 4 Award of at least 2 but less than 4 academic years
- 5 Bachelor's degree
- 6 Postbaccalaureate certificate
- 7 Master's degree
- 8 Post-master's certificate
- 17 Doctor's degree - research/scholarship
- 18 Doctor's degree - professional practice
- 19 Doctor's degree - other
- 20 Certificates of less than 12 weeks
- 21 Certificates of at least 12 weeks but less than 1 year

ABOUT THE AUTHORS



Jinman Pang, MS

Research Associate, Center for Health Workforce Studies

Ms. Pang conducts data analysis, updates federal data sources, and conducts literature reviews, among other tasks as needed. Ms. Pang specializes in health econometrics, applied microeconomics, data analysis, modeling, and forecasting. She is currently a PhD candidate with the Economics Department at the University at Albany.



David Armstrong, PhD

Director, Health Workforce Technical Assistance Center

Dr. David Armstrong manages the day-to-day operations of HWTAC and provides direct assistance to states and organizations engaged in health workforce planning. Dr. Armstrong has an extensive background in conducting health workforce studies. He has presented nationwide and produced dozens of reports on the health care workforce in New York and the US. He has a doctorate in sociology from the University at Albany, SUNY and has worked in the field of health workforce studies since 2003.



Center for Health Workforce Studies
School of Public Health | University at Albany, SUNY
1 University Place, Suite 220 | Rensselaer, NY 12144-3445

www.healthworkforceta.org