

NOVEMBER 5, 2019

# Diversity in California's Health Education and Workforce Pipeline

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PRESENTED TO: Hon. Joaquin Arambula



LEGISLATIVE ANALYST'S OFFICE

# Representation in California's Health Care Workforce

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## Latino and Black Californians Are Underrepresented Among Physicians and Other Advanced Health Professionals

- Latino Californians, who comprise nearly 40 percent of the state's population, make up only about 8 percent of physicians and other advanced health professionals (such as dentists and optometrists). Black Californians, who comprise around 5 percent of the state's residents, make up around 3 percent of these professionals.
- By contrast, Asian and white Californians are overrepresented in these professions.

## Latinos Also Are Underrepresented in Nursing

- Latinos comprise 13 percent of nurses in the state—also far below Latinos' share of the state's population.
- All other racial/ethnic groups are overrepresented in nursing in California.

## For Allied Health, Latino Representation Is Higher

- Latinos comprise 34 percent of allied health workers (such as radiation technicians and dental hygienists)—just somewhat lower than their share of the state's population.
- Black and Asian Californians are overrepresented in allied health fields, whereas white Californians are underrepresented.

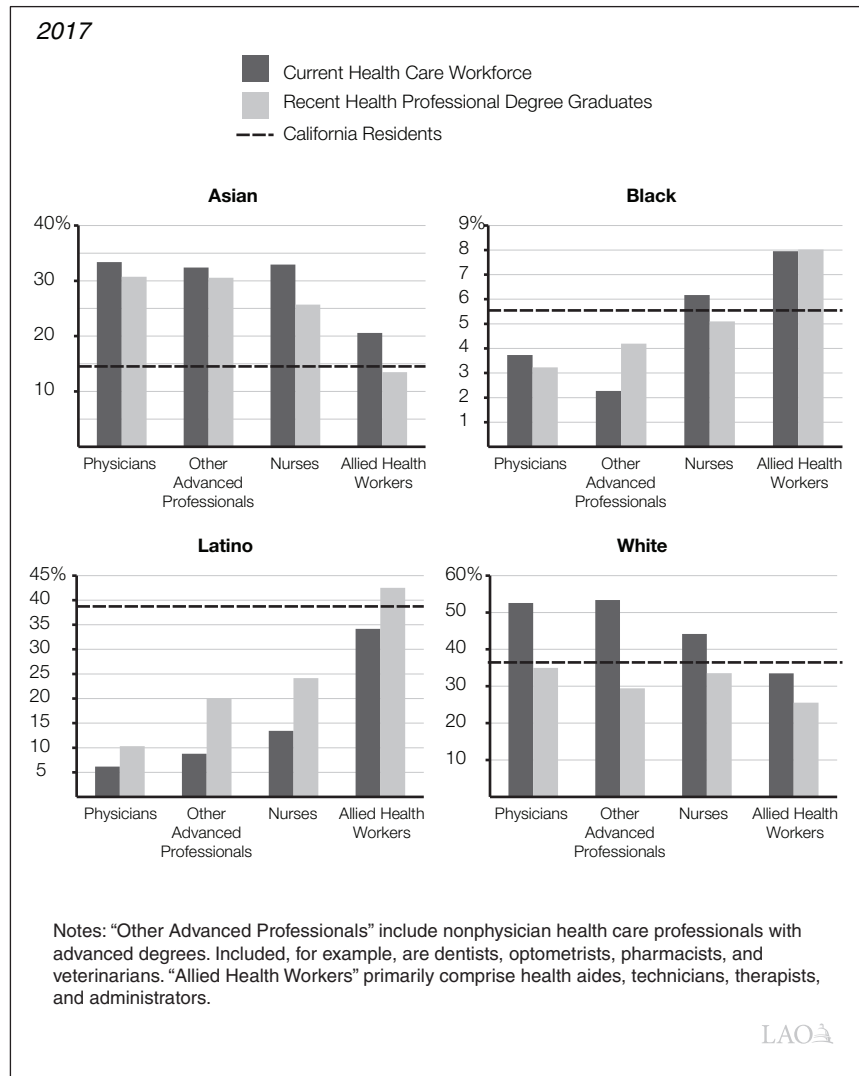
## Latino Representation Has Increased Over Time

- Though Latinos still are underrepresented in all health occupations, their share has generally increased in these occupations over time.
- The share of Asian Californians in health occupations also has increased over time, whereas the share of white Californians has decreased and the share of black Californians has remained largely unchanged.

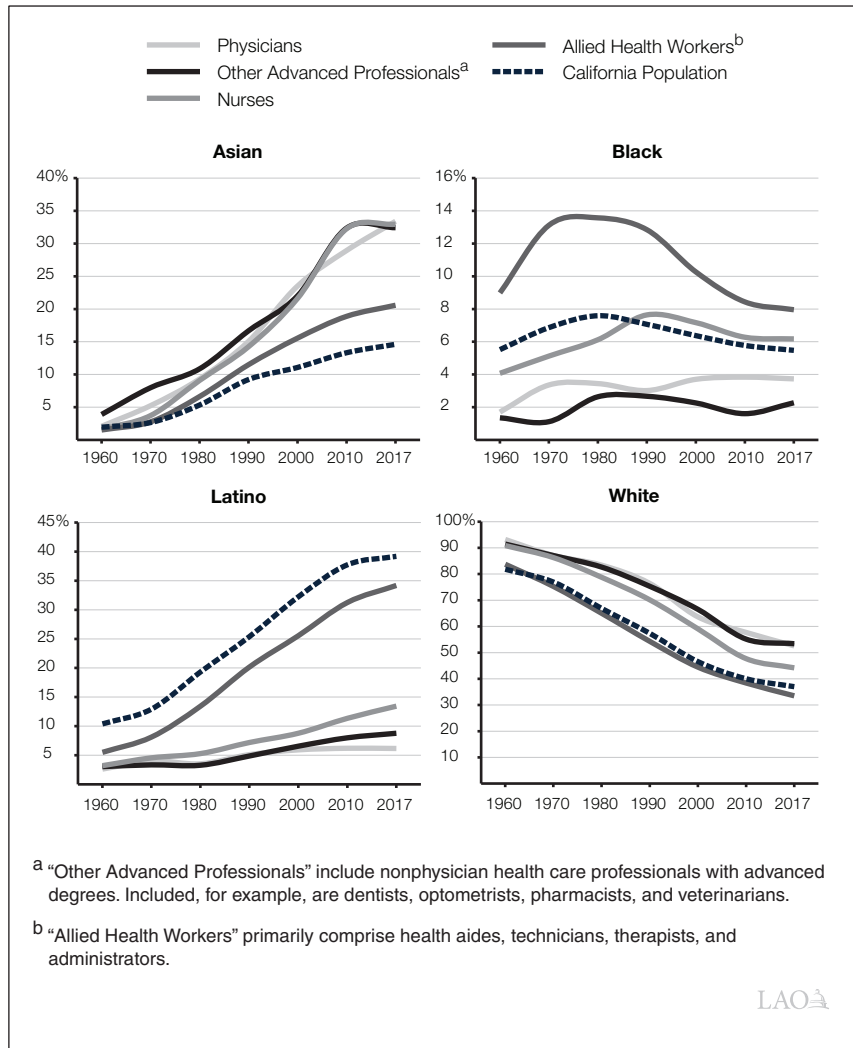


# Representation in California's Health Care Workforce

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# Change in the Makeup of California's Health Care Workforce Over Time



# Underrepresentation Exists in Undergraduate Education Too

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## Latino Students Are Somewhat Underrepresented in Undergraduate Education

- Latino students comprise half of all high school graduates in the state but 43 percent of graduates who have completed prerequisite courses to attend the universities.
- Latino students comprise about 45 percent of undergraduate students at the community colleges and the California State University (CSU). Around 25 percent of undergraduate students at the University of California (UC) are Latino.
- At each segment, achievement gaps exist by race/ethnicity, with Latino and black students generally having lower completion rates than Asian and white students.
- These broad trends likely impact representation in health professions. For example, around two-thirds of students in California who apply to medical school come from UC.

## Latino Students Might Have Relatively High Pre-Med Drop-Off Rates

- Each year, researchers at UC Los Angeles conduct a national survey of incoming freshmen at four-year institutions. According to the most recent survey, “physician or surgeon” is the most common career aspiration among entering students (11 percent).
- Among entering freshmen, Asian students have the highest reported interest in becoming a physician (18 percent), followed by black students (14 percent), Latino students (13 percent), and white students (9 percent).
- Because Latino students comprise a small share of the state’s medical school applicants (8 percent in 2019-20), these data might suggest that attrition among undergraduates interested in medicine is higher for Latino students than Asian or white students. More survey data would be needed to confirm this theory.



# Community College Programs

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## Career Technical Education Is One Key Mission of Community Colleges

- In 2018-19, 28 percent of community college enrollment was in a career technical education (CTE) field. Of these CTE enrollments, 13 percent were in a health-related course (nursing and allied health professions).
- Community colleges use a total of roughly \$2 billion of their general purpose funds to support CTE courses. In addition to this amount, community colleges and high schools receive a total of about \$800 million in state and federal funds for specific CTE programs. The figure on the next page lists these specific programs.

## Community Colleges Have Support Programs Aimed at Improving Student Outcomes

- The community colleges implement several programs that provide academic support, counseling, and other assistance to underrepresented students. These programs are primarily intended to improve completion rates for these students.
- As the figure on page 7 shows, in 2019-20, the state is spending a total of more than \$600 million on these programs.

## State Has Undertaken Efforts to Improve Access to Bachelor's Degree Programs

- Chapter 428 of 2010 (SB 1440, Padilla) established the associate degree for transfer. Students who complete this degree are guaranteed admission to a CSU program that can be completed in two years of full-time study. To date, the community colleges and CSU have developed 40 such pathways.
- The UC did not participate in the initial implementation of the associate degree for transfer. However, UC recently developed a memorandum of understanding with the California Community Colleges (CCC) to develop associate degrees for transfer that would



# Community College Programs

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guarantee admission into UC programs. To date, UC and CCC have developed two such degrees (in biology and chemistry).

- Chapter 747 of 2014 (SB 850, Block) authorized community colleges to pilot bachelor's degrees in certain fields not offered by CSU and UC. CCC currently offers 15 programs—7 of which are in health-related fields.

## Community College and High School CTE Programs

(In Millions)

Program	Funding <sup>a</sup>	Description
Community College Strong Workforce Program	\$248	Supports smaller class sizes, equipment purchases, and regional coordination, among other activities, intended to increase the availability and quality of CTE programs.
High School Strong Workforce Program	164	Helps school districts create and maintain high school CTE programs aligned with community colleges' CTE programs.
CTE Incentive Grants	150	Helps school districts create and maintain high school CTE programs that promote college and career readiness.
Strengthening CTE for the 21 <sup>st</sup> Century (Perkins)	132 <sup>b</sup>	Supports curriculum and professional development, equipment purchases, and other expenses at schools, community colleges, and correctional facilities.
College and Career Access Pathways	40 <sup>c</sup>	Provides college courses to high school students, with an emphasis on enrolling underrepresented students.
Economic and Workforce Development Program	23	Supports various activities, such as employer engagement and labor market research, intended to align community college CTE programs with industry needs.
California Partnership Academies	19	Within high schools, supports small learning communities that integrate CTE with academic education.
CTE Initiative	15	Supports CTE pathways from high schools to community colleges.
Nursing Program Support	13	Funds enrollment growth and student support in community college nursing programs.
Specialized Secondary Programs	5	Funds select school districts to pilot programs that prepare students for college and careers in specialized fields.
<b>Total</b>	<b>\$808</b>	

<sup>a</sup> Unless otherwise noted, reflects state General Fund (2019-20).  
<sup>b</sup> Estimated federal funds.  
<sup>c</sup> Estimated based on 2018-19 enrollment. Community colleges use general purpose funding to support the program.  
 CTE = career technical education.



# CCC Student Support Programs

*(In Millions)*

Program	Funding <sup>a</sup>	Description
Student Equity and Achievement Program	\$475	Supports academic counseling, assessment, basic skills instruction, and other activities intended to improve student outcomes and eliminate achievement gaps among underrepresented students.
Extended Opportunity Programs and Services	133	Provides counseling, tutoring, financial support, and other supplemental services for low-income and academically underprepared students, as well as single parents receiving public assistance.
Umoja	3	Provides specialized courses, counseling, and other student services, with an emphasis on promoting awareness of African and African-American culture.
Mathematics, Engineering, and Science Achievement	3	Provides counseling, workshops, and community-building activities to underrepresented students in math, science, and engineering fields.
Puente	2	Provides specialized courses, counseling, and mentoring to underrepresented students, with an emphasis on successful transfer to universities.
Middle College High School	2	Provides high school and college courses on community college campuses to high-potential, at-risk high school students.
<b>Total</b>	<b>\$617</b>	

<sup>a</sup> State General Fund (2019-20).





# Health Diversity Pipeline Programs in California

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## Programs Focus on Four Points of the Education Pipeline

- Middle school and high school programs focus on encouraging students to consider a future health career and enroll in college.
- At the community college level, programs tend to focus on increasing transfer to the universities in a health care pathway. Other undergraduate programs focus on reducing attrition from health science studies and increasing college graduation rates.
- Postbaccalaureate programs provide college graduates with additional support to prepare academically and apply to graduate health programs.
- Some graduate programs provide additional instruction and training for students to serve underrepresented communities.

## California Has Several Diversity-Focused Programs

- In discussions with stakeholders, our office was able to identify nine programs focused on serving underrepresented students in health care fields.
- Most of these programs are the result of regional efforts, and many rely partly on private funds from foundations or industry partners.



# Existing Health Care Pipeline Initiatives

Program	Description	Funding
<b>Pre-Collegiate Programs</b>		
Health Academies	Provides high school instruction that integrates academic content with health care skills (multiple locations statewide). Administered by CDE.	State, local, private
Health and Science Pipeline Initiative	Provides curriculum resources and professional development for middle and high school educators. Also supports a three-week career exploration program in the summer for high school students (multiple locations statewide). Administered by CCC.	State
Westminster Free Clinic-Teen Healthcare Internship	Provides medical assistant training to high school students at a clinic serving a low-income community. Participating students receive high school credit and college counseling (one location). Westminster Free Clinic is a private nonprofit entity.	Private, state
<b>Undergraduate Programs</b>		
California Medicine Scholars Program	Aims to develop regional hubs—each consisting of community colleges, universities, and medical schools—that will develop pathways into medicine for underrepresented students (multiple locations statewide). Administered by California Medical Coalition, which includes CDE, higher education segments, medical schools, and industry associations.	State, private
Health Career Connection	Provides paid summer internships and career development workshops to underrepresented college students (multiple locations statewide). Health Career Connection is a private nonprofit entity.	Private
Health Career Opportunities Program	Helps universities provide academic support and outreach, with the goal of increasing the diversity of applicants to graduate-level health science programs (multiple locations statewide). Administered by Health Resources and Services Agency.	Federal
Health Occupations Pipeline Education	Provides various career exploration, clinical experience, and research activities for students interested in health care. Activities serve high school, community college, and university students (one location). Administered by Ventura County Health Care Agency.	State, private
<b>Postbaccalaureate Programs</b>		
Public programs	Provides instruction and support to students with bachelor's degrees with the goal of increasing medical school attendance (multiple campuses). Administered by UC and CSU.	State
<b>Graduate Programs</b>		
Program in Medical Education	Provides UC medical students additional curriculum and clinical opportunities to serve to medically disadvantaged communities (five UC campuses). Administered by UC.	State

