

Working Paper #94

**Health Professions Education
in Washington State:
1996-2004 Completion Statistics**

November 2004

by

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This study was performed by the University of Washington Center for Health Workforce Studies (CHWS) through a contract with the Washington State Workforce Training and Education Coordinating Board. The UW CHWS receives core support from the National Center for Health Workforce Analysis (NCHWA), Bureau of Health Professions (BHP), Health Resources and Services Administration (HRSA).



ABOUT THE WORKFORCE CENTER

The WWAMI Center for Health Workforce Studies at the University of Washington Department of Family Medicine is one of six regional centers funded by the National Center for Health Workforce Analysis (NCHWA) of the federal Bureau of Health Professions (BHP), Health Resources and Services Administration (HRSA). Major goals are to conduct high-quality health workforce research in collaboration with the BHP and state agencies in Washington, Wyoming, Alaska, Montana, and Idaho (WWAMI); to provide methodological expertise to local, state, regional, and national policy makers; to build an accessible knowledge base on workforce methodology, issues, and findings; and to provide wide dissemination of project results in easily understood and practical form to facilitate appropriate state and federal workforce policies.

The Center brings together researchers from medicine, nursing, dentistry, public health, the allied health professions, pharmacy, and social work to perform applied research on the distribution, supply, and requirements of health care providers, with emphasis on state workforce issues in underserved rural and urban areas of the WWAMI region. Workforce issues related to provider and patient diversity, provider clinical care and competence, and the cost and effectiveness of practice in the rapidly changing managed care environment are emphasized.

The WWAMI Rural Health and Health Workforce Research Center Working Paper Series is a means of distributing prepublication articles and other working papers to colleagues in the field. Your comments on these papers are welcome and should be addressed directly to the authors. Questions about the WWAMI Center for Health Workforce Studies should be addressed to:

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INTRODUCTION

This report documents completions of postsecondary health career educational programs throughout Washington State. Each page summarizes program completions for one of 36 selected health education programs. The term “completion” as used in this report encompasses graduation from degree programs (e.g., registered nurses, dentists) as well as completion of a course of study leading to a nondegreed credential (e.g., home health aides, nurse assistants). This report covers the period from 1995-96 through 2003-04. Trend data include absolute numbers of program completions by gender, population-adjusted completion rates, and completions by race/ethnicity. Throughout the report, each academic year, beginning in July and ending in June, is referred to by the calendar year in which the academic year ended, e.g., 2003-04 is referred to as 2004.

DATA SOURCES

Data for this report come from the Integrated Postsecondary Education Data System (IPEDS) of the National Center for Education Statistics for 1996-97 through 2002-03. IPEDS is a systematic survey of educational organizations whose primary purpose is to provide postsecondary education. IPEDS does not collect data from organizations that are not primarily educational in nature, for example, hospitals that offer nursing diploma programs. For this reason, the numbers of health career program completers may be underestimated for some professions, such as nurse aides (for whom training is also provided by hospitals and long-term care facilities). More information about the IPEDS is available at <http://nces.ed.gov/ipeds/> and <http://www.nsf.gov/sbe/srs/sipeds/>.

IPEDS data for 2003-04 were not yet available at the time this report was produced. Data for the 2003-04 year come from the Washington State Board for Community and Technical Colleges (SBCTC). These data include public institutions granting degrees or

certificates up to the associate degree level. As a result, no data are included in this report for the year 2003-04 for occupations where training extends beyond the associate level (e.g., medicine), or where training programs are offered in private-sector institutions. One exception is physician assistants, for whom the University of Washington’s MEDEX Northwest, the only physician assistant training program in Washington State, has provided complete data through 2004.

State population data are from the Bureau of the Census. Population-adjusted figures are based on population estimates as of July 1 in each year. We estimated July 1, 2004 population by extrapolating from census trend estimates through April 2004.

Gender: IPEDS provides complete counts by gender, imputing for missing data. We also imputed for a very small number of missing values in SBCTC gender counts.

Race and Ethnicity: Bureau of the Census data on race and ethnicity of the Washington State population in 2000 are presented for comparison with the corresponding data for each occupation. The Census changed its methods for collecting race and ethnicity data in 2000, preventing direct category-by-category comparisons between the census population race/ethnicity data and the completers’ race/ethnicity data in this report.

The 2000 census asked for race and ethnicity separately and for the first time allowed respondents to report more than one race. The question on Hispanic ethnicity was modified to “Hispanic or Latino.” Racial categories were also amended: “Asian or Pacific Islander” was disaggregated into “Asian” and “Native Hawaiian and Other Pacific Islander.”

The 2000 state population demographics shown here reflect these changes in data collection and reporting. Figure 1 presents the total population distribution for those reporting just one race of the five main census categories, some other race, and more than one race. Figure 2 presents the proportions reporting

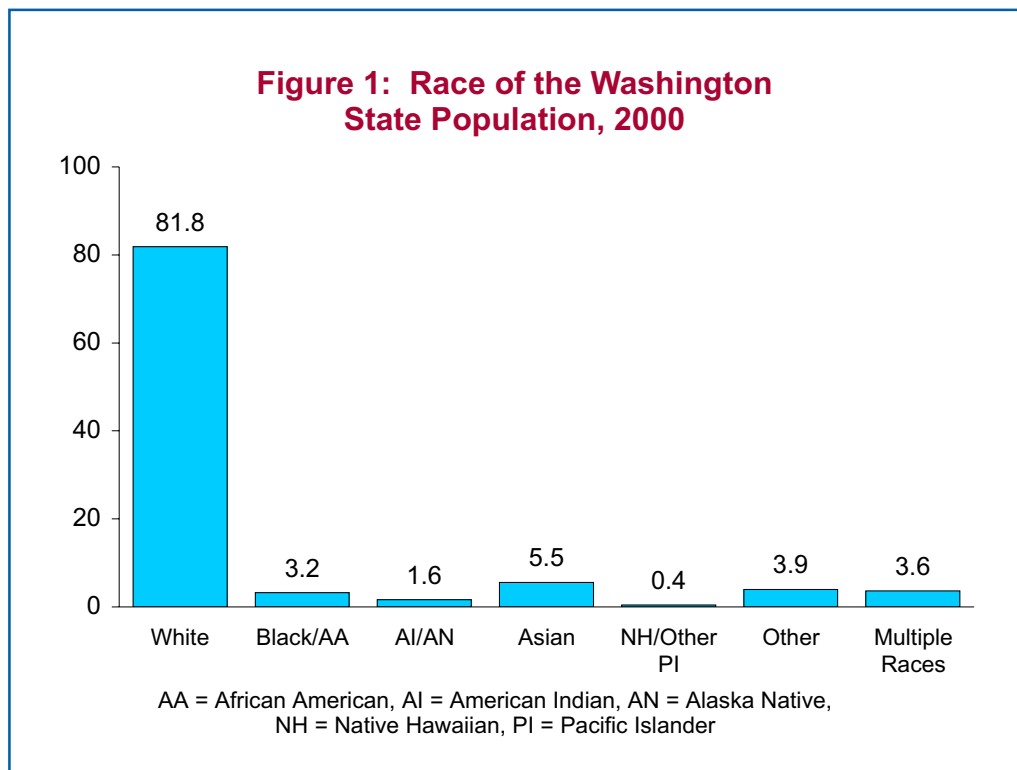
Hispanic or Latino Ethnicity and the single racial/ethnic combination of those who reported their race as “White” only but not Hispanic or Latino ethnicity.

Completions data on race/ethnicity reported by IPEDS categorize completers into one and only one of the following racial/ethnic designations:

- White, non-Hispanic.
- Hispanic.
- Black, non-Hispanic.
- Asian or Pacific Islander.
- American Indian or Alaskan Native.
- Nonresident alien.
- Unknown.

The University of Washington’s MEDEX Northwest (for physician assistants) uses a similar classification system, and SBCTC uses the same classification system as IPEDS with the addition of a multiple race category. Nonresident aliens are excluded from all data reported here. The lack of strict comparability between 2000 census figures and the racial/ethnic data reported here must be borne in mind.

Some racial/ethnic data were missing from the data sets. We have noted percentages of missing racial/ethnic data for each profession. We break down completions in this report by race and ethnicity, basing these percentages on only those completers for whom race and ethnicity were known (thus excluding from the denominator those completers whose racial/ethnic data were missing). In 2003-04 data, multiple race completions (a small number) are counted in the minority category in the figures displaying proportions



of whites versus all racial/ethnic minorities. Multiple race completions are not reported in figures displaying detailed breakdowns of minority race/ethnicity, but because the numbers reporting multiple races are so small, this does not significantly affect the results.

LIMITATIONS OF THE DATA

The data presented in this report are subject to the following conditions that may cause some undercounting of program completions. IPEDS attempts to conduct a complete census of all postsecondary educational organizations. Coverage is thought to be high, with response rates above 90 percent. Yearly verification is performed using accreditation lists, but it is not known how many institutions are missed. Although IPEDS imputes for nonresponses, the extent of the undercount for missing institutions, nonresponses, and specific health occupations where training is available outside of educational institutions is unknown.

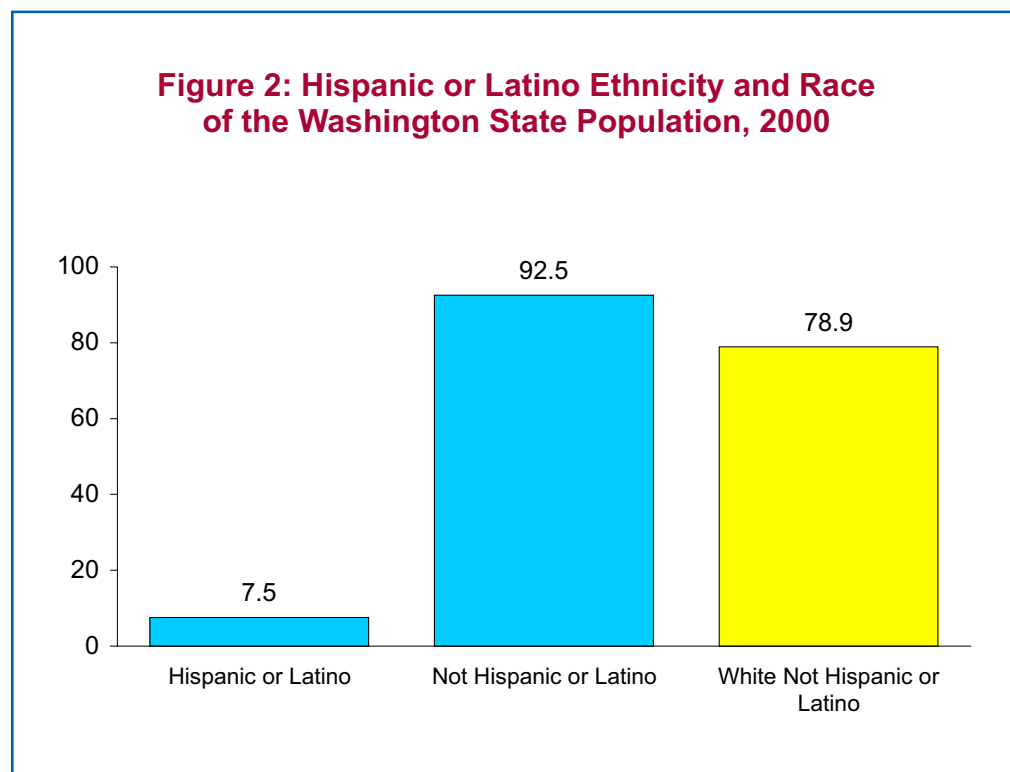
THE UNIVERSITY OF WASHINGTON CENTER FOR HEALTH WORKFORCE STUDIES

The WWAMI Center for Health Workforce Studies was established in 1998 at the University of Washington with funding from the U.S. Health Resources and Services Administration (HRSA), Bureau of Health Professions. The overall aim of the Center is to facilitate the production and distribution of

an appropriate health care workforce that can meet the health care needs of the population in terms of access, quality, and cost, with an emphasis on primary care service provision to the underserved. The Center for Health Workforce Studies' objectives are:

- To conduct relevant health workforce research and policy analysis in collaboration with federal and state agencies.
- To provide consultation to local, state, regional and national policy makers on health workforce issues.
- To develop and refine analytical methods for measuring health workforce supply and requirements.
- To contribute to the understanding of health workforce issues and findings.
- To disseminate project results to a wide audience.

The Center brings together a multidisciplinary team of researchers who collaboratively perform health workforce analyses and who work in close collaboration with the states, regional and national health policy makers. L. Gary Hart, PhD, is the Center's Director. In carrying out its mission, Center staff work cooperatively with the National Center for Health Workforce Analysis at the Bureau of Health Professions to develop a research agenda focused on improving the distribution, diversity, supply, and competence of the nation's health workforce.



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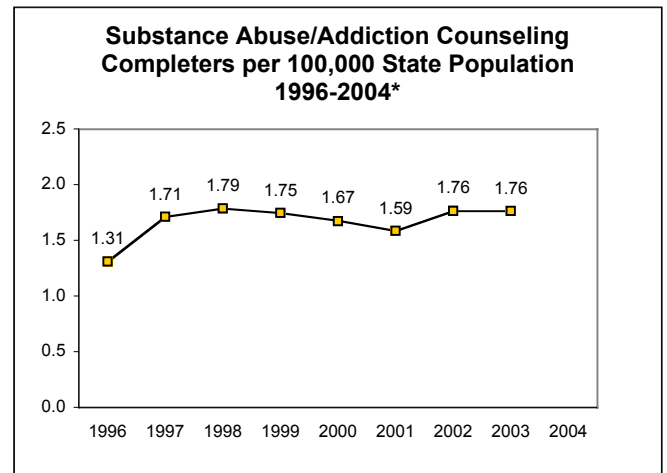
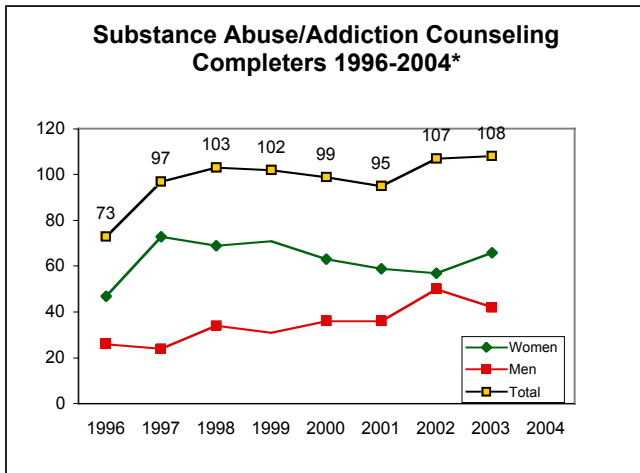
Population Division, U.S. Census Bureau. Table 1: annual estimates of the population for the United States and states, and for Puerto Rico: April 1, 2000 to July 1, 2003. Release date: December 18, 2003. Last revised date: May 11, 2004.

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Whittaker, Doug. Personal communication. Washington State Board for Community and Technical Colleges, September 2004.

Health Professions Education in Washington State

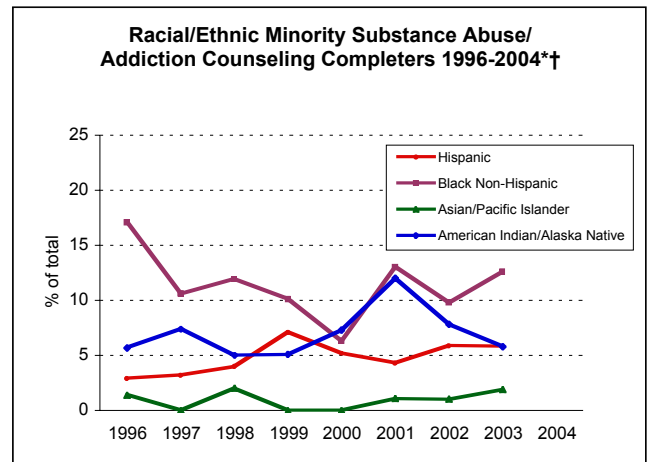
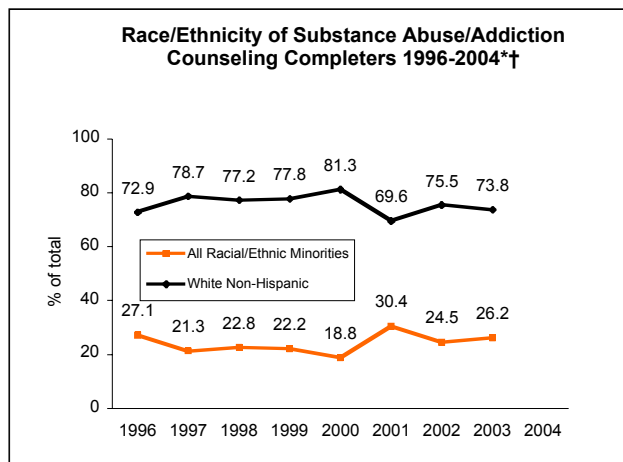
Substance Abuse/Addiction Counseling Program Completers



- Twelve community and technical colleges and universities in the state offered substance abuse/addiction counseling programs in 2003.
- There are several types of substance abuse/addiction counseling programs in Washington. The number of program completions from 1996-2003 by type of program is as follows:

Type of Program	Number of Program Completions*							
	1996	1997	1998	1999	2000	2001	2002	2003
Less than two years	39	46	49	50	32	32	63	55
Associate	34	51	54	50	64	39	38	51
Baccalaureate						4	3	1
Master's						15	1	
Other				2	3	5	2	1

- Total annual program completions increased by 47.9% from 1996 to 2003.
- Completions per 100,000 population increased by 34.4% over the same time period.
- 64.4% of program completers were female in 1996 compared to 61.1% in 2003.



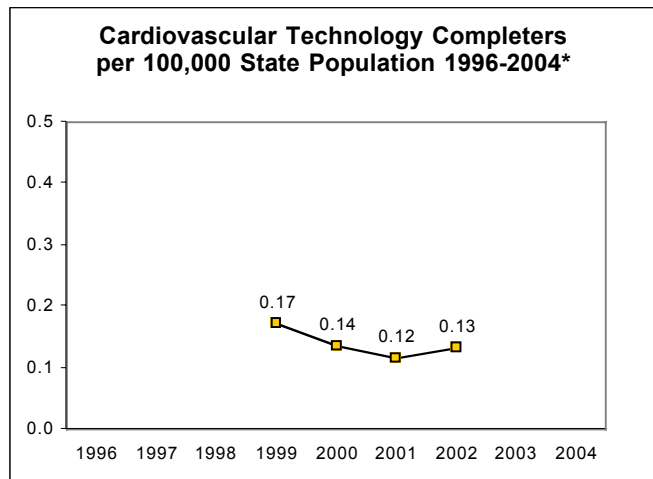
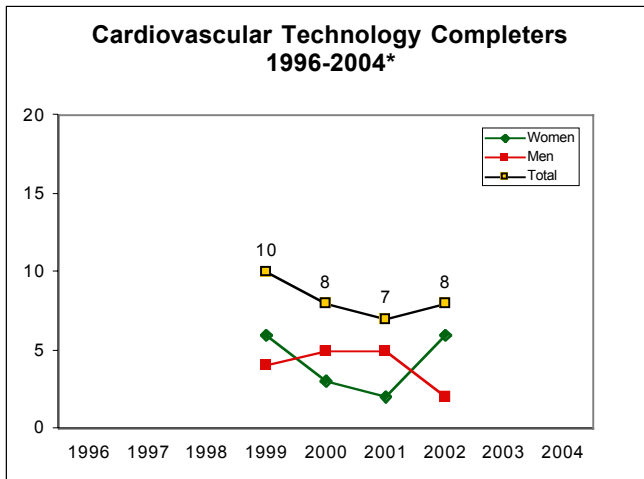
* Complete data not available for 2004.

† Race/ethnicity were not reported for a range of 1.9% to 4.7% of completers each year (these data were missing for 4.6% of completers in 2003).

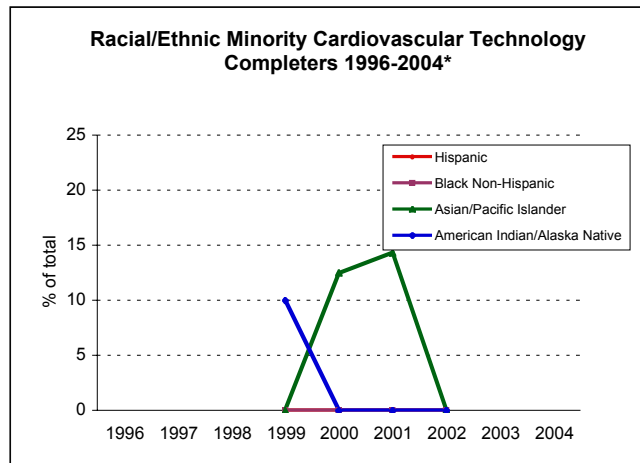
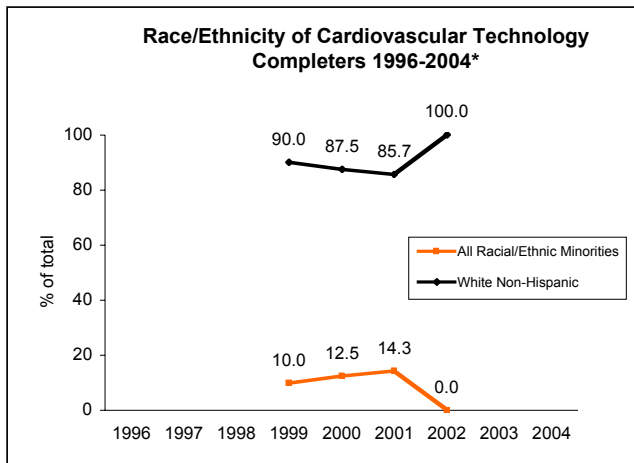
Data sources: see introduction.

Health Professions Education in Washington State

Cardiovascular Technology Program Completers



- The state had one cardiovascular technology program at Spokane Community College in 2002 at the associate degree level. No programs were reported in the state prior to 1999.
- Total annual program completions decreased by 20.0% from 1999 to 2002.
- Completions per 100,000 decreased by 23.5% over the same time period.
- 60.0% of program completers were female in 1999 compared to 75.0% in 2002.

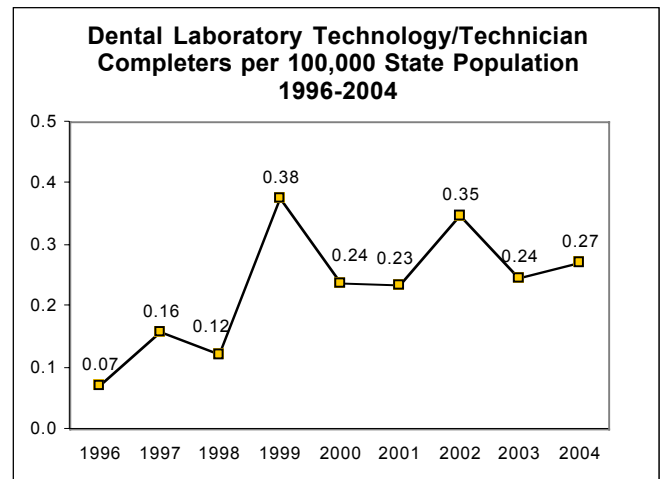
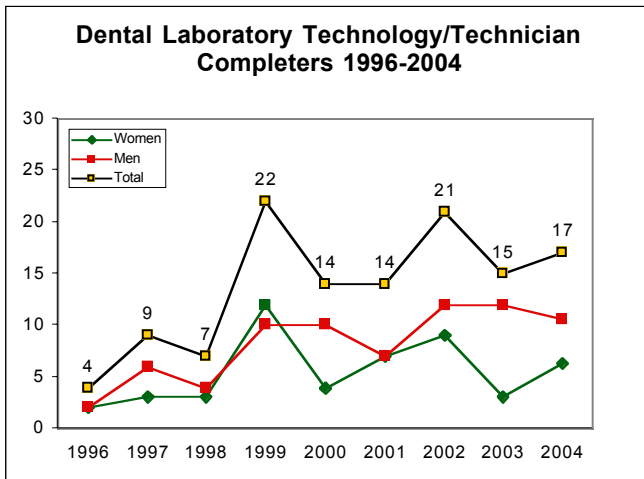


* Data not reported for 1996-1998, 2003-2004.

Data sources: see introduction.

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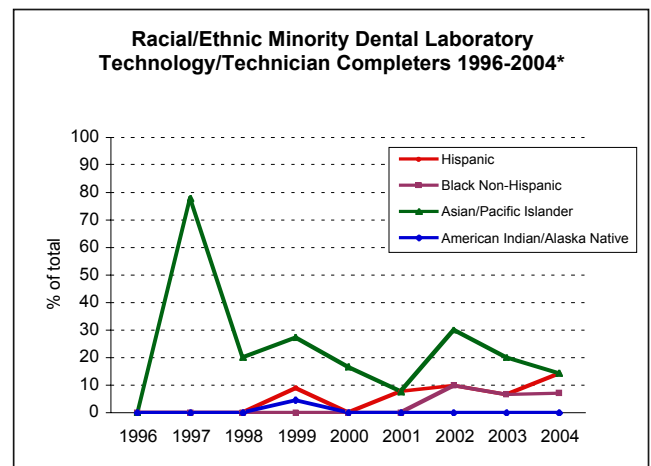
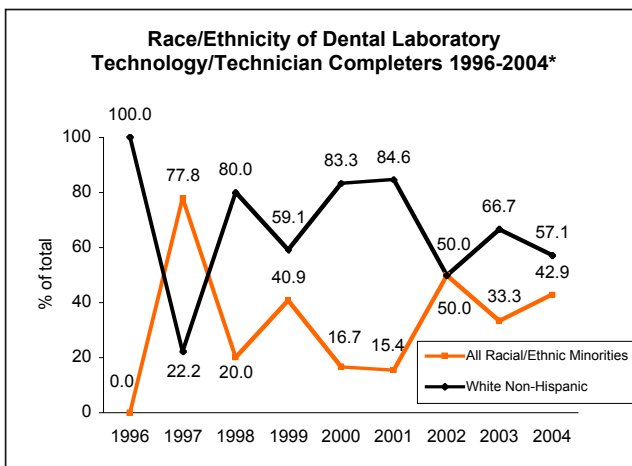
Dental Laboratory Technology/Technician Program Completers



- The state had one dental laboratory technology/technician program at Bates Technical College in 2004.
- There are several program tracks for dental laboratory technology/technicians. The number of program completions from 1996-2004 by program track is as follows:

Type of Program	Number of Program Completions									
	1996	1997	1998	1999	2000	2001	2002	2003	2004	
Less than two years				6	1	1	1	2	5	
Associate		9	7	6	2	5	6	3	2	
Other	4			10	11	8	14	10	10	

- Total annual program completions increased by 325% from 1996 to 2004.
- Completions per 100,000 population increased by 286% over the same time period.
- 50.0% of program completers were female in 1996 compared to 37.5% in 2004.

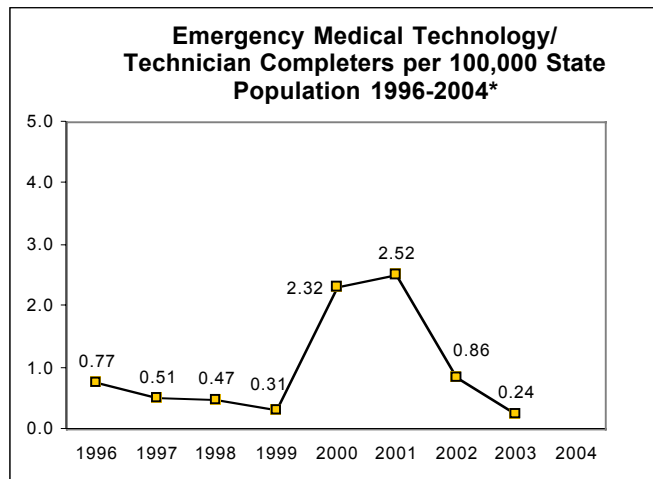
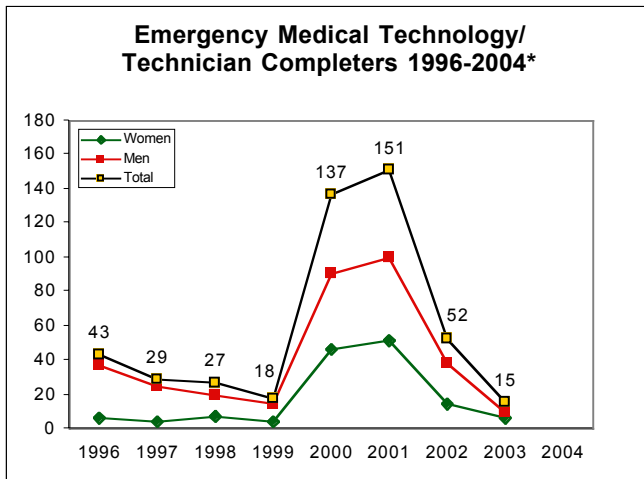


* Race/ethnicity data were complete in 1997, 1999, and 2003 but were not reported for a range of 4.8% to 28.6% of completers each year (these data were missing for 17.6% of completers in 2004).

Data sources: see introduction.

Health Professions Education in Washington State

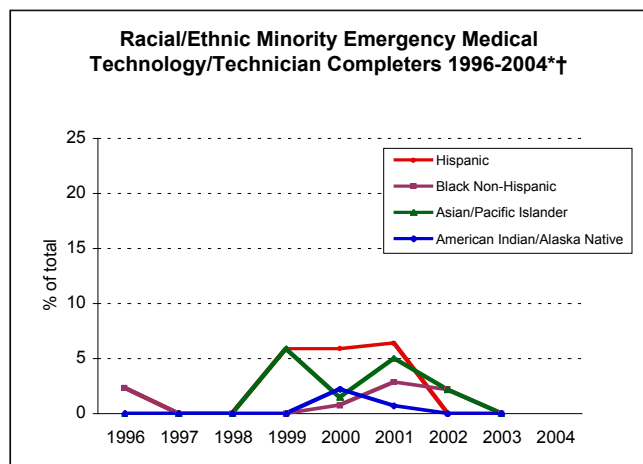
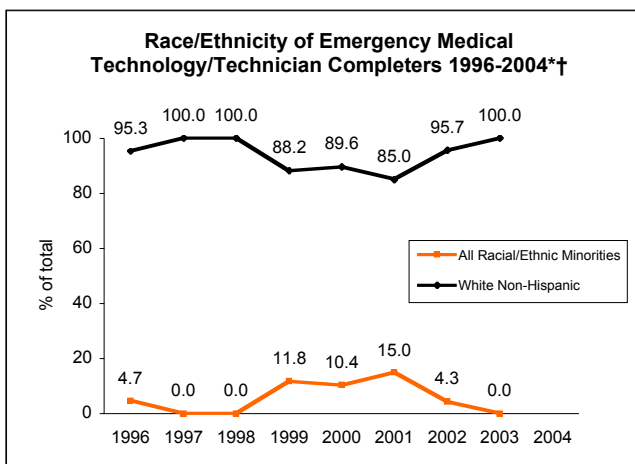
Emergency Medical Technology/Technician Program Completers



- Four community and technical colleges and one university in the state offered emergency medical technology/technician programs in 2003.
- There are several types of emergency medical technology/technician programs in Washington. The number of program completions from 1996-2003 by type of program is as follows:

Type of Program	Number of Program Completions*							
	1996	1997	1998	1999	2000	2001	2002	2003
Less than two years	27	17	5	2	121	136	24	
Associate	2	3	1	2	7	4	14	8
Baccalaureate	14	9	21	14	9	11	14	7

- Total annual program completions decreased by 65.1% from 1996 to 2003.
- Completions per 100,000 population decreased by 68.8% over the same time period.
- 14.0% of program completers were female in 1996 compared to 40.0% in 2003.



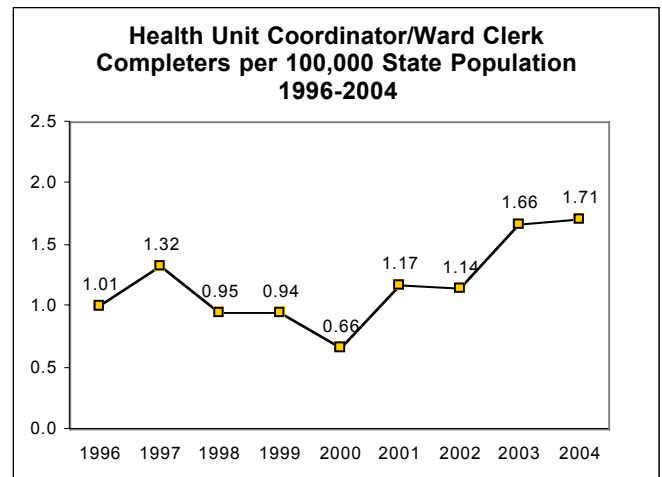
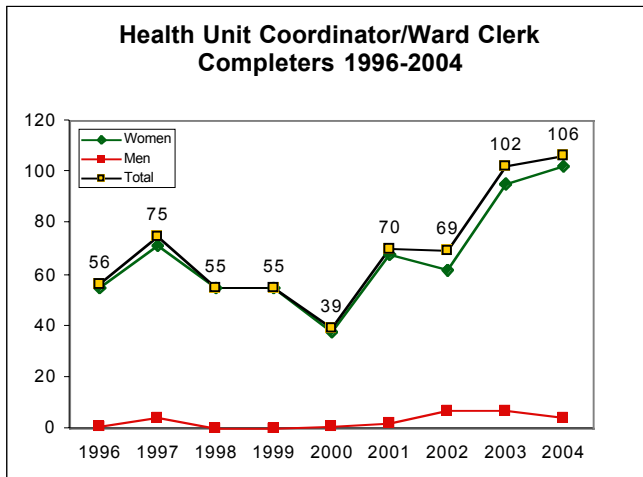
* Complete data not available for 2004.

† Race/ethnicity data were complete for 1996, 1997, and 2003 but not reported for a range of 1.5% to 11.5% of completers in other years.

Data sources: see introduction.

Health Professions Education in Washington State

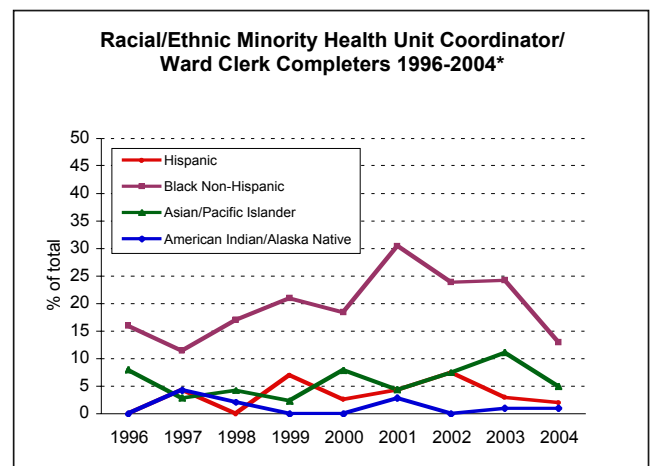
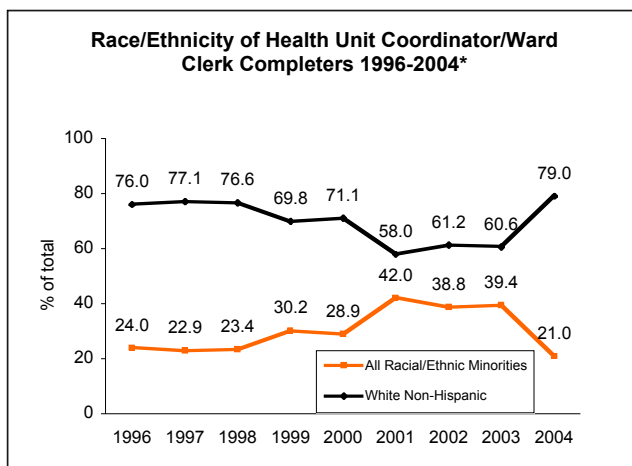
Health Unit Coordinator/Ward Clerk Program Completers



- Four community and technical colleges in the state offered health unit coordinator/ward clerk programs in 2004.
- There are two types of health unit coordinator/ward clerk programs in Washington. The number of program completions from 1996-2004 by type of program is as follows:

Type of Program	Number of Program Completions									
	1996	1997	1998	1999	2000	2001	2002	2003	2004	
Less than two years	49	69	45	50	34	70	68	101	100	
Associate	7	6	10	5	5		1	1	6	

- Total annual program completions increased by 89.3% from 1996 to 2004.
- Completions per 100,000 population increased by 69.3% over the same time period.
- 98.2% of program completers were female in 1996 compared to 96.2% in 2004.

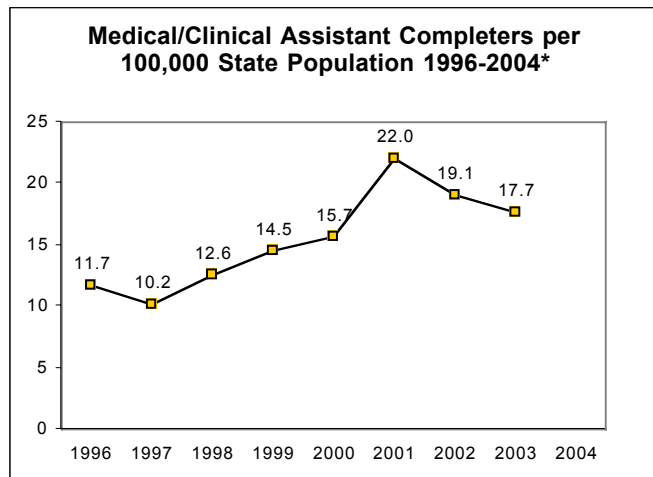
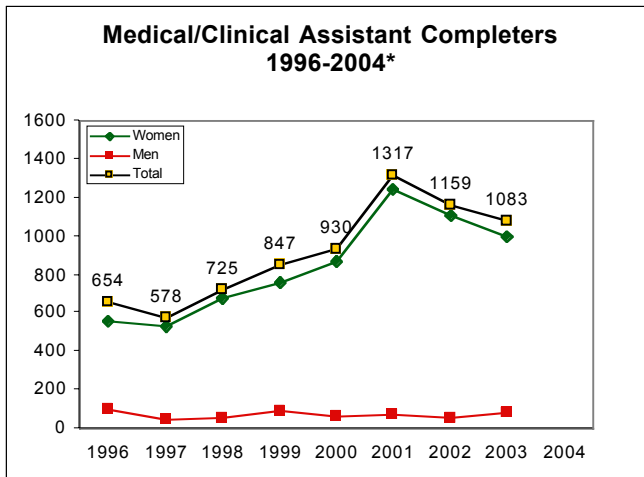


* Race/ethnicity were not reported for a range of 1.4% to 21.8% of completers each year (these data were missing for 5.7% of completers in 2004).

Data sources: see introduction.

Health Professions Education in Washington State

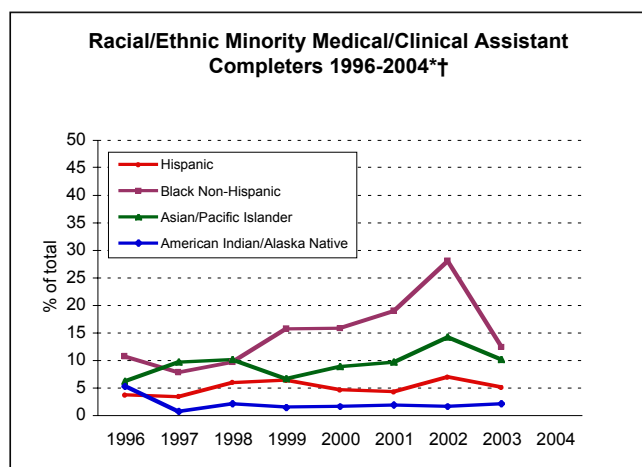
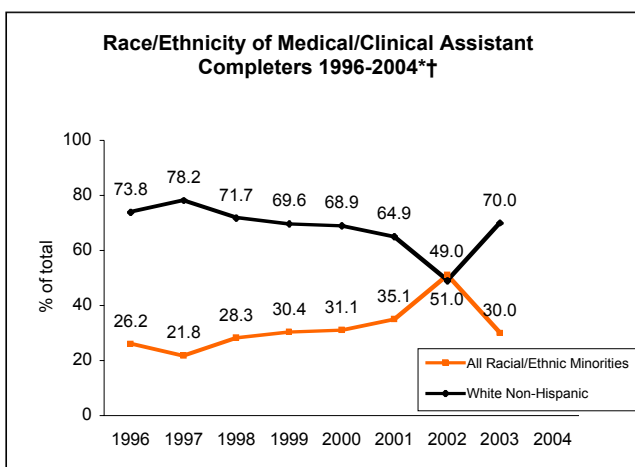
Medical/Clinical Assistant Program Completers



- Twenty-three community and technical colleges and institutes in the state offered medical/clinical assistant programs in 2003.
- There are several types of medical/clinical assistant programs in Washington. The number of program completions from 1996-2003 by type of program is as follows:

Type of Program	Number of Program Completions*							
	1996	1997	1998	1999	2000	2001	2002	2003
Less than two years	575	501	620	762	875	1,265	1,106	971
Associate	69	68	73	62	46	52	53	95
Other	10	9	32	23	9			17

- Total annual program completions increased by 65.6% from 1996 to 2003.
- Completions per 100,000 population increased by 51.3% over the same time period.
- 84.7% of program completers were female in 1996 compared to 92.3% in 2003.



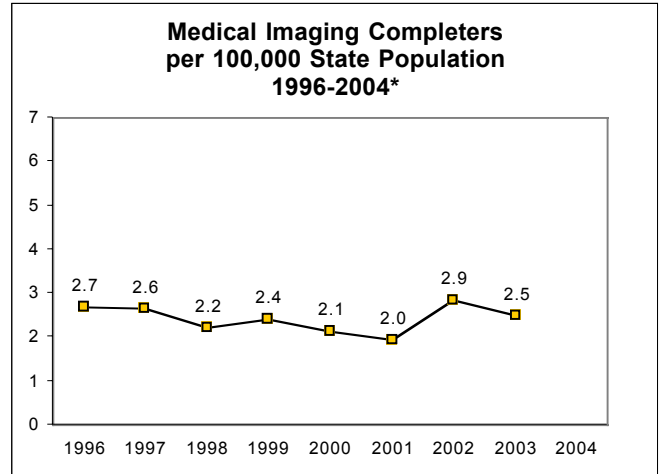
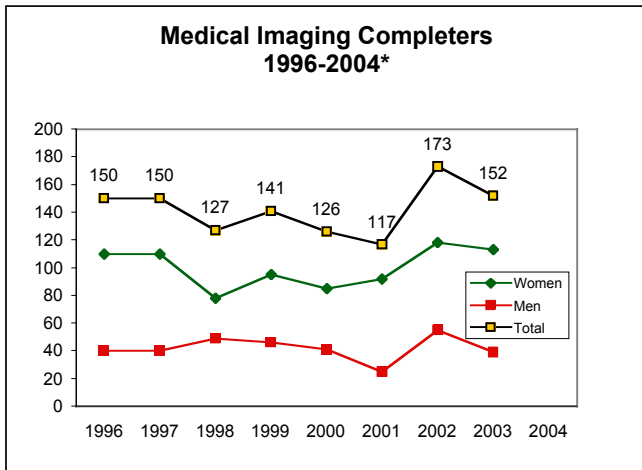
* Complete data not available for 2004.

† Race/ethnicity were not reported for a range of 3.4% to 14.7% of completers each year (these data were missing for 12.3% of completers in 2003).

Data sources: see introduction.

Health Professions Education in Washington State

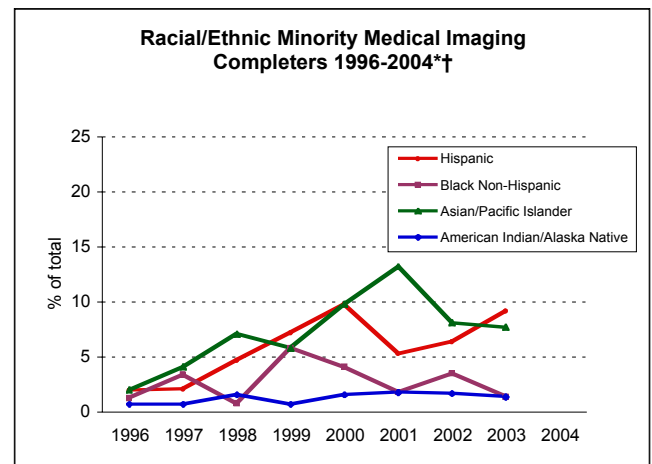
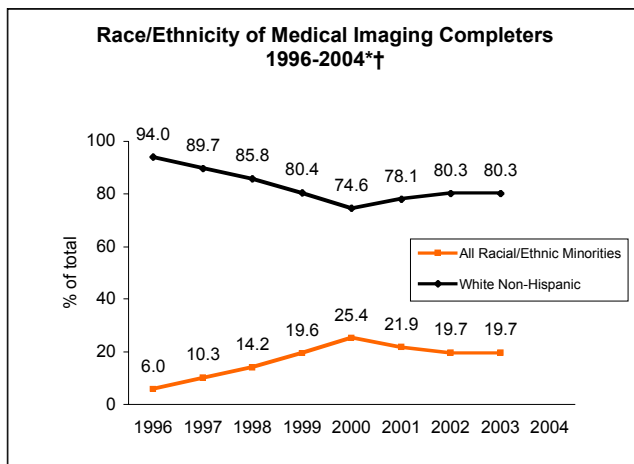
Medical Imaging Program Completers



- Five community and technical colleges and institutes and one university in the state offered medical imaging programs in 2003. Medical imaging included medical radiologic technology/technician, radiation therapy, nuclear medical technology, and diagnostic medical sonography technician programs.
- There are several types of medical imaging programs in Washington. The number of program completions from 1996-2003 by type of program is as follows:

Type of Program	Number of Program Completions*							
	1996	1997	1998	1999	2000	2001	2002	2003
Less than two years	17	21	18	21	18	1	21	10
Associate	107	112	103	109	95	107	137	122
Baccalaureate	18	17	6	11	13	9	15	20
Other	8							

- Total annual program completions increased by 1.3% from 1996 to 2003.
- Completions per 100,000 population decreased by 7.4% over the same time period.
- 73.3% of program completers were female in 1996 compared to 74.3% in 2003.



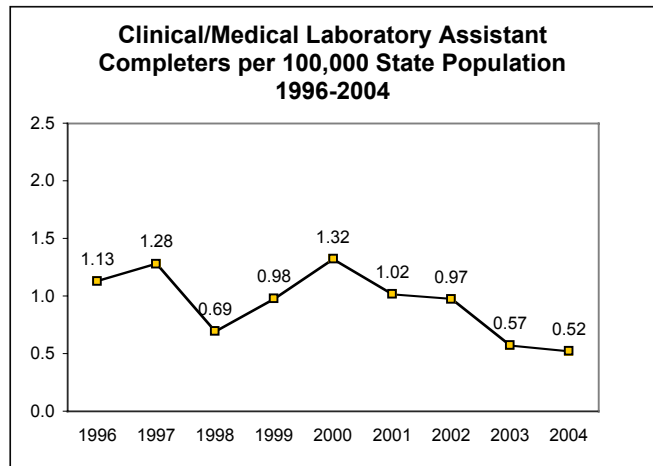
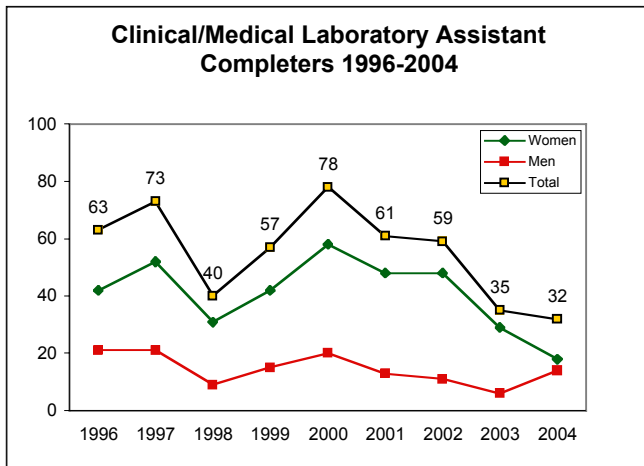
* Complete data were not available for 2004.

† Race/ethnicity data were complete in 1996, 1998, and 2002, but not reported for a range of 2.1% to 6.6% of completers in other years (these data were missing for 6.6% of completers in 2003).

Data sources: see introduction.

Health Professions Education in Washington State

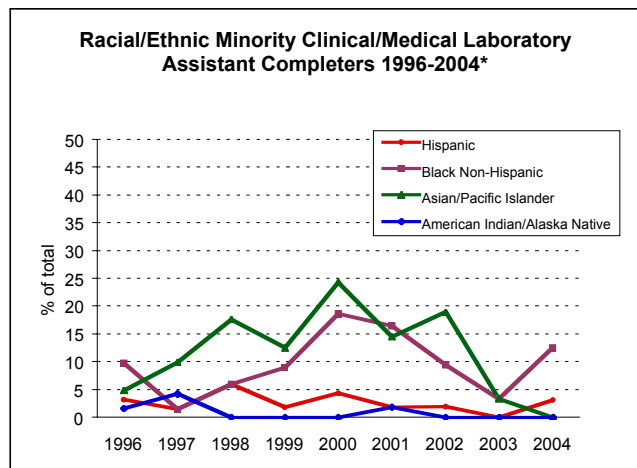
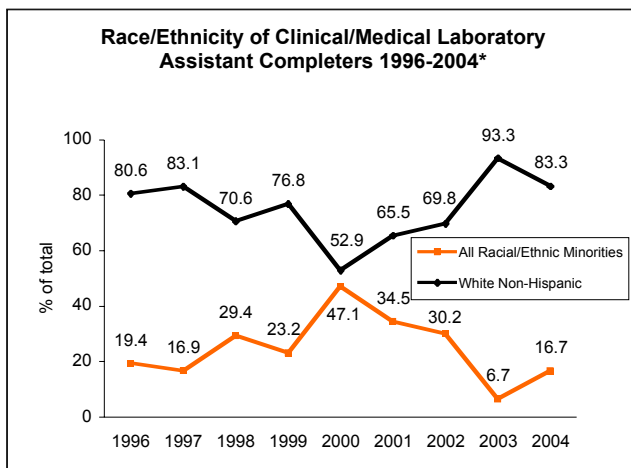
Clinical/Medical Laboratory Assistant Program Completers



- Six community and technical colleges and institutes in the state offered clinical/medical laboratory assistant programs in 2004.
- There are two types of clinical/medical laboratory assistant programs in Washington. The number of program completions from 1996-2004 by type of program is as follows:

Type of Program	Number of Program Completions									
	1996	1997	1998	1999	2000	2001	2002	2003	2004	
Less than two years	11	15	3	21	50	40	41	11	2	
Associate	52	58	37	36	28	20	18	24	30	
Baccalaureate						1				

- Total annual program completions decreased by 49.2% from 1996 to 2004.
- Completions per 100,000 population decreased by 54.0% over the same time period.
- 66.7% of program completers were female in 1996 compared to 56.2% in 2004.

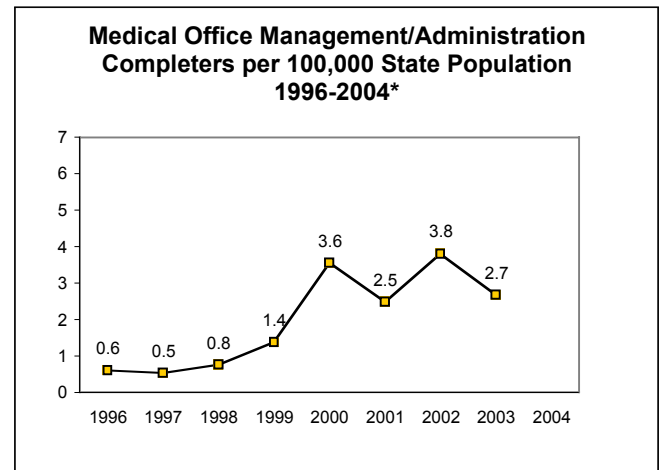
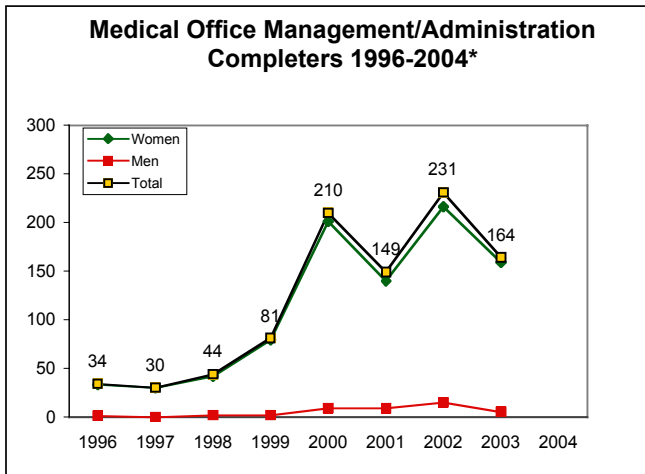


* Race/ethnicity data were complete in 2004 but were not reported for a range of 1.6% to 15.0% in other years.

Data sources: see introduction.

Health Professions Education in Washington State

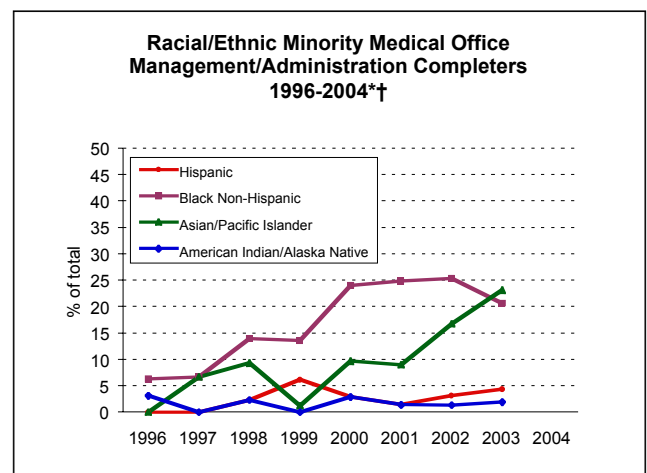
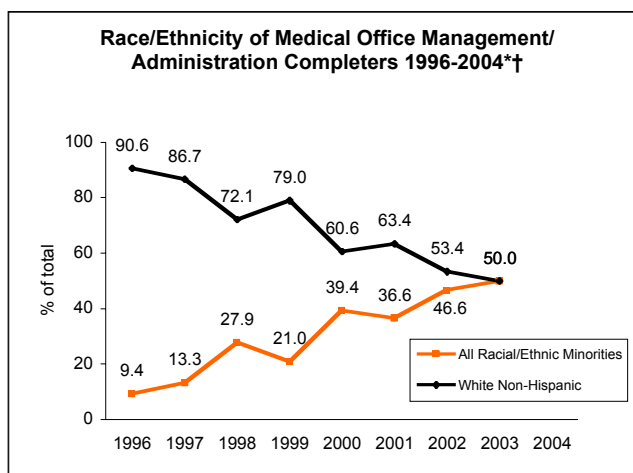
Medical Office Management/Administration Program Completers



- Five community and technical colleges in the state offered medical office management/administration programs of less than two years in 2003.
- There are two types of medical office management/administration programs in Washington. The number of program completions from 1996-2004 by type of program is as follows:

Type of Program	Number of Program Completions*							
	1996	1997	1998	1999	2000	2001	2002	2003
Less than two years	34	30	44	81	210	148	230	161
Associate						1	1	3

- Total annual program completions increased by 382% from 1996 to 2003.
- Completions per 100,000 population increased by 350% over the same time period.
- 97.1% of program completers were female in 1996 compared to 97.0% in 2003.



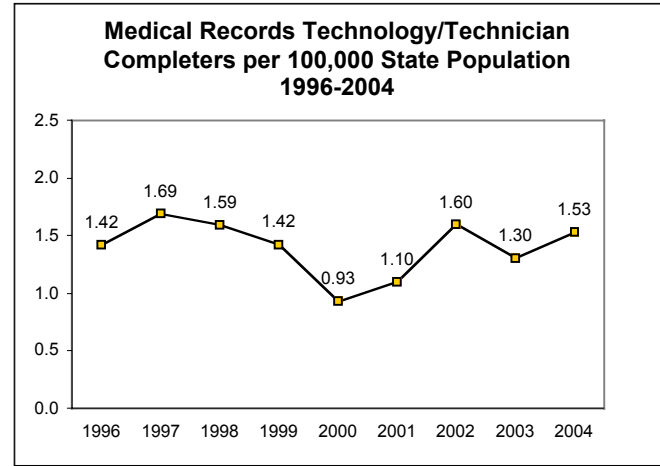
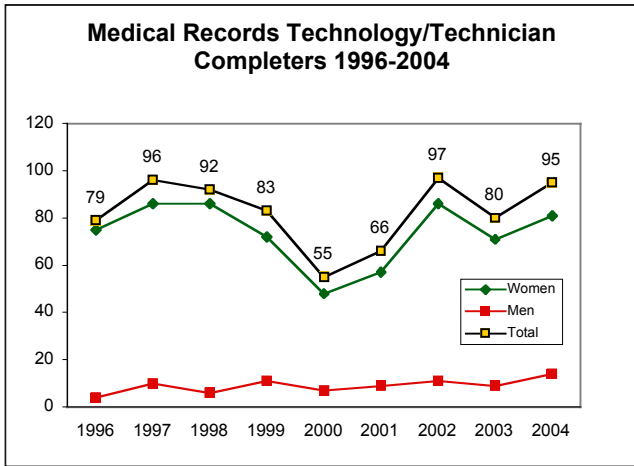
* Complete data not available for 2004.

† Race/ethnicity were complete in 1997 and 1999 but not reported for a range of 1.0% to 5.9% of completers other years (these data were missing for 2.4% of completers in 2003).

Data sources: see introduction.

Health Professions Education in Washington State

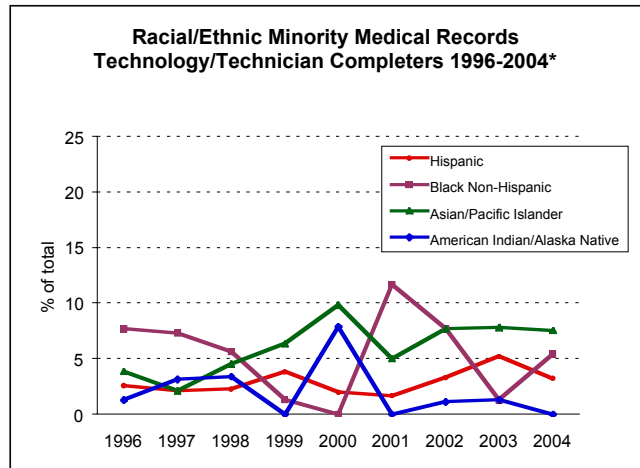
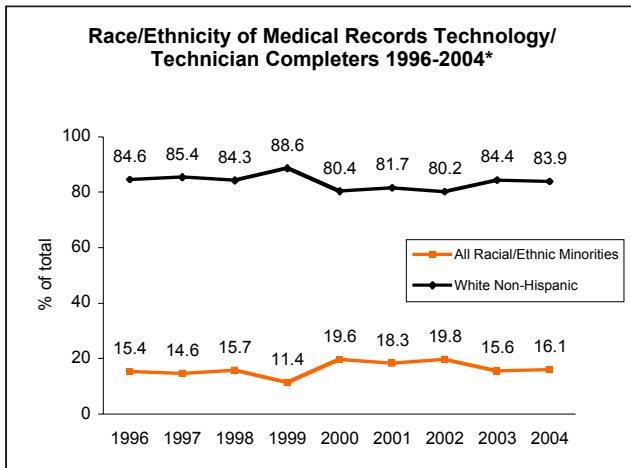
Medical Records Technology/Technician Program Completers



- Seven community and technical colleges in the state offered medical records technology/technician programs in 2004.
- There are two types of medical records technology/technician programs in Washington. The number of program completions from 1996-2004 by type of program is as follows:

Type of Program	Number of Program Completions									
	1996	1997	1998	1999	2000	2001	2002	2003	2004	
Less than two years	31	39	26	30	24	20	68	48	55	
Associate	48	57	66	53	31	46	29	32	40	

- Total annual program completions increased by 20.3% from 1996 to 2004.
- Completions per 100,000 population increased by 7.7% over the same time period.
- 94.9% of program completers were female in 1996 compared to 85.3% in 2004.

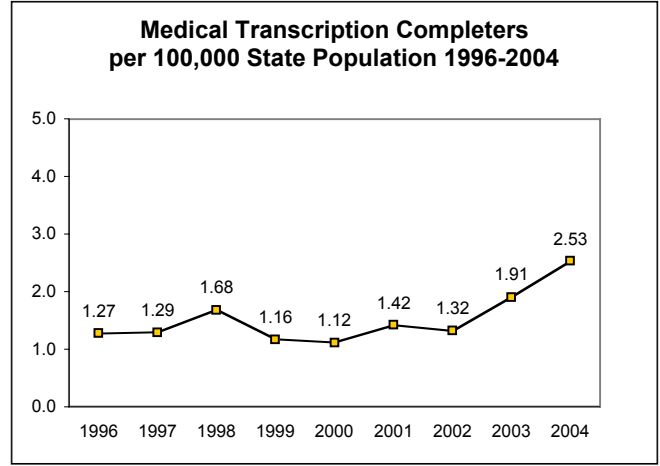
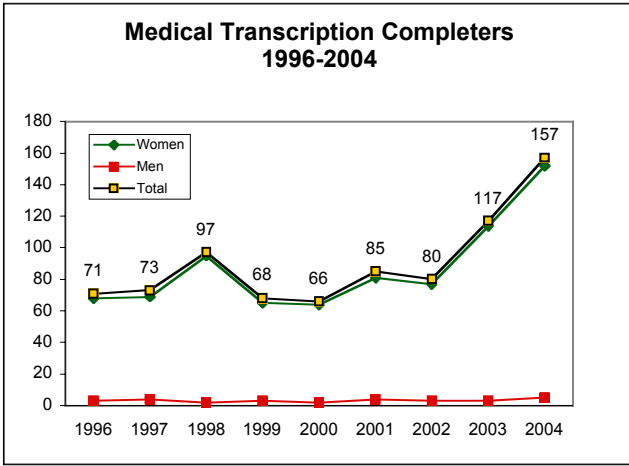


* Race/ethnicity data were complete in 1997 but were not reported for a range of 1.3% to 9.1% of completers each year (these data were missing for 7.8% of completers in 2004).

Data sources: see introduction.

Health Professions Education in Washington State

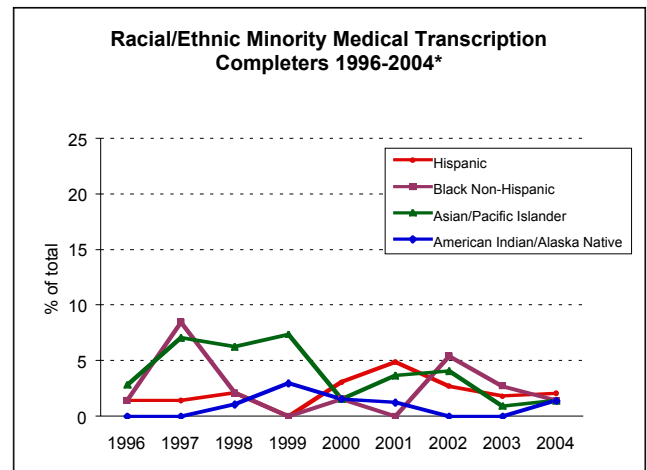
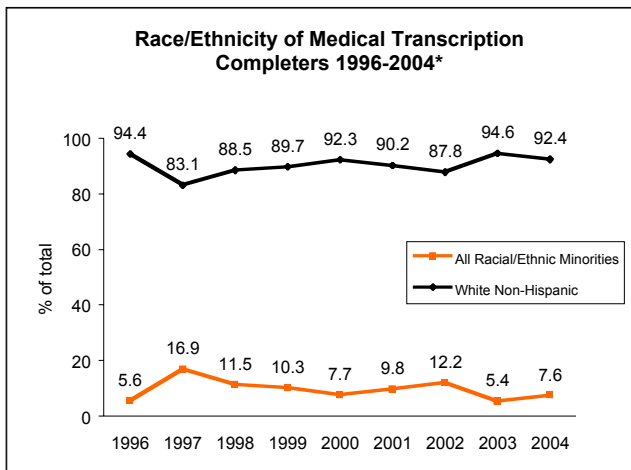
Medical Transcription Program Completers



- Thirteen community and technical colleges in the state offered medical transcription programs in 2004.
- There are two types of medical transcription programs in Washington. The number of program completions from 1996-2004 by type of program is as follows:

Type of Program	Number of Program Completions								
	1996	1997	1998	1999	2000	2001	2002	2003	2004
Less than two years	71	73	95	67	66	83	79	116	157
Associate			2	1		2	1	1	

- Total annual program completions increased by 121% from 1996 to 2004.
- Completions per 100,000 population increased by 99.2% over the same time period.
- 95.8% of program completers were female in 1996 compared to 96.8% in 2004.

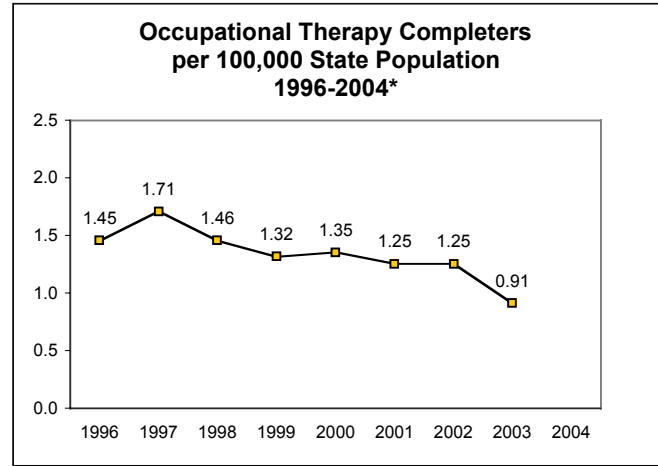
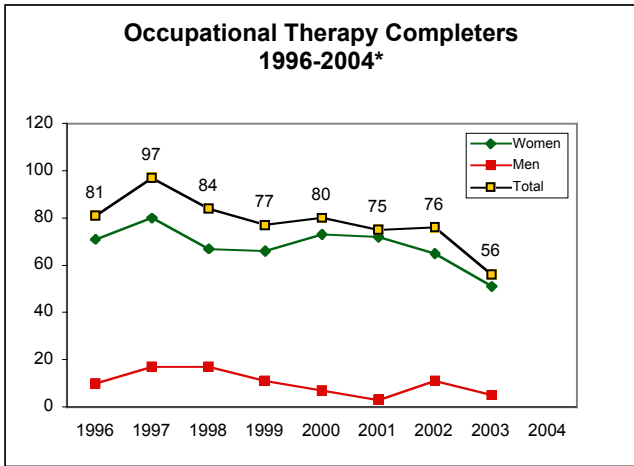


* Race/ethnicity data were complete in 1996 and 1999 but not reported for a range of 1.0% to 7.6% of completers in other years (these data were missing for 7.6% of completers in 2004).

Data sources: see introduction.

Health Professions Education in Washington State

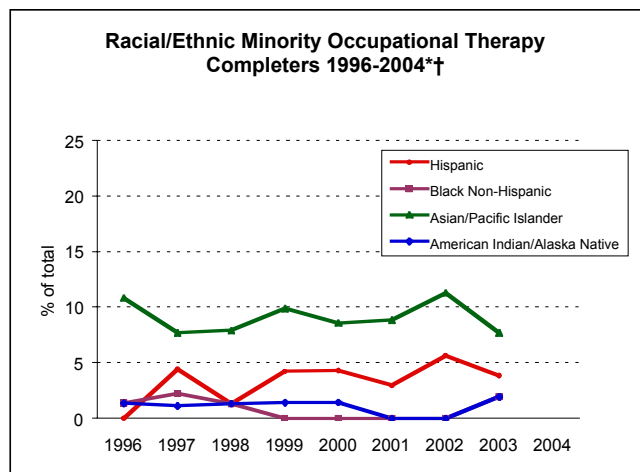
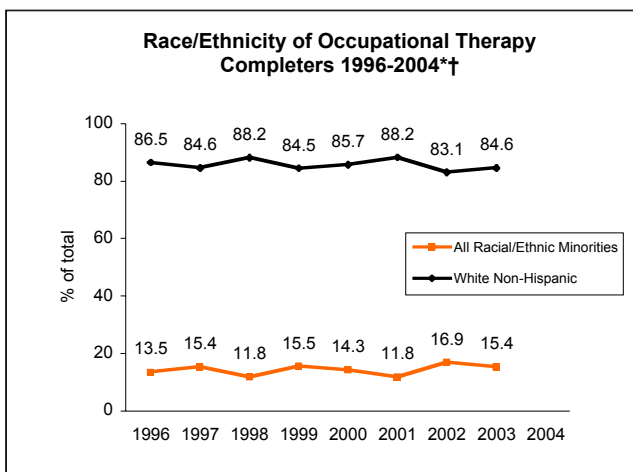
Occupational Therapy Program Completers



- Three universities in the state offered occupational therapy programs in 2003.
- There are two types of occupational therapy programs in Washington. The number of program completions from 1996-2003 by type of program is as follows:

Type of Program	Number of Program Completions*							
	1996	1997	1998	1999	2000	2001	2002	2003
Baccalaureate	70	77	70	62	64	56	41	23
Master's	11	20	14	15	16	19	35	33

- Total annual program completions decreased by 30.9% from 1996 to 2003.
- Completions per 100,000 population decreased by 37.2% over the same time period.
- 87.7% of program completers were female in 1996 compared to 91.1% in 2003.



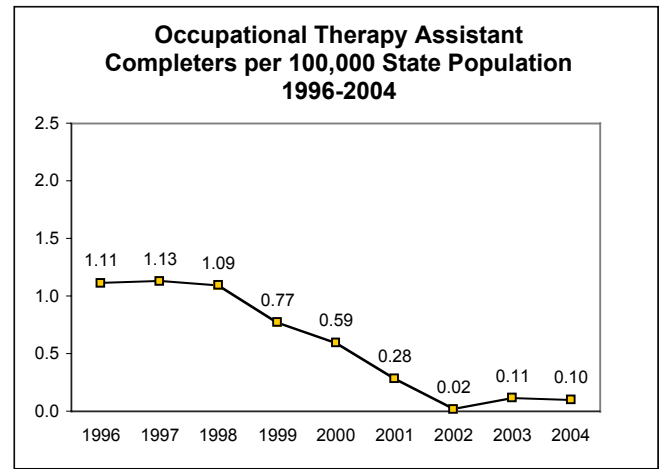
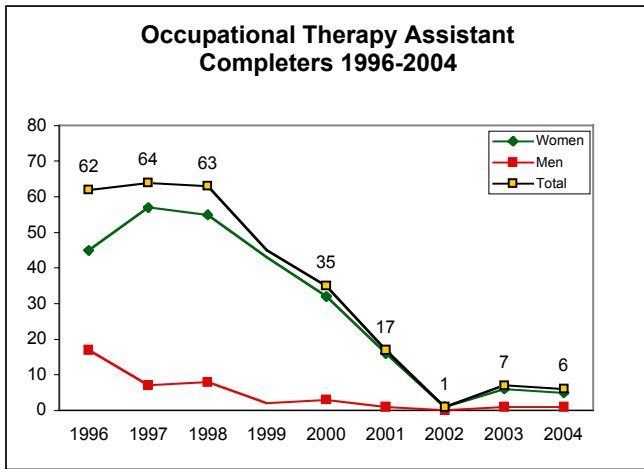
* Complete data not available for 2004.

† Race/ethnicity were not reported for a range of 6.2% to 12.5% of completers each year (these data were missing for 7.1% of completers in 2003).

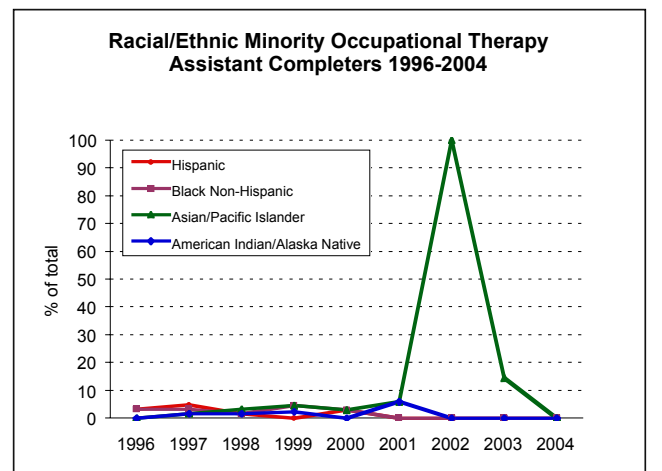
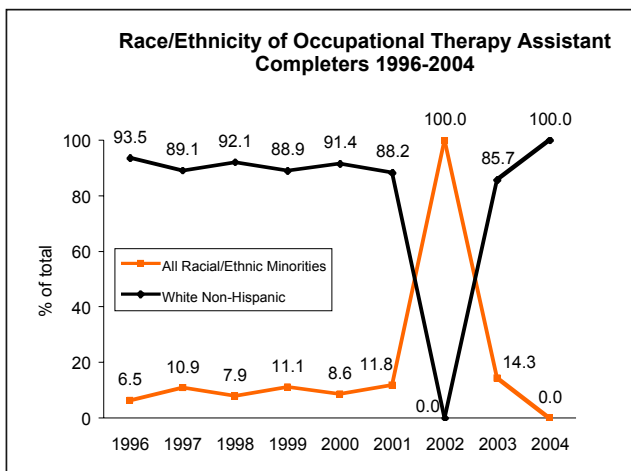
Data sources: see introduction.

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Occupational Therapy Assistant Program Completers



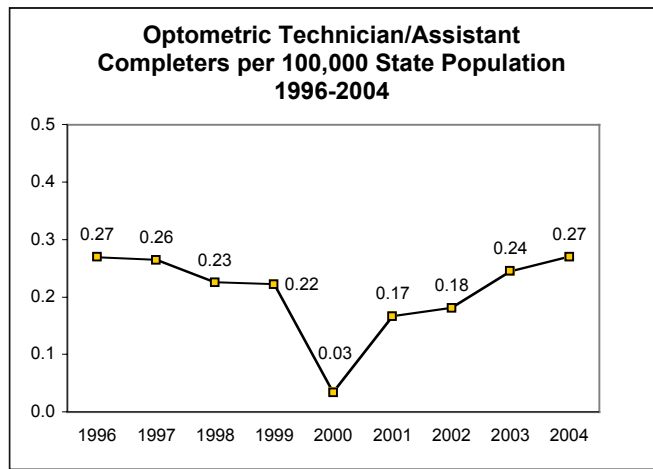
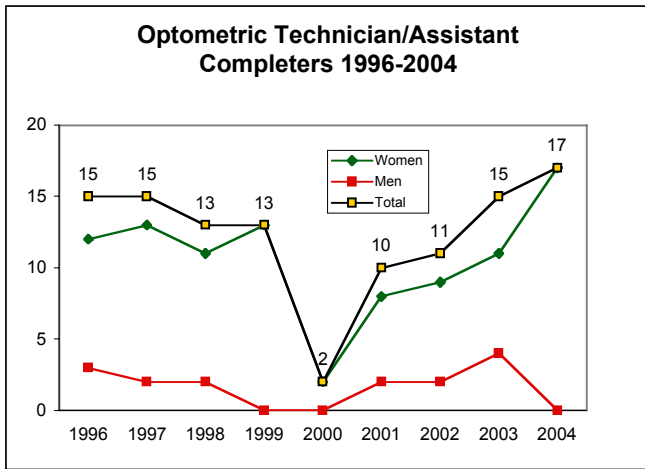
- The state had one associate-level occupational therapy assistant program at Green River Community College in 2004.
- Total annual program completions decreased by 90.3% from 1996 to 2004.
- Completions per 100,000 population decreased by 91.0% over the same time period.
- 72.6% of program completers were female in 1996 compared to 83.3% in 2004.



Data sources: see introduction.

Health Professions Education in Washington State

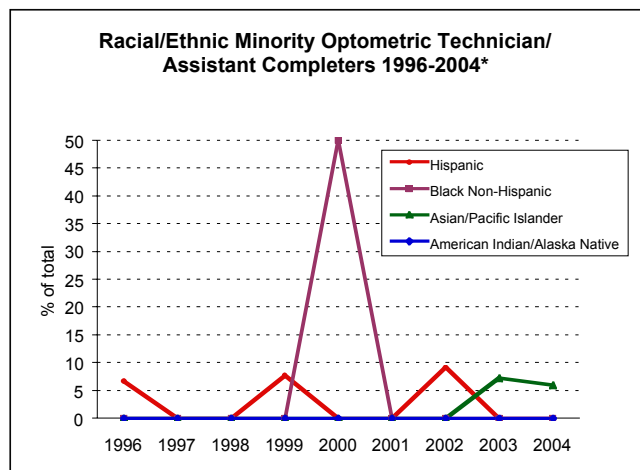
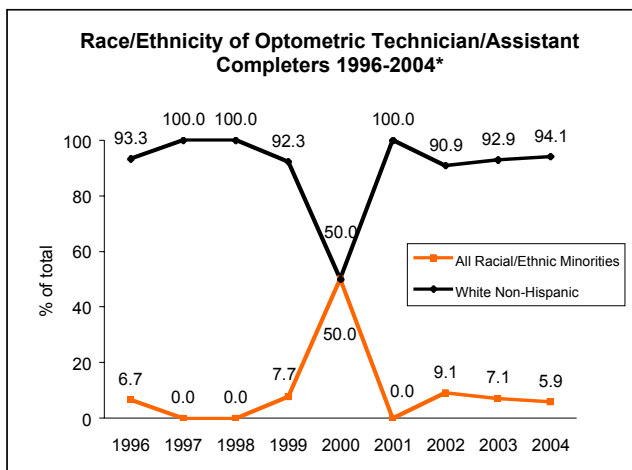
Optometric Technician/Assistant Program Completers



- The state had one optometric technician/assistant program at Spokane Community College in 2004.
- There are two types of optometric technician/assistant programs in Washington. The number of program completions from 1996-2004 by type of program is as follows:

Type of Program	Number of Program Completions								
	1996	1997	1998	1999	2000	2001	2002	2003	2004
Less than two years	11	6	10	9	2	8	8	10	9
Associate	4	9	3	4	2	3	3	5	8

- Total annual program completions increased by 13.3% from 1996 to 2004.
- Completions per 100,000 population remained unchanged over the same time period.
- 80.0% of program completers were female in 1996 compared to 100% in 2004.

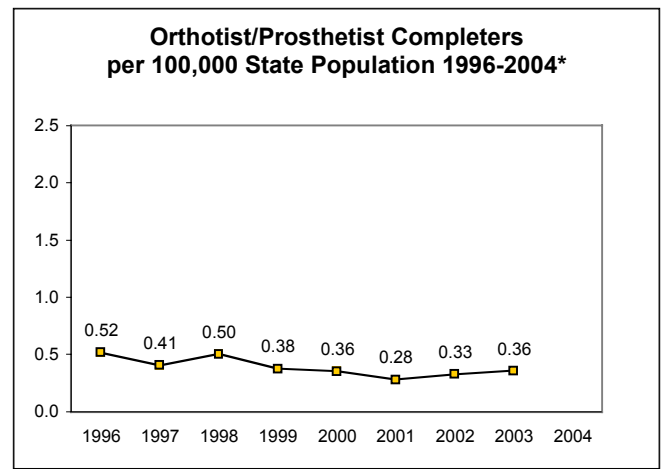
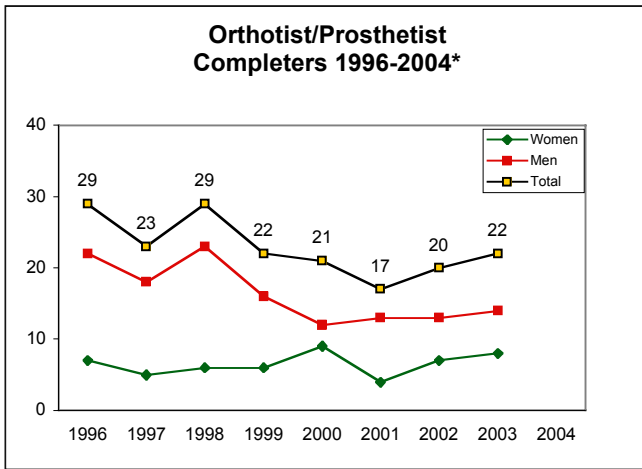


* Race/ethnicity data were complete for all years except 2003 when these data were not reported for 6.7% of completers.

Data sources: see introduction.

Health Professions Education in Washington State

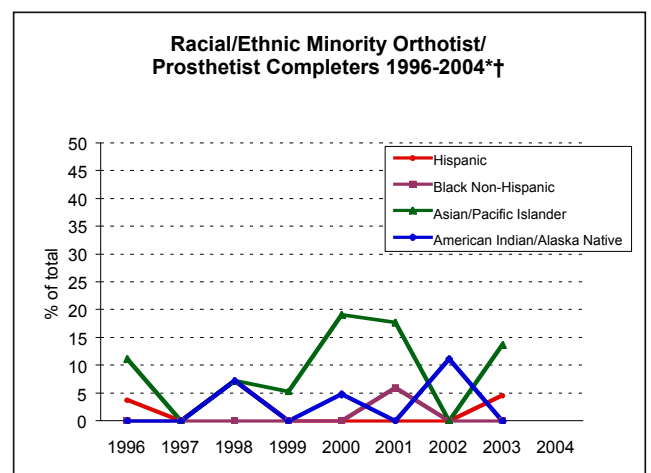
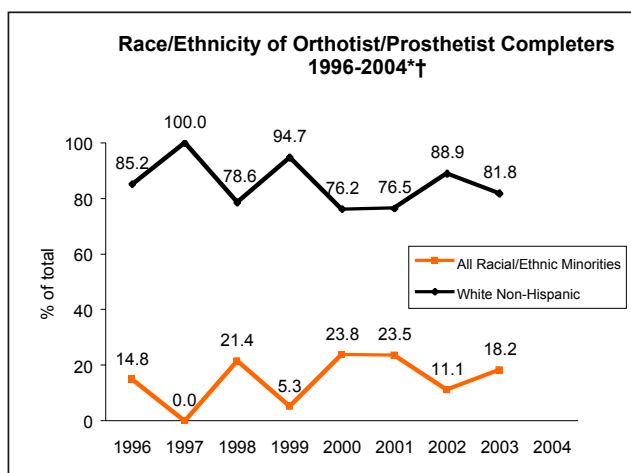
Orthotist/Prosthetist Program Completers



- One community college and one university in the state offered orthotist/prosthetist programs in 2003.
- There are several types of orthotist/prosthetist programs in Washington. The number of program completions from 1996-2003 by type of program is as follows:

Type of Program	Number of Program Completions*							
	1996	1997	1998	1999	2000	2001	2002	2003
Less than two years	9	8	7	4	1	2	2	2
Associate	7	4	9	6	10	3	8	7
Baccalaureate	13	11	13	12	10	12	10	13

- Total annual program completions decreased by 24.1% from 1996 to 2003.
- Completions per 100,000 population decreased by 30.8% over the same time period.
- 24.1% of program completers were female in 1996 compared to 36.4% in 2003.



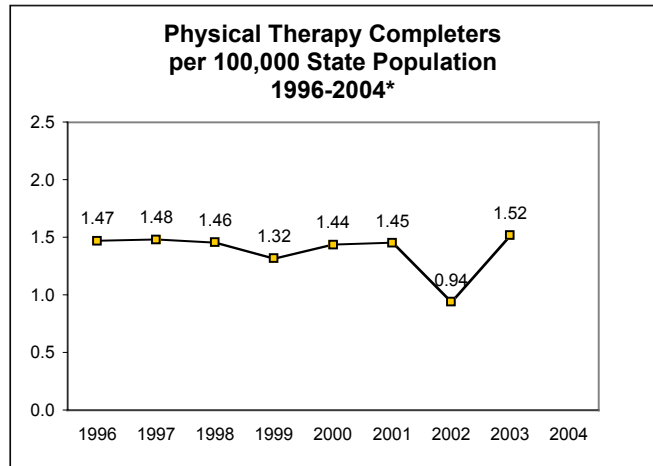
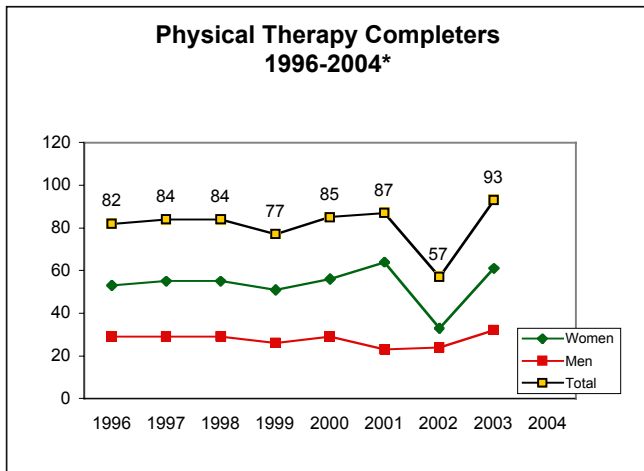
* Complete data not available for 2004.

† Race/ethnicity data were complete for 2000, 2001, and 2003 but not reported for a range of 3.4% to 13.6% of completers in other years.

Data sources: see introduction.

Health Professions Education in Washington State

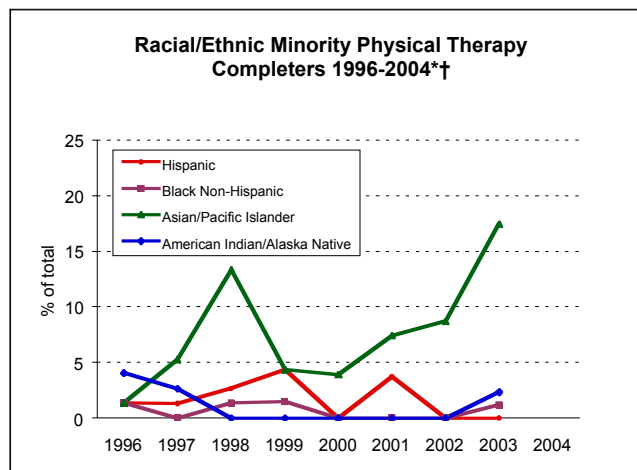
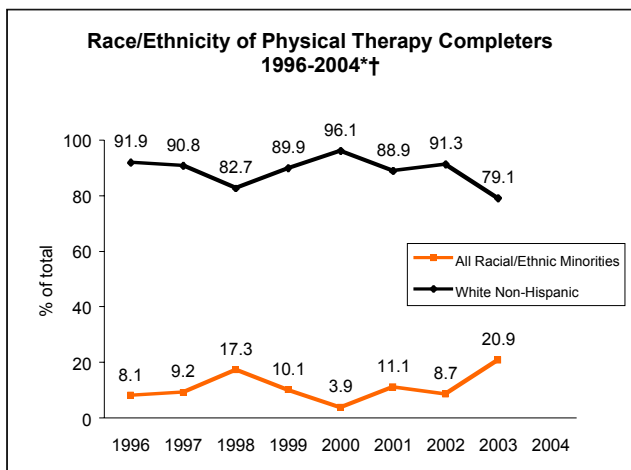
Physical Therapy Program Completers



- Three universities in the state offered physical therapy programs in 2003.
- 2002 was a transition year from the baccalaureate to the master's degree, resulting in a temporarily low number of graduates. All post-2001 graduates receive the master's degree. The number of program completions from 1996-2003 by type of program is as follows:

Type of Program	Number of Program Completions*							
	1996	1997	1998	1999	2000	2001	2002	2003
Baccalaureate	54	52	24	23	24	24		
Master's	28	32	60	54	61	63	57	93

- Total annual program completions increased by 13.4% from 1996 to 2003.
- Completions per 100,000 population increased by 3.4% over the same time period.
- 64.6% of program completers were female in 1996 compared to 65.6% in 2003.



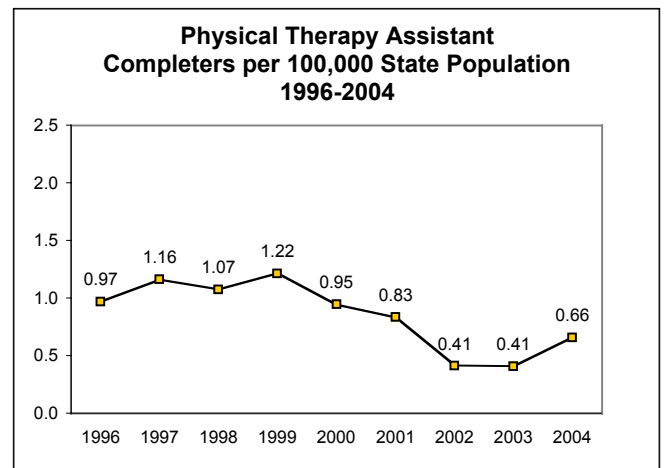
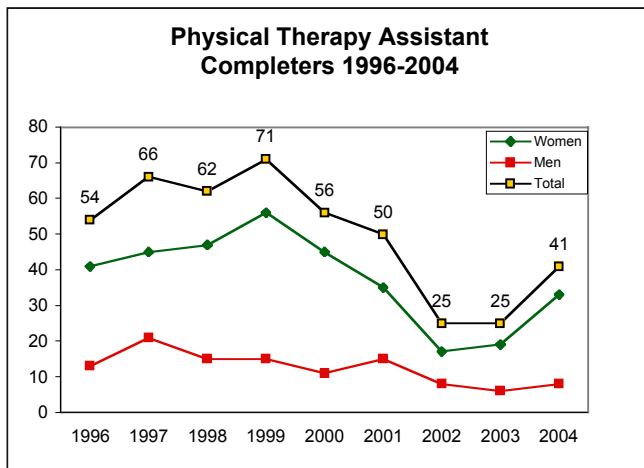
* Complete data not available for 2004.

† Race/ethnicity were not reported for a range of 6.9% to 19.3% of completers each year (these data were missing for 7.5% of completers in 2003).

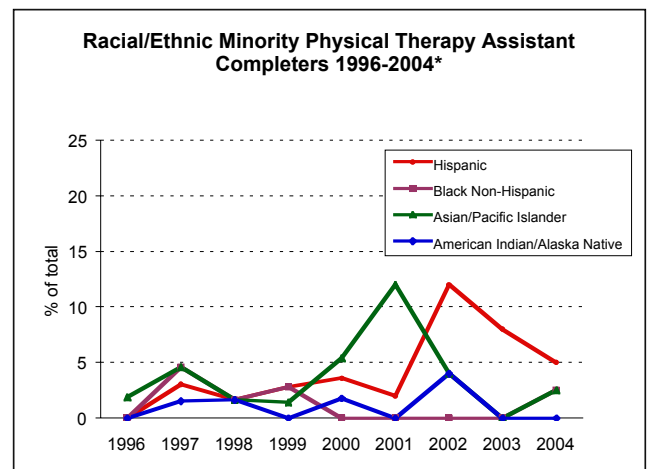
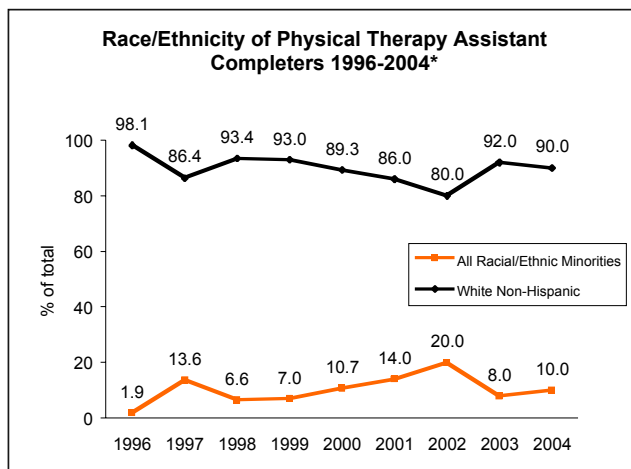
Data sources: see introduction.

Health Professions Education in Washington State

Physical Therapy Assistant Program Completers



- Three community colleges in the state offered physical therapy assistant programs at the associate degree level in 2004.
- Total annual program completions decreased by 24.1% from 1996 to 2004.
- Completions per 100,000 population decreased by 32.0% over the same time period.
- 75.9% of program completers were female in 1996 compared to 80.5% in 2004.

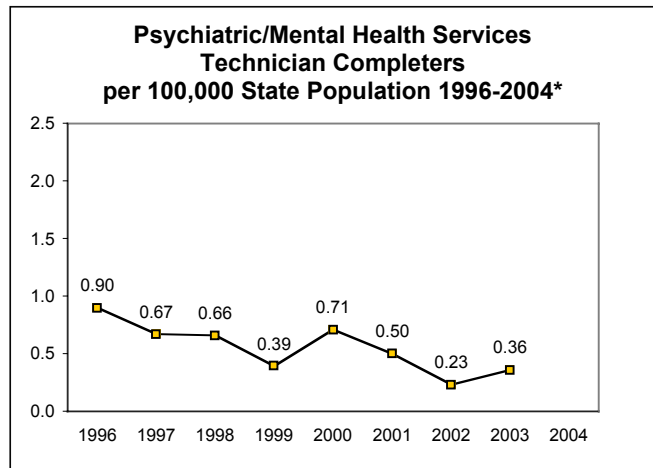
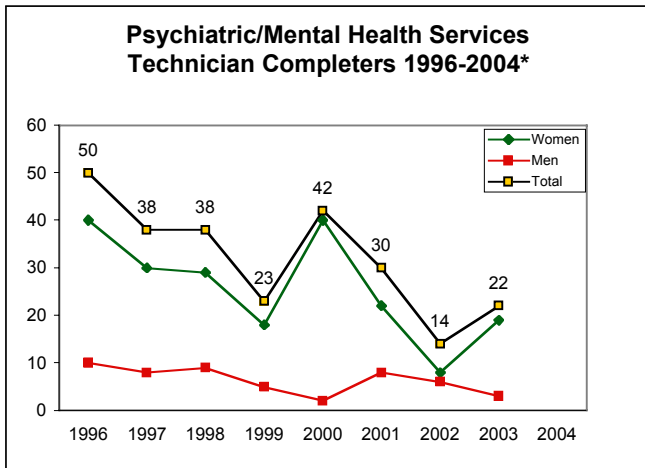


* Race/ethnicity data were complete for all years except 1998 when these data were missing for 1.6% of completers, and 2004, when these data were missing for 2.4% of completers.

Data sources: see introduction.

Health Professions Education in Washington State

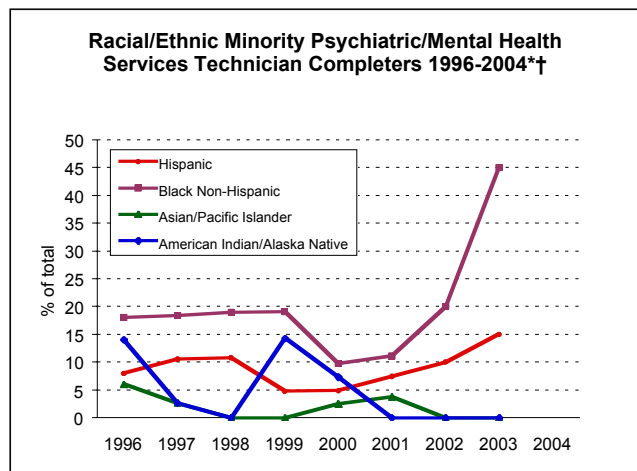
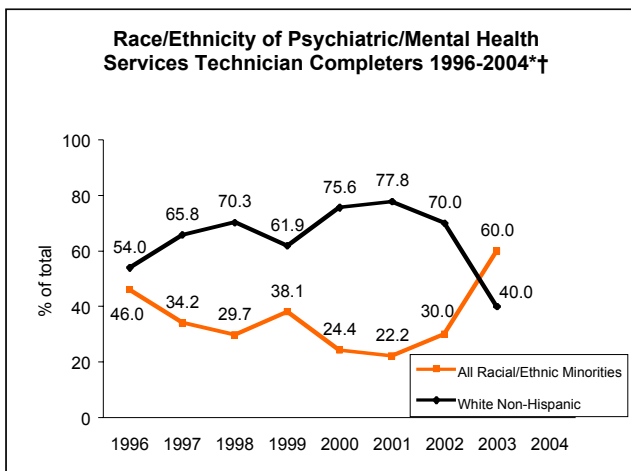
Psychiatric/Mental Health Services Technician Program Completers



- Three community colleges in the state offered psychiatric/mental health services technician programs in 2003.
- There are several types of psychiatric/mental health services technician programs in Washington. The number of program completions from 1996-2003 by type of program is as follows:

Type of Program	Number of Program Completions*							
	1996	1997	1998	1999	2000	2001	2002	2003
Less than two years	36	28	29	18	18	29	13	21
Associate	6	8	2	4	1	1	1	1
Baccalaureate	8	2	7	1	23			

- Total annual program completions decreased by 56.0% from 1996 to 2003.
- Completions per 100,000 population decreased by 60.0% over the same time period.
- 80.0% of program completers were female in 1996 compared to 86.4% in 2003.



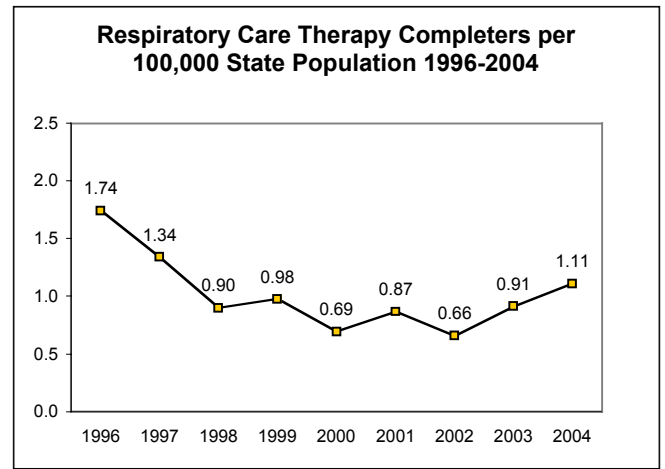
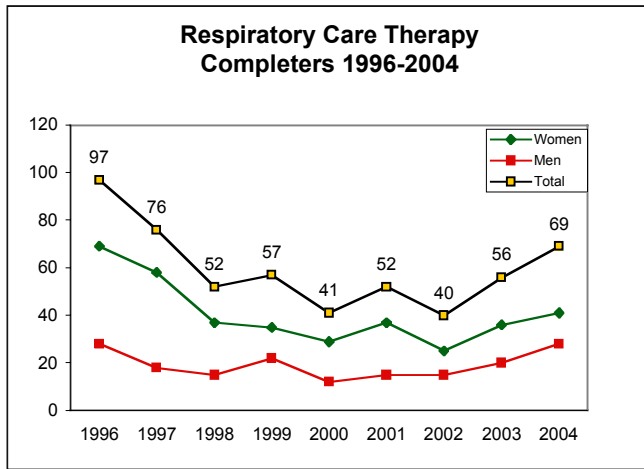
* Complete data not available for 2004.

† Race/ethnicity data were complete for 1996 and 1997 but not reported for a range of 2.4% to 28.6% of completers each year (these data were missing for 9.1% of completers in 2003).

Data sources: see introduction.

Health Professions Education in Washington State

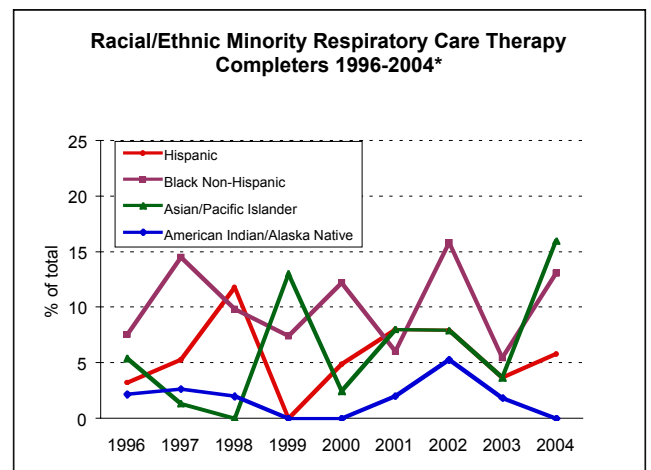
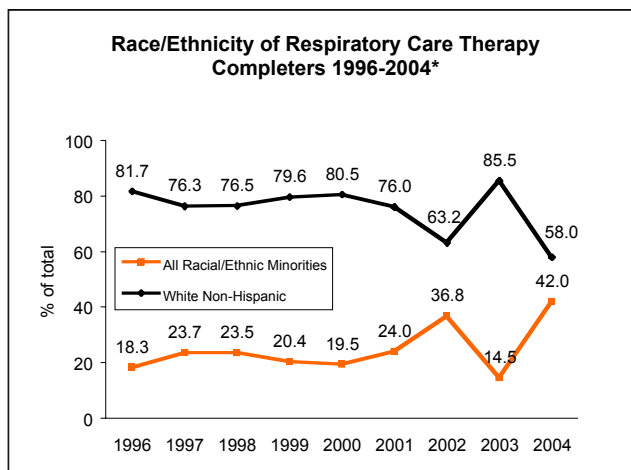
Respiratory Care Therapy Program Completers



- Four community colleges in the state offered respiratory care therapy programs in 2004.
- There are two types of respiratory care therapy programs in Washington. The number of program completions from 1996-2004 by type of program is as follows:

Type of Program	Number of Program Completions								
	1996	1997	1998	1999	2000	2001	2002	2003	2004
Less than two years	24	30	14	14	13	10	9		
Associate	73	46	38	43	28	42	31	46	69
Other								10	

- Total annual program completions decreased by 28.9% from 1996 to 2004.
- Completions per 100,000 population decreased by 36.2% over the same time period.
- 71.1% of program completers were female in 1996 compared to 59.4% in 2004.

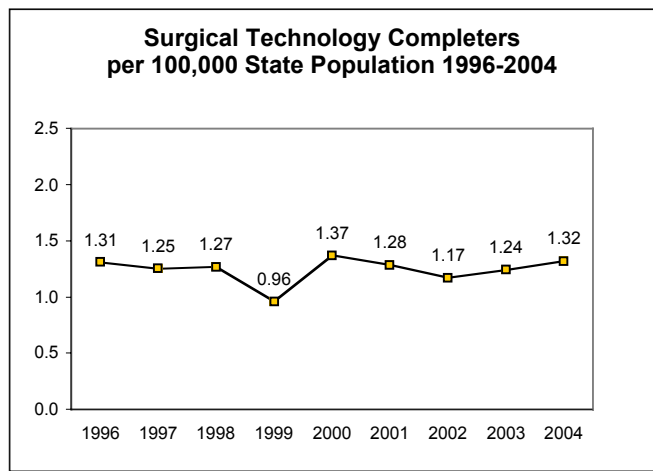
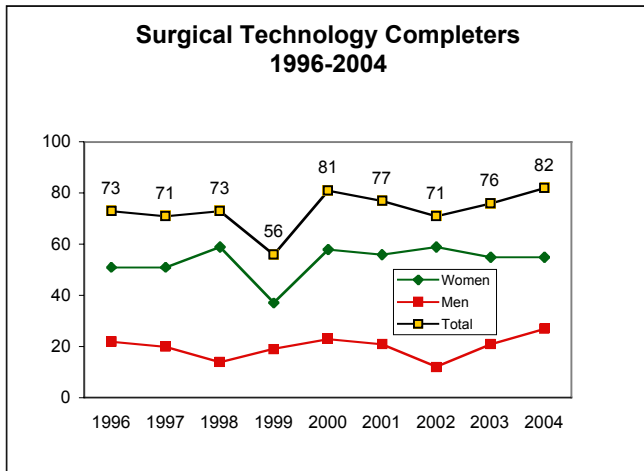


* Race/ethnicity data were complete in 1997, 2000, and 2004 but not reported for a range of 1.8% to 5.3% of completers in other years.

Data sources: see introduction.

Health Professions Education in Washington State

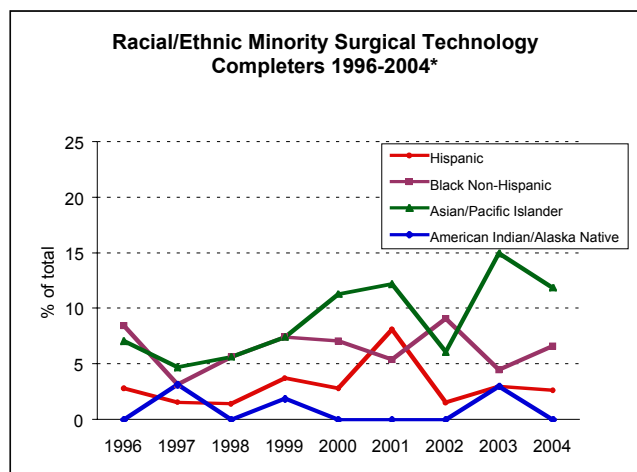
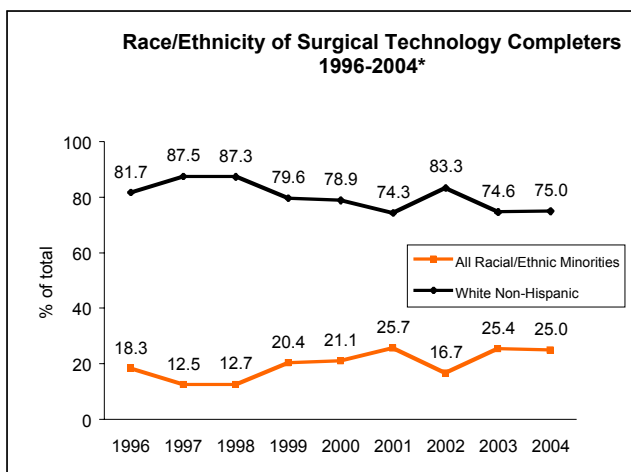
Surgical Technology Program Completers



- Five community and technical colleges in the state offered surgical technology programs in 2004.
- There are two types of surgical technology programs in Washington. The number of program completions from 1996-2004 by type of program is as follows:

Type of Program	Number of Program Completions								
	1996	1997	1998	1999	2000	2001	2002	2003	2004
Less than two years	58	56	55	44	63	54	64	59	67
Associate	15	15	18	12	18	23	7	17	15

- Total annual program completions increased by 12.3% from 1996 to 2004.
- Completions per 100,000 population remained virtually unchanged over the same time period.
- 69.9% of program completers were female in 1996 compared to 67.1% in 2004.

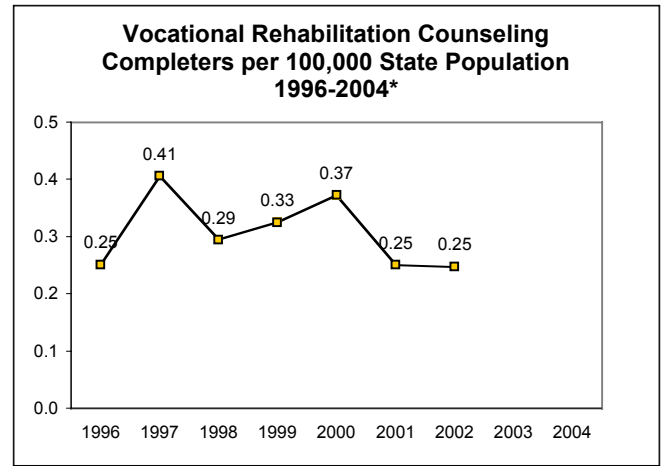
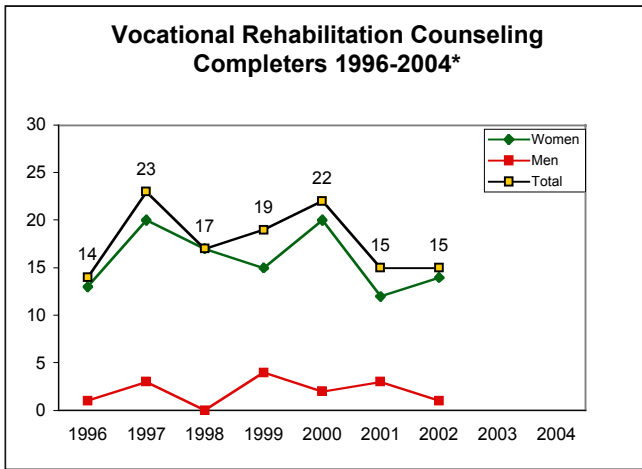


* Race/ethnicity were not reported for a range of 2.7% to 12.3% of completers each year (these data were missing for 7.3% of completers in 2004).

Data sources: see introduction.

Health Professions Education in Washington State

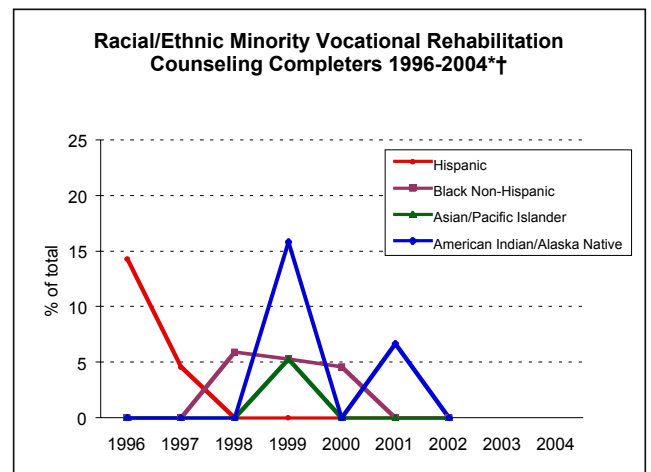
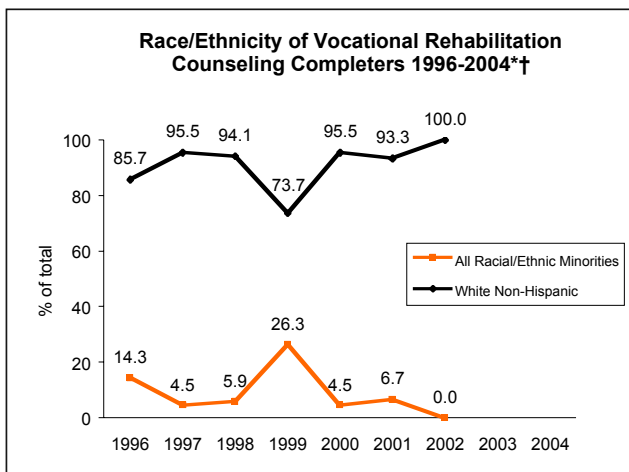
Vocational Rehabilitation Counseling Program Completers



- Three community colleges and universities in the state offered vocational rehabilitation counseling programs in 2002.
- There are several types of vocational rehabilitation counseling programs in Washington. The number of program completions from 1996-2002 by type of program is as follows:

Type of Program	Number of Program Completions*						
	1996	1997	1998	1999	2000	2001	2002
Less than two years	8	14	5	8	7	5	5
Associate	6	9	12	9	12	8	7
Master's				2	3	2	3

- Total annual program completions increased by 6.7% from 1996 to 2002.
- Completions per 100,000 population remained unchanged over the same time period.
- 92.9% of program completers were female in 1996 compared to 93.3% in 2002.



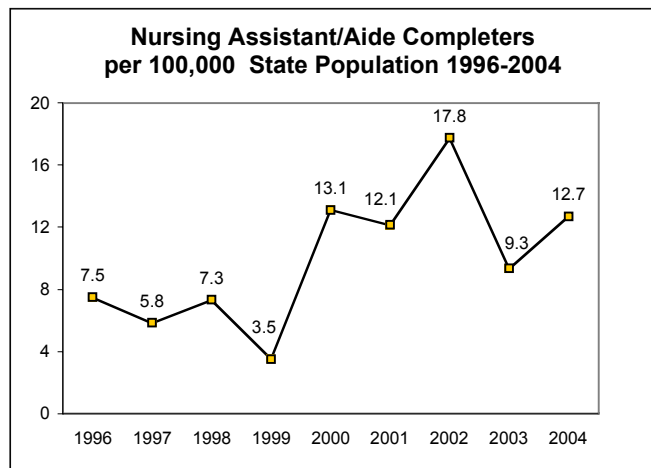
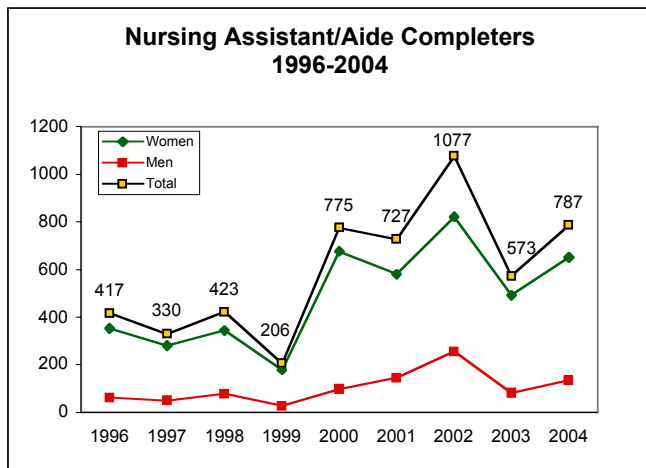
* No completions reported in 2003 in IPEDS, data not available for 2004.

† Race/ethnicity were not reported for 4.3% of completers in 1997 but these data were complete for all other years from 1996 through 2002.

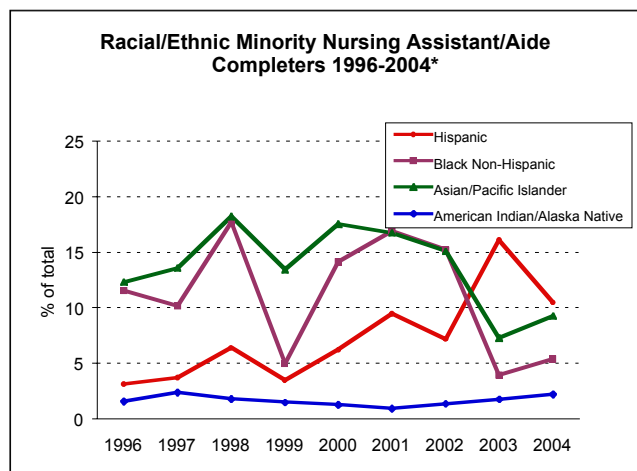
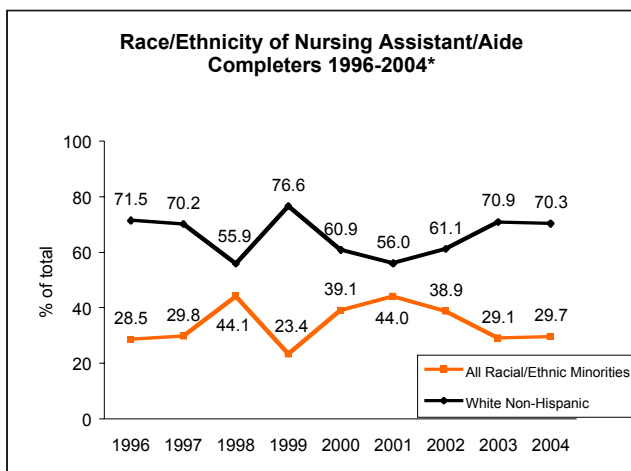
Data sources: see introduction.

Health Professions Education in Washington State

Nursing Assistant/Aide Program Completers



- Statistics are reported only for postsecondary nursing assistant/aide programs in the state; 14 community and technical colleges and institutes offered programs of less than two years in 2004. Health care facility or high school programs are not included.
- Total annual program completions increased by 88.7% from 1996 to 2004.
- Completions per 100,000 population increased by 69.3% over the same time period.
- 84.9% of program completers were female in 1996 compared to 82.9% in 2004.

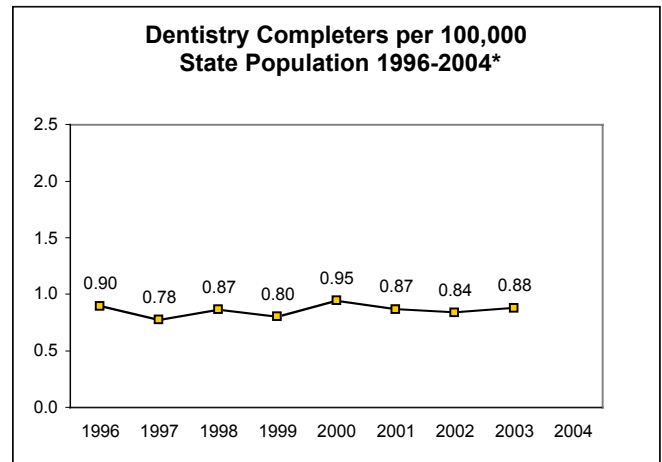
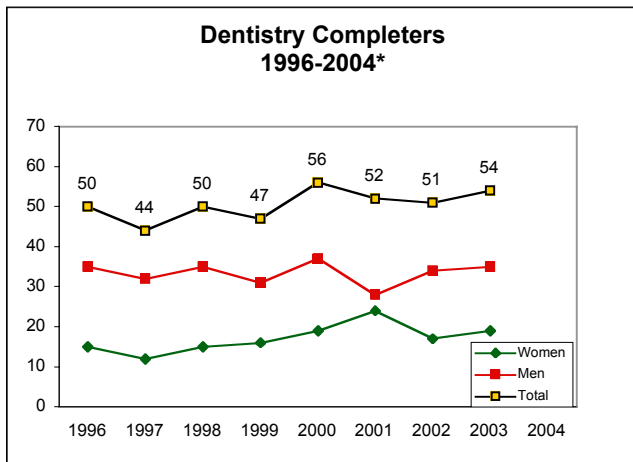


* Race/ethnicity were not reported for a range of 2.4% to 18.8% of completers each year (these data were missing for 8.0% of completers in 2004).

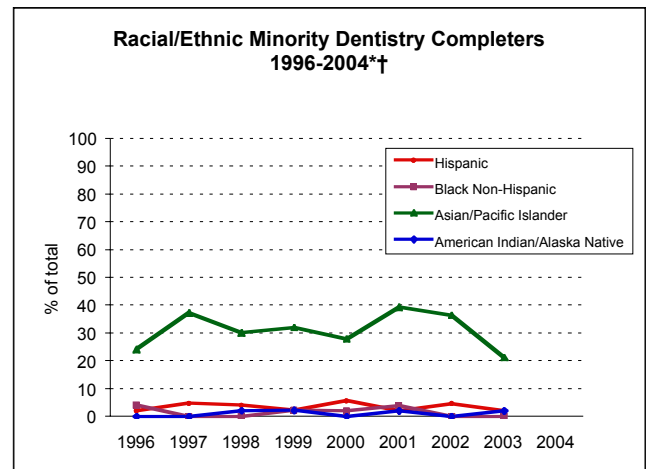
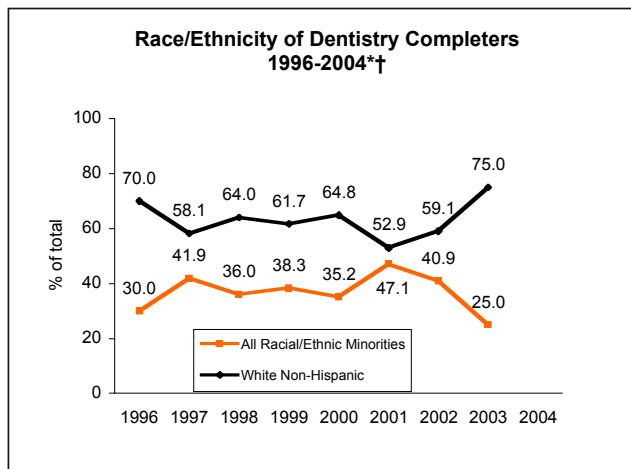
Data sources: see introduction.

Health Professions Education in Washington State

Dentistry Program Completers



- The state has one dental school, the University of Washington School of Dentistry.
- Total annual completions increased by 8.0% from 1996 to 2003.
- Completions per 100,000 population decreased by 2.2% over the same time period.
- 30.0% of program completers were female in 1996 compared to 35.2% in 2003.



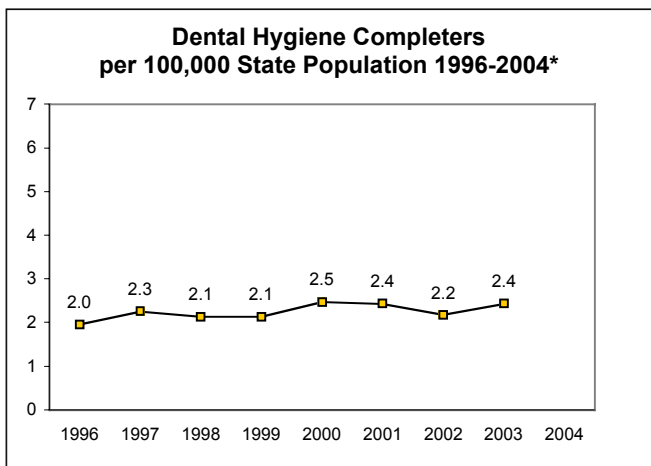
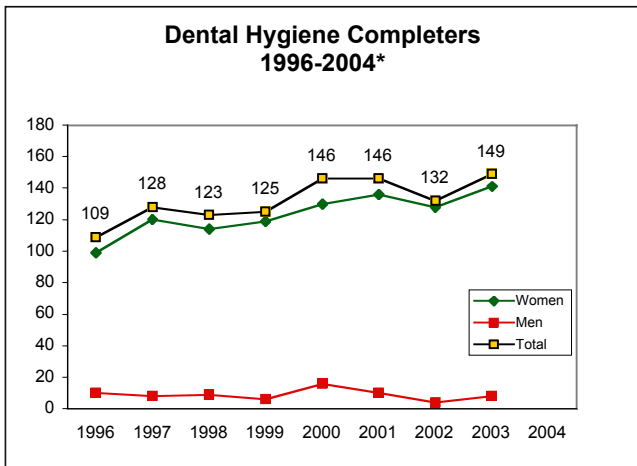
* Complete data not available for 2004.

† Race/ethnicity data were complete in 1996, 1998, and 1999 but not reported for a range of 1.9% to 13.7% of completers in other years (these data were missing for 3.7% of completers in 2003).

Data sources: see introduction.

Health Professions Education in Washington State

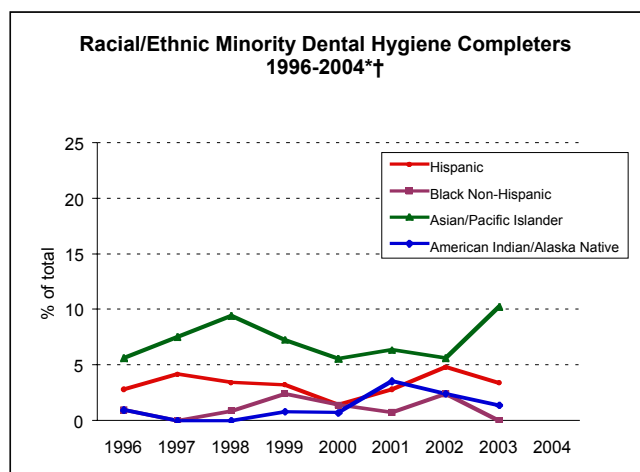
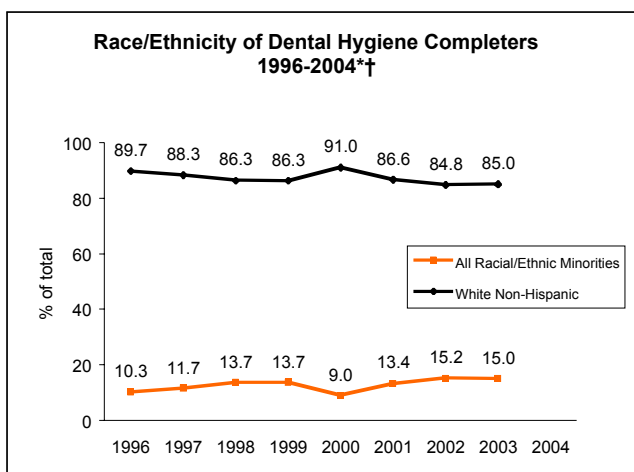
Dental Hygiene Program Completers



- Six community and technical colleges and two universities in the state offered dental hygiene programs in 2003.
- There are several types of dental hygiene programs in Washington. Baccalaureate degrees may have a clinical or population health focus. The number of program completions from 1996-2003 by type of program is as follows:

Type of Program	Number of Program Completions*							
	1996	1997	1998	1999	2000	2001	2002	2003
Less than two years					4			
Associate	83	93	95	101	107	109	105	114
Baccalaureate	26	35	28	24	26	37	27	35
Other					9			

- Total annual completions increased by 36.7% from 1996 to 2003.
- Completions per 100,000 population increased by 20.0% over the same time period.
- 90.8% of program completers were female in 1996 compared to 94.6% in 2003.



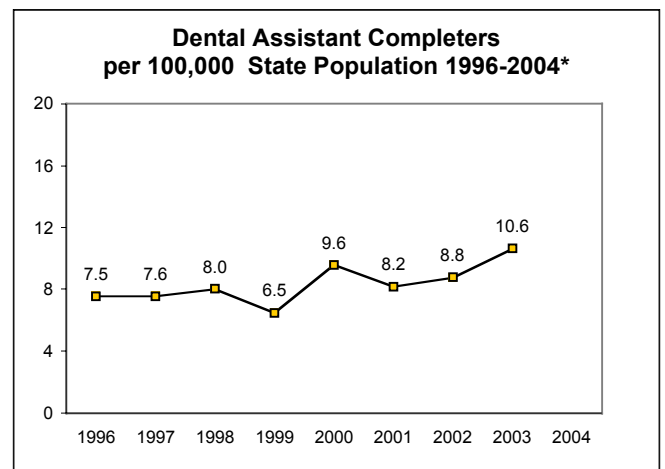
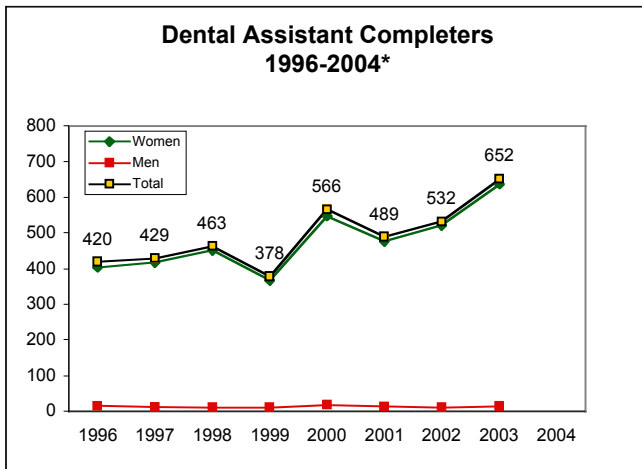
* Complete data not available for 2004.

† Race/ethnicity were not reported for a range of 0.8% to 6.3% of completers each year (these data were missing for 1.3% of completers in 2003).

Data sources: see introduction.

Health Professions Education in Washington State

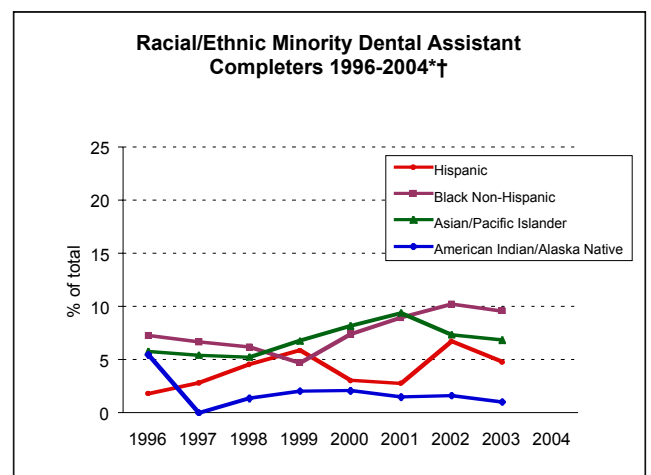
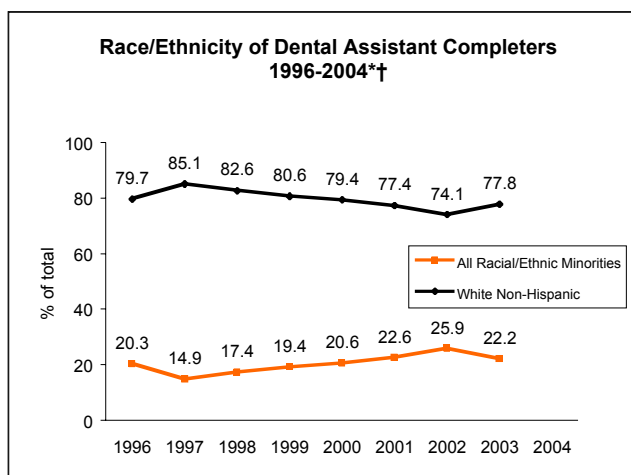
Dental Assistant Program Completers



- Seventeen community and technical colleges and institutes in the state offered dental assistant programs in 2003.
- There are several types of dental assistant programs in Washington. The number of program completions from 1996-2003 by type of program is as follows:

Type of Program	Number of Program Completions*							
	1996	1997	1998	1999	2000	2001	2002	2003
Less than two years	367	384	370	318	477	419	493	585
Associate	19	25	35	32	34	32	25	52
Baccalaureate	21							
Other	13	20	58	28	55	38	14	15

- Total annual program completions increased by 55.2% from 1996 to 2003.
- Completions per 100,000 population increased by 41.3% over the same time period.
- 96.2% of program completers were female in 1996 compared to 97.9% in 2003.



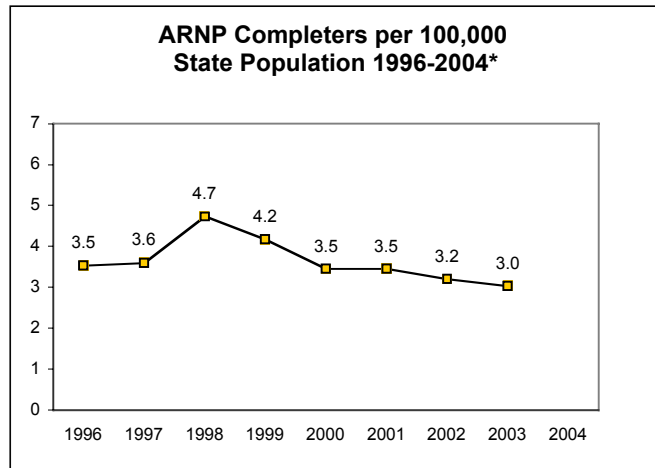
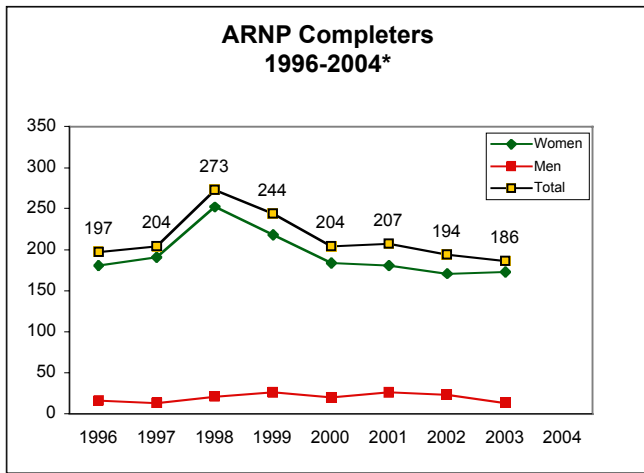
* Complete data not available for 2004.

† Race/ethnicity were not reported for a range of 4.3% to 10.3% of completers each year (these data were missing for 10.3% of completers in 2003).

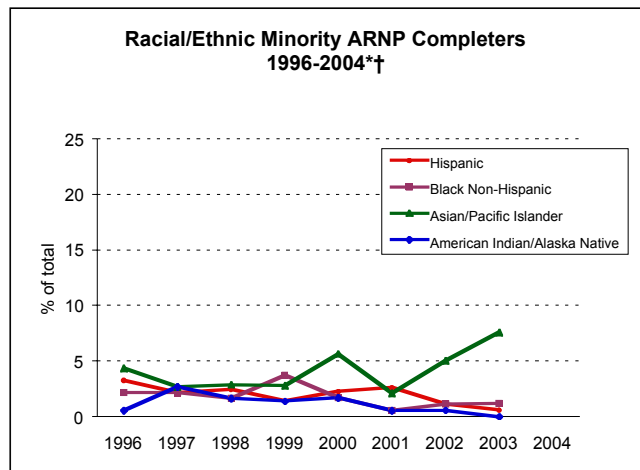
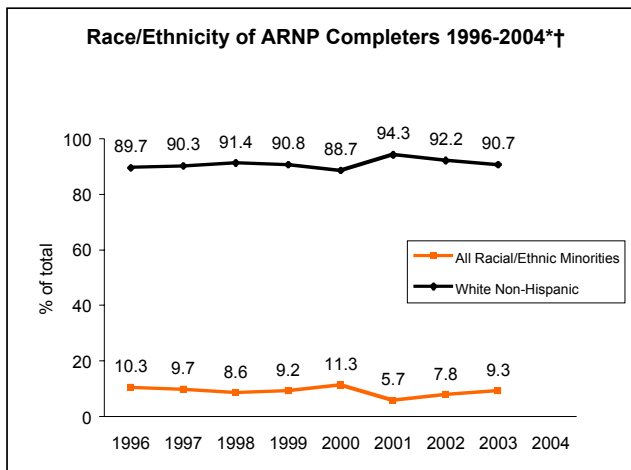
Data sources: see introduction.

Health Professions Education in Washington State

Advanced Registered Nurse Practitioner Program Completers



- Eight universities in the state offered advanced registered nurse practitioner programs in 2003.
- Total annual program completions decreased by 5.6% from 1996 to 2003.
- Completions per 100,000 population decreased by 14.3% over the same time period.
- 91.9% of program completers were female in 1996 compared to 93.0% in 2003.



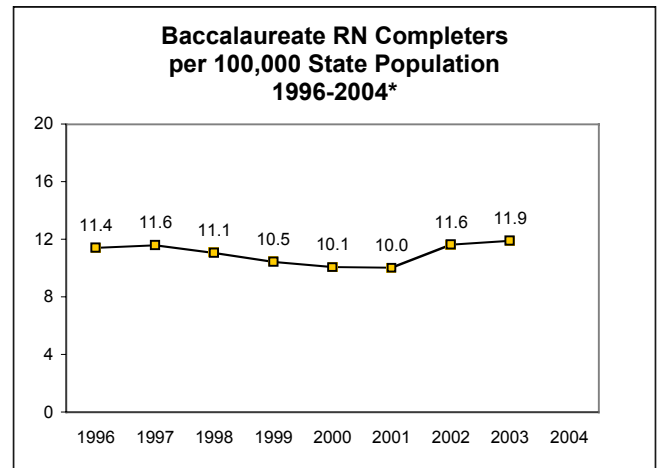
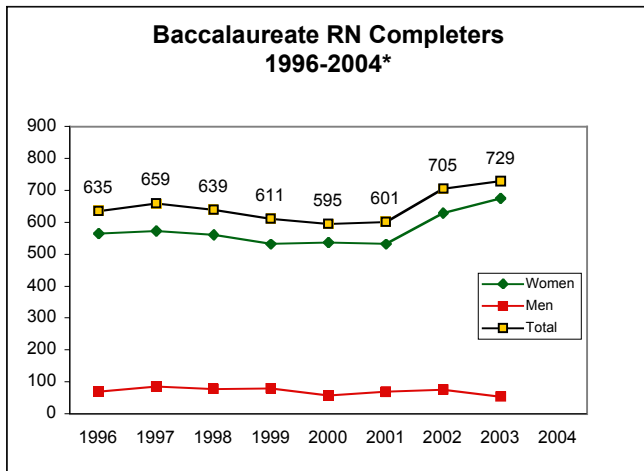
* Complete data not available for 2004.

† Race/ethnicity were not reported for a range of 6.6% to 13.2% of completers each year (these data were missing for 7.5% of completers in 2004).

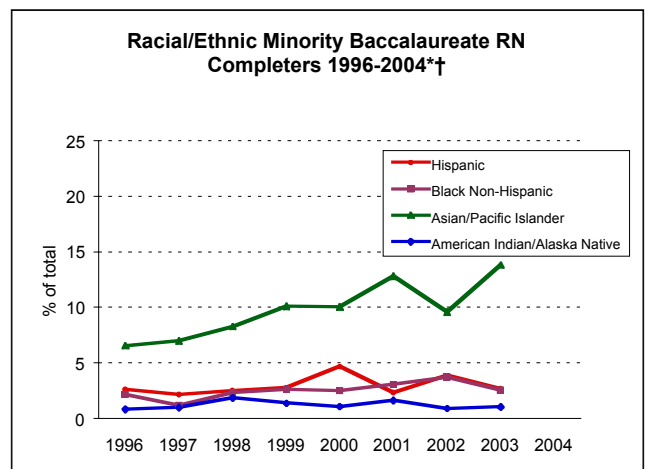
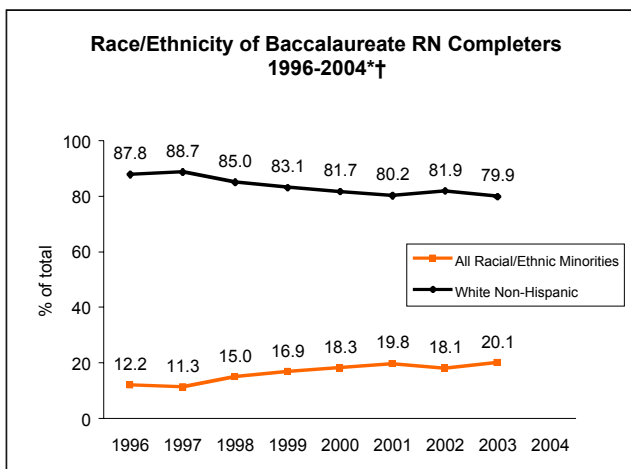
Data sources: see introduction.

Health Professions Education in Washington State

Baccalaureate Registered Nurse Program Completers



- Thirteen universities and colleges in the state offered baccalaureate registered nurse programs in 2003.
- Total annual program completions increased by 14.8% from 1996 to 2003.
- Completions per 100,000 population increased by 4.4% over the same time period.
- 89.0% of program completers were female in 1996 compared to 92.6% in 2003.



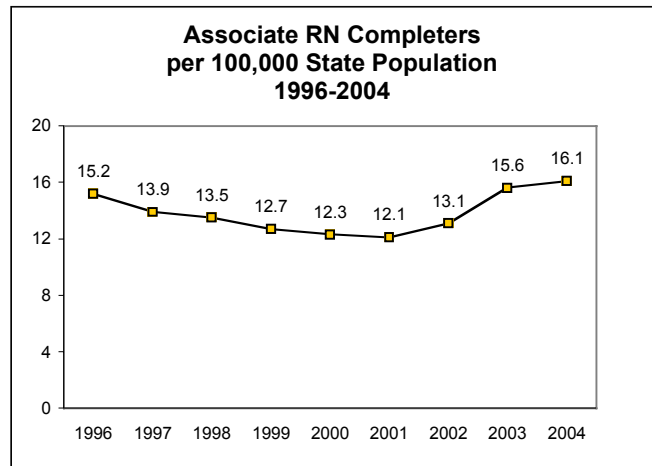
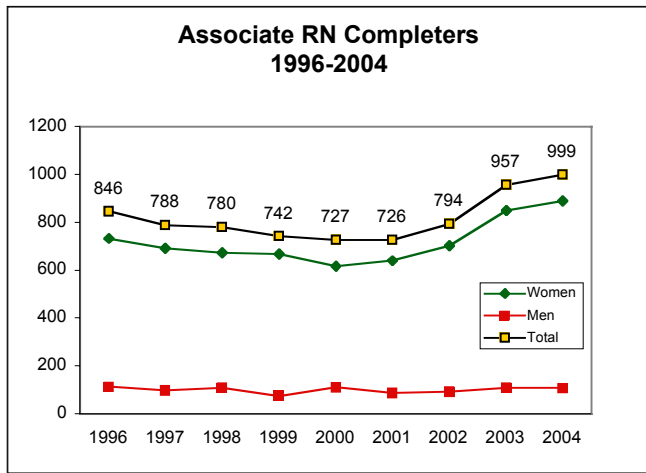
* Complete data not available for 2004.

† Race/ethnicity were not reported for a range of 4.1% to 8.6% of completers each year (these data were missing for 8.5% of completers in 2003).

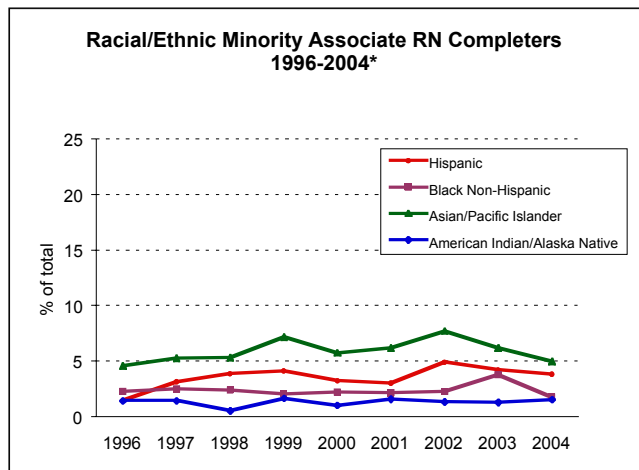
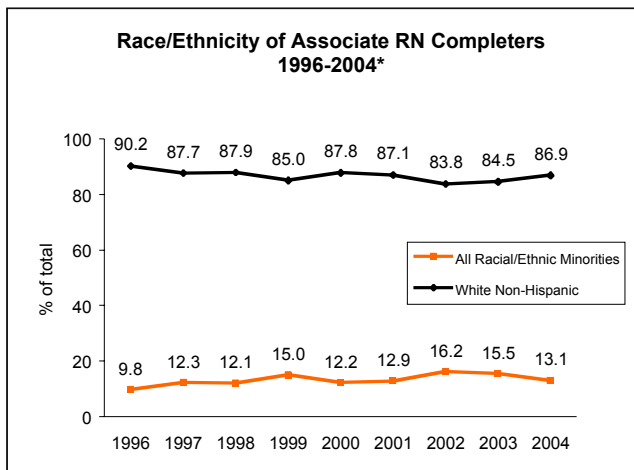
Data sources: see introduction.

Health Professions Education in Washington State

Associate Registered Nurse Program Completers



- Eighteen community and technical colleges in the state offered associate registered nurse programs in 2004. Some students complete the course of study but do not apply for the associate degree. These students may not be counted as completers (and are therefore not reflected in these figures) but may become licensed RNs.
- Total annual program completions increased by 18.1% from 1996 to 2004.
- Completions per 100,000 population increased by 5.9% over the same time period.
- 86.6% of program completers were female in 1996 compared to 89.2% in 2004.

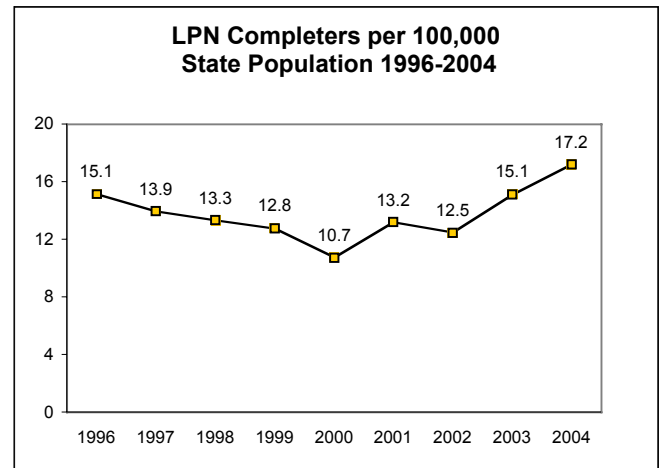
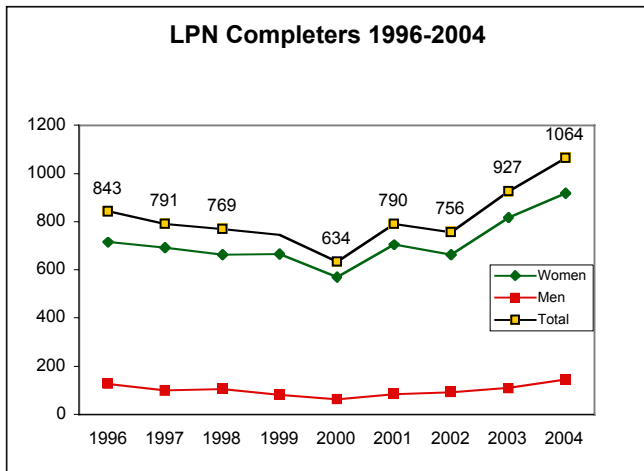


* Race/ethnicity were not reported for a range of 1.9% to 6.5% of completers each year (these data were missing for 3.3% of completers in 2004).

Data sources: see introduction.

Health Professions Education in Washington State

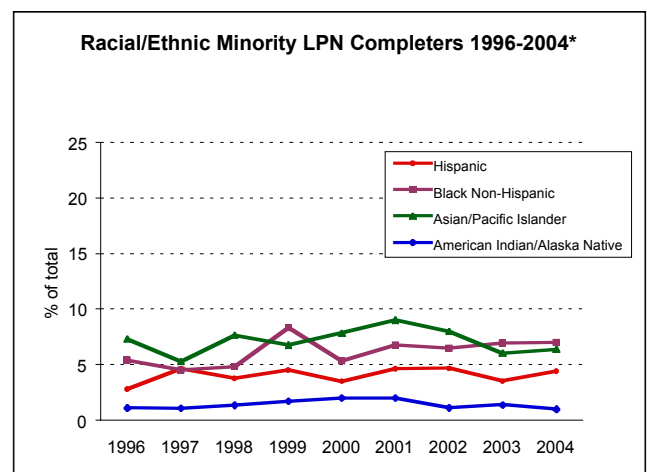
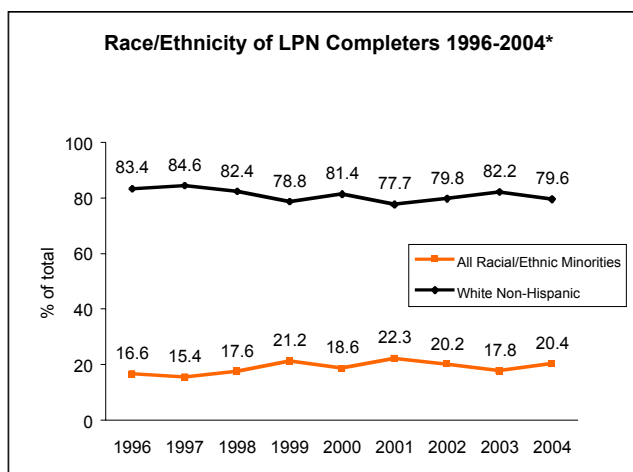
Licensed Practical Nurse Program Completers



- Twenty-one community and technical colleges in the state offered licensed practical nurse programs in 2004.
- There are several types of licensed practical nurse programs in Washington. The number of program completions from 1996-2004 by type of program is as follows.

Type of Program	Number of Program Completions								
	1996	1997	1998	1999	2000	2001	2002	2003	2004
Less than two years	828	768	727	647	523	709	672	836	1,037
Associate	15	23	24	27	29	36	38	25	27
Other			18	73	82	45	46	66	

- Total annual program completions awarded increased by 26.2% from 1996 to 2004.
- Completions per 100,000 population increased by 13.9% over the same time period.
- 84.8% of program completers were female in 1996 compared to 86.3% in 2004.

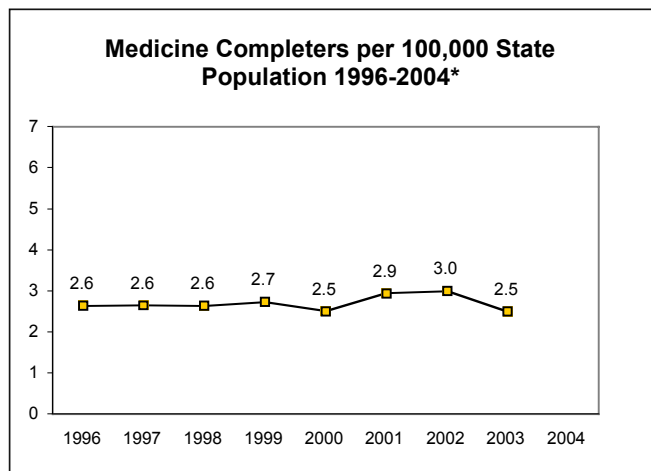
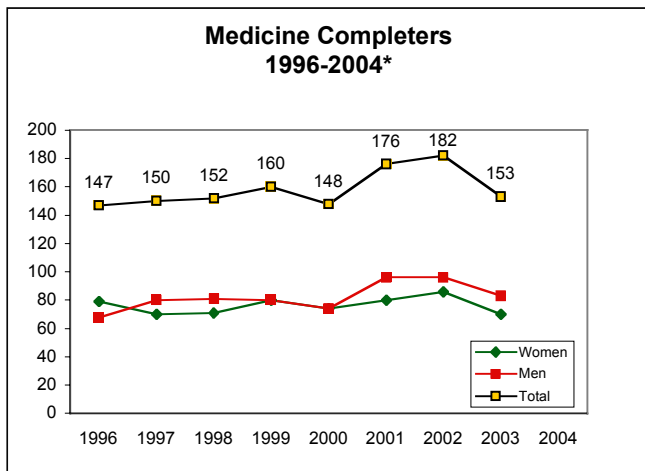


* Race/ethnicity were not reported for a range of 2.6% to 5.2% of completers each year (these data were missing for 4.0% of completers in 2004).

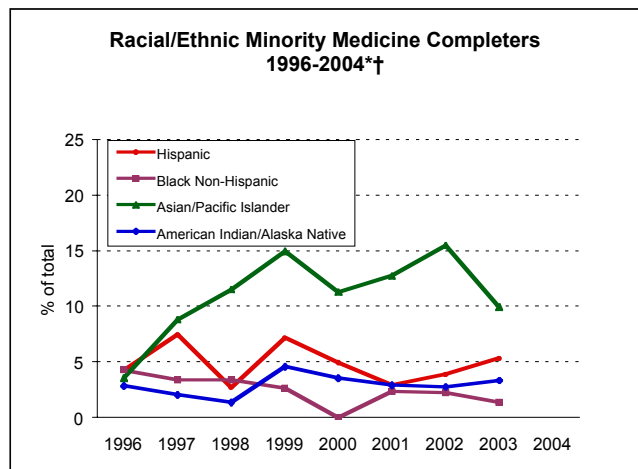
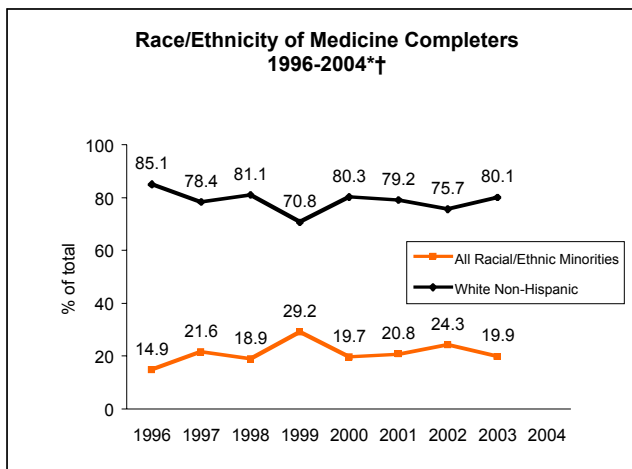
Data sources: see introduction.

Health Professions Education in Washington State

Medicine Program Completers



- The state has one medical school, the University of Washington School of Medicine.
- Total annual completions increased by 4.1% from 1996 to 2003.
- Completions per 100,000 population decreased by 3.8% over the same time period.
- 53.7% of program completers were female in 1996 compared to 45.8% in 2003.



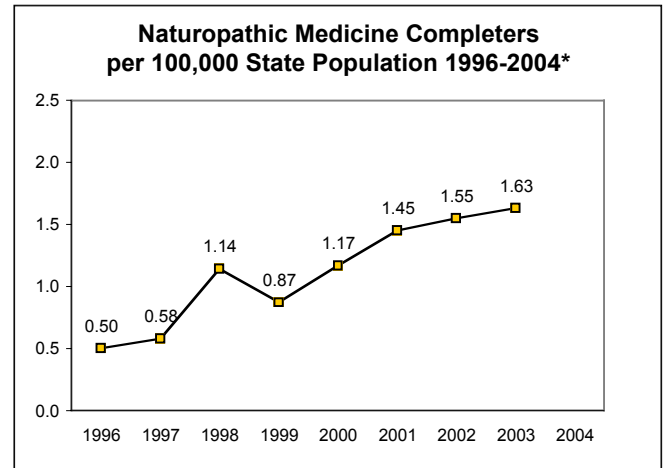
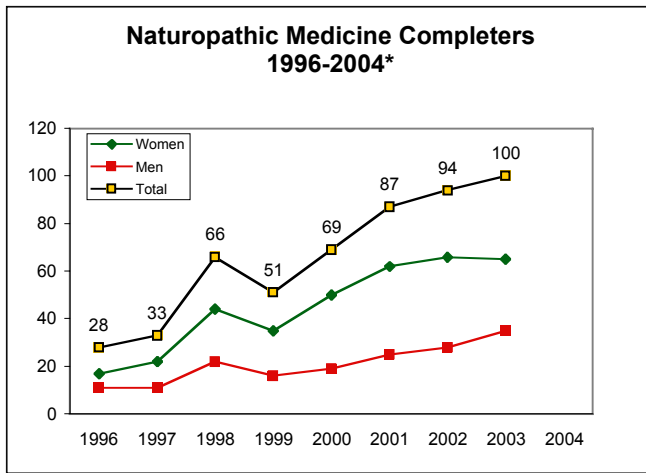
* Complete data not available for 2004.

† Race/ethnicity were not reported for a range of 0.5% to 4.1% of completers each year (these data were missing for 1.3% of completers in 2003).

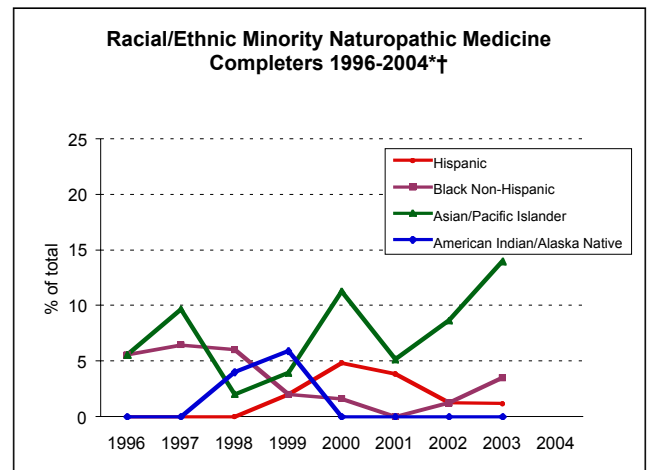
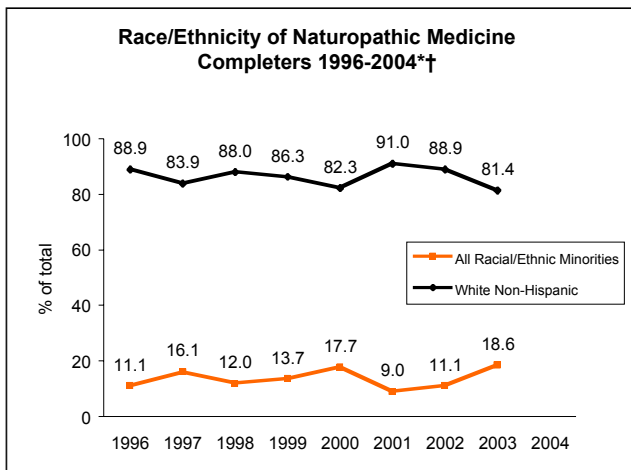
Data sources: see introduction.

Health Professions Education in Washington State

Naturopathic Medicine Program Completers



- The state has one naturopathic medicine school, Bastyr University.
- Total annual program completions increased by 257% from 1996 to 2003.
- Completions per 100,000 population increased by 226% over the same time period.
- 60.7% of program completers were female in 1996 compared to 65.0% in 2003.



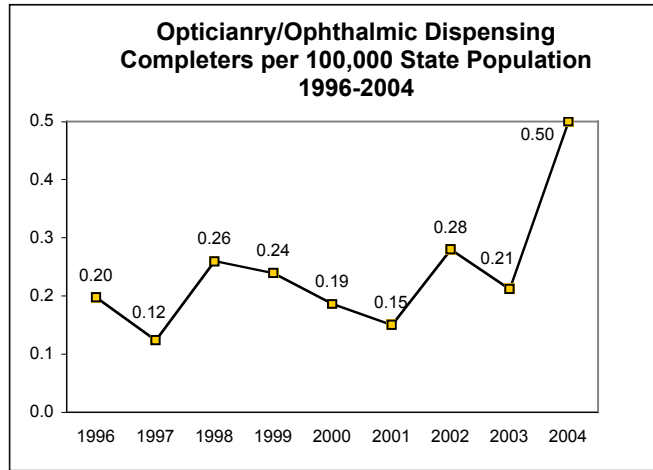
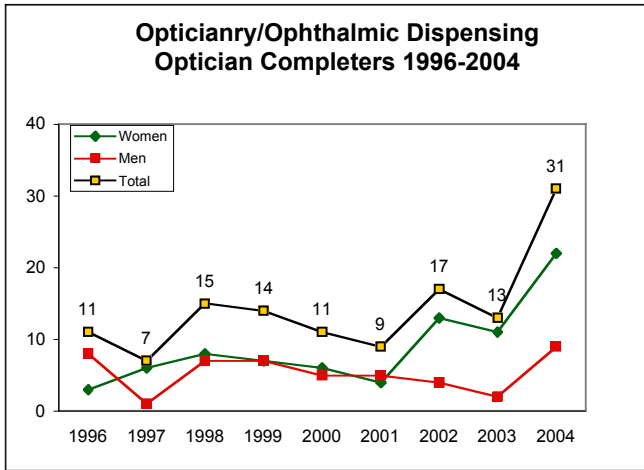
* Complete data not available for 2004.

† Race/ethnicity data were complete in 1999 but not reported for a range of 6.1% to 35.7% of completers each year (these data were missing for 14.0% of completers in 2004).

Data sources: see introduction.

Health Professions Education in Washington State

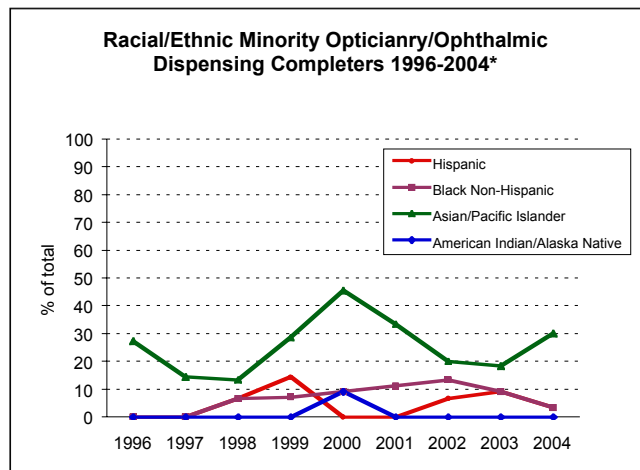
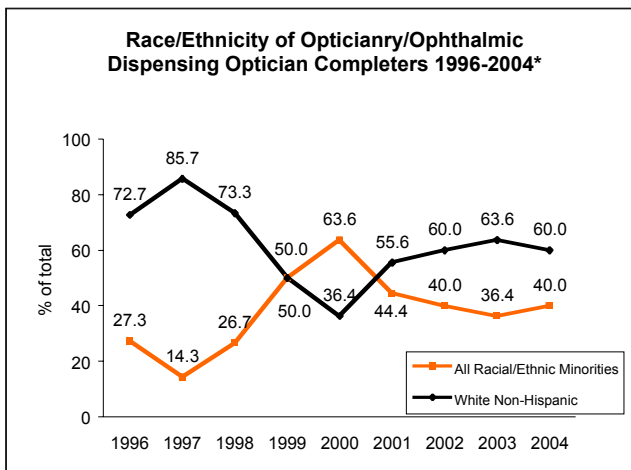
Opticianry/Ophthalmic Dispensing Optician Program Completers



- Two community colleges in the state offered opticianry/ophthalmic dispensing optician programs in 2004.
- There are two types of opticianry/ophthalmic dispensing optician programs in Washington. The number of program completions from 1996-2004 by type of program is as follows:

Type of Program	Number of Program Completions									
	1996	1997	1998	1999	2000	2001	2002	2003	2004	
Less than two years					1		1	1	5	
Associate	11	7	15	14	10	9	16	12	26	

- Total annual program completions increased by 191% from 1996 to 2004.
- Completions per 100,000 population increased by 150% over the same period.
- 27.3% of program completers were female in 1996 compared to 71.0% in 2004.

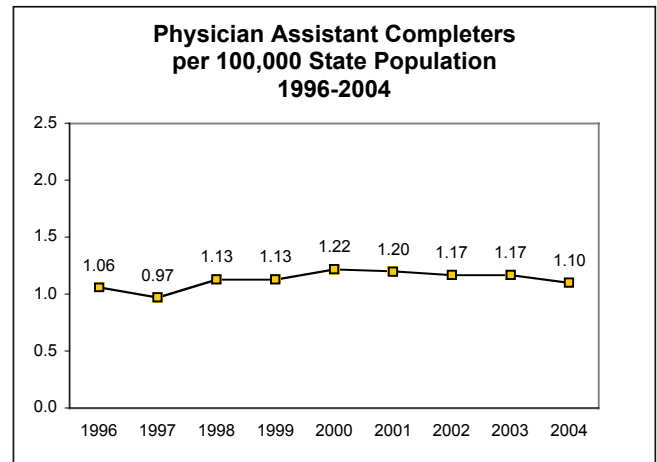
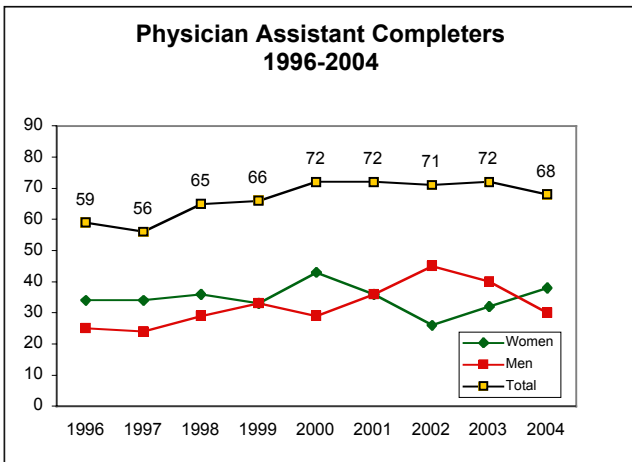


* Race/ethnicity data were complete from 1996 through 2001 but were not reported for a range of 3.2% to 15.4% of completers in other years (these data were missing for 3.2% of completers in 2004).

Data sources: see introduction.

Health Professions Education in Washington State

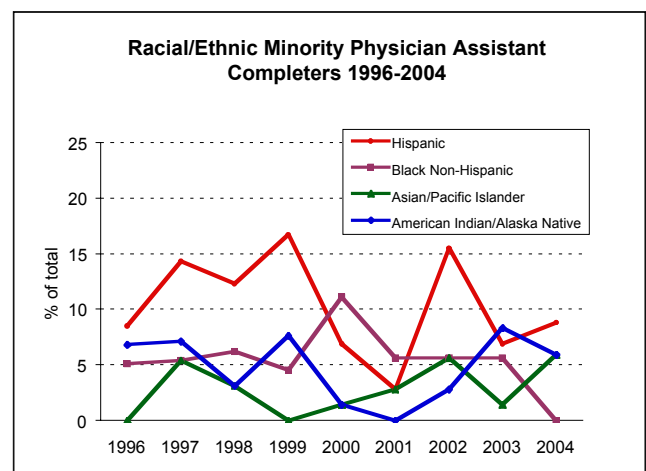
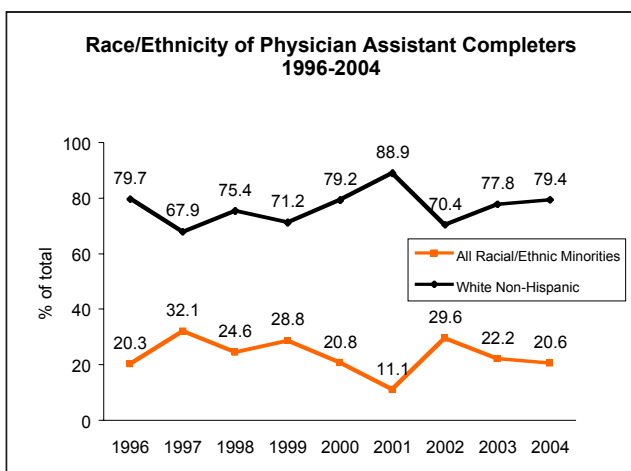
Physician Assistant Program Completers



- The state has one physician assistant program, MEDEX Northwest at the University of Washington.
- There are two types of physician assistant programs in Washington. The number of program completions from 1996-2004 by type of program is as follows:

Type of Program	Number of Program Completions									
	1996	1997	1998	1999	2000	2001	2002	2003	2004	
Two-year certificate	42	34	30	37	25	24	29	21	19	
Baccalaureate	17	22	35	29	47	48	42	51	49	

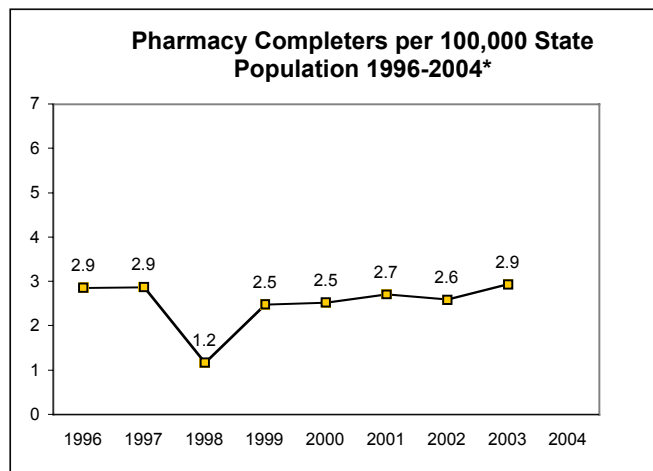
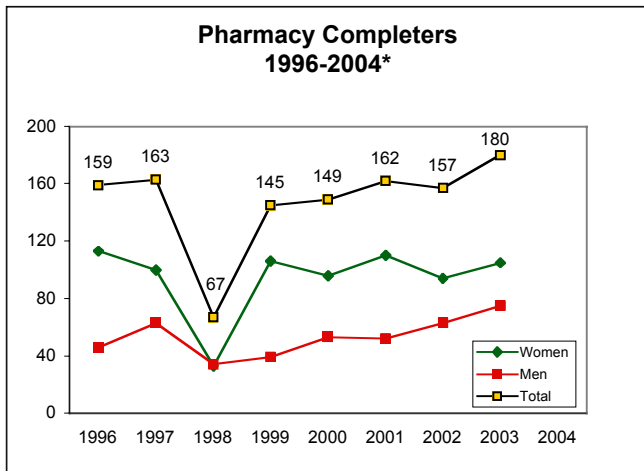
- Total annual completions increased by 15.3% from 1997 to 2004.
- Completions per 100,000 population increased by 3.8% over the same time period.
- 57.6% of program completers were female in 1996 compared to 55.9% in 2004.



Data sources: see introduction.

Health Professions Education in Washington State

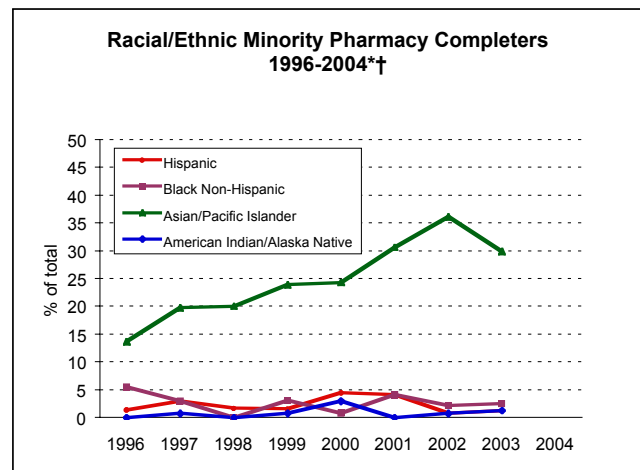
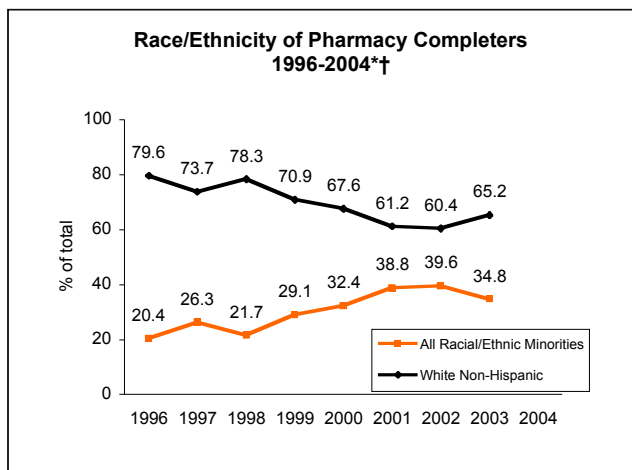
Pharmacy Program Completers



- Two universities in the state offered pharmacy programs in 2003.
- 1998 was a transition year from the three-year baccalaureate degree to the four-year Pharm.D., resulting in a temporarily low number of graduates. All post-1998 graduates receive the Pharm.D. The number of program completions from 1996-2003 by type of program is as follows:

Type of Program	Number of Program Completions*							
	1996	1997	1998	1999	2000	2001	2002	2003
Baccalaureate	146	150	43	64				
Master's	13	13	24	81	146	162	157	180

- Total annual program completions increased by 13.2% from 1996 to 2003.
- Completions per 100,000 population remained unchanged over the same time period.
- 71.1% of program completers were female in 1996 compared to 58.3% in 2003.



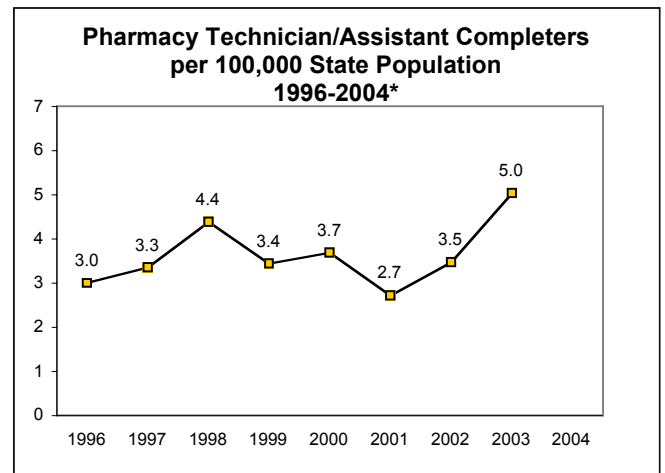
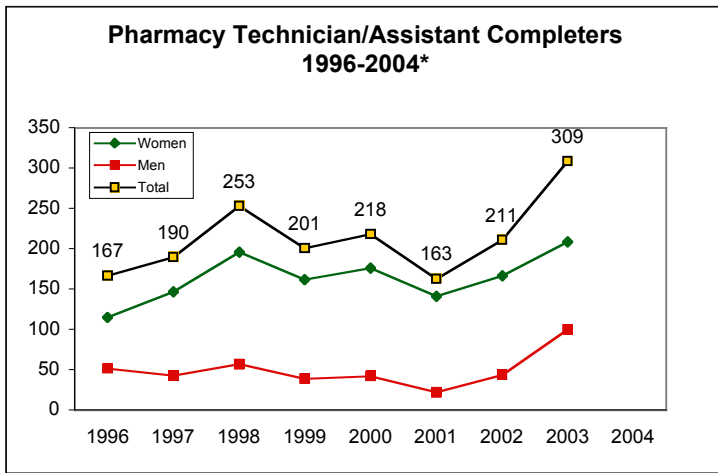
* Complete data not available for 2004.

† Race/ethnicity were not reported for a range of 7.5% to 16.0% of completers each year (these data were missing for 8.9% of completers in 2003).

Data sources: see introduction.

Health Professions Education in Washington State

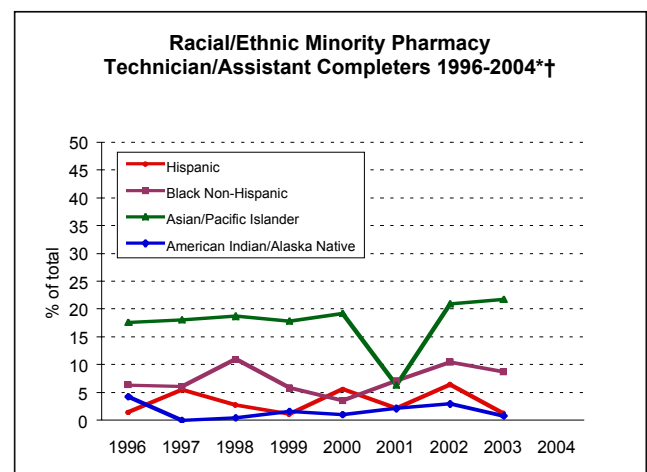
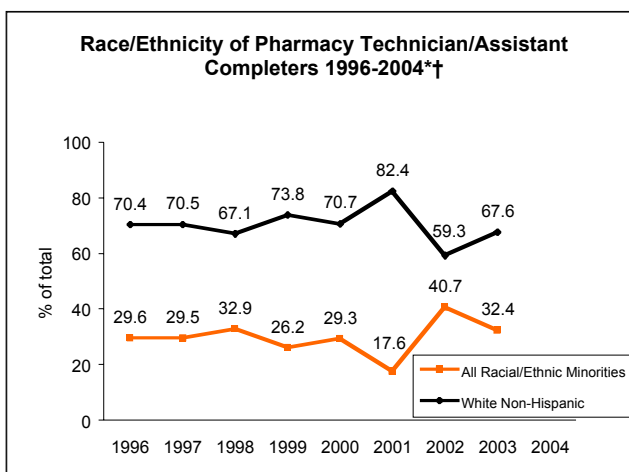
Pharmacy Technician/Assistant Program Completers



- Twelve community and technical colleges and institutes in the state offered pharmacy technician assistant programs in 2003.
- There are two types of pharmacy technician/assistant programs in Washington. The number of program completions from 1996-2003 by type of program is as follows:

Type of Program	Number of Program Completions*							
	1996	1997	1998	1999	2000	2001	2002	2003
Less than two years	165	189	248	190	201	151	200	286
Associate	2	1	5	11	17	12	11	23

- Total annual program completions increased by 85.0% from 1996 to 2003.
- Completions per 100,000 population increased by 66.7% over the same time period.
- 68.9% of program completers were female in 1996 compared to 67.6% in 2003.



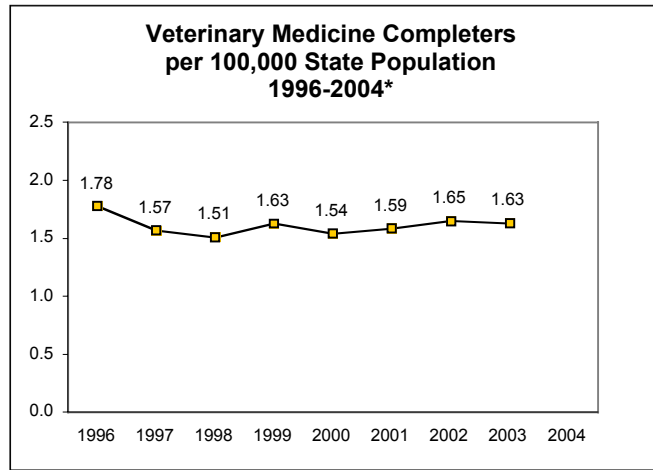
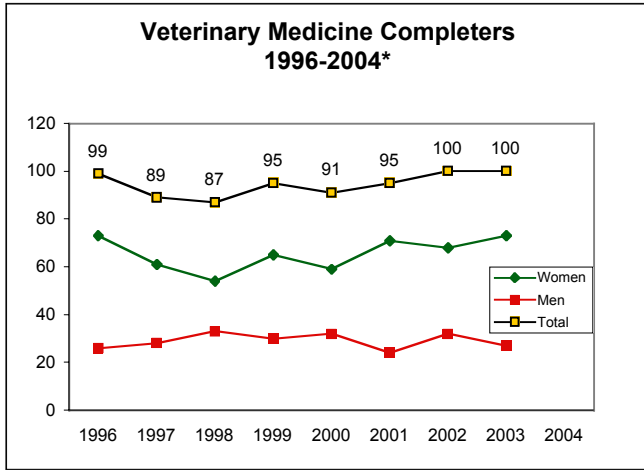
* Complete data not available for 2004.

† Race/ethnicity were not reported for a range of 3.7% to 18.5% of completers each year (these data were missing for 18.1% of completers in 2003).

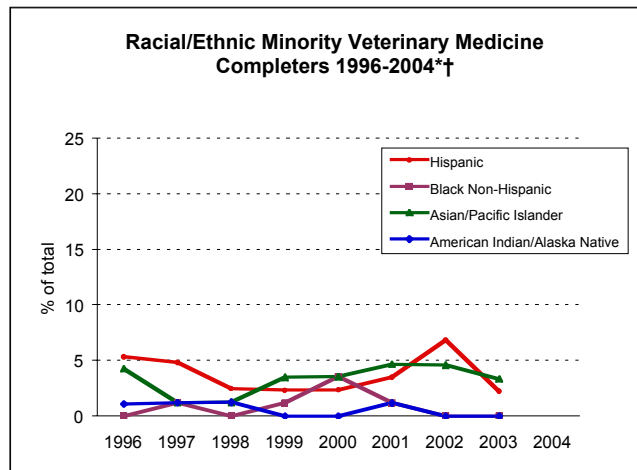
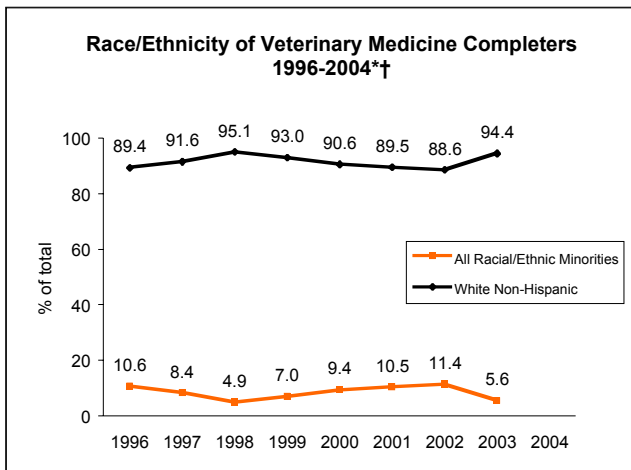
Data sources: see introduction.

Health Professions Education in Washington State

Veterinary Medicine Program Completers



- The state has one veterinary school, the Washington State University College of Veterinary Medicine.
- Total annual program completions remained virtually unchanged from 1996 to 2003.
- Completions per 100,000 population decreased by 8.4% over the same time period.
- 73.7% of program completers were female in 1996 compared to 73.0% in 2003.



* Complete data not available for 2004.

† Race/ethnicity were not reported for a range of 5.1% to 12.0% of completers each year (these data were missing for 10.0% of completers in 2003).

Data sources: see introduction.

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Benedetti, T. J., Baldwin, L. M., Andrilla, C. H., Hart, L. G. (2004). The productivity of Washington State's obstetrician-gynecologist workforce: does gender make a difference? *Obstetrics and Gynecology*, 103(3), 499-505.

WORKING PAPERS

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