



Centers of Excellence

Academic Years 2015-2020

The Health Resources and Services Administration (HRSA) is the primary federal agency for improving health care for people who are geographically isolated or economically or medically underserved. HRSA programs help those in need of high-quality primary health care by supporting the training of health professionals – focusing in particular on the geographical distribution of providers to areas where they are needed most.

The Centers of Excellence (COE) Program is part of a national strategy to improve access to culturally appropriate health care by increasing the number of underrepresented minority students who enter and graduate from health professions training programs. Through the COE Program, HRSA funds Centers of Excellence at colleges and universities across the country to:

1. **Recruit** underrepresented minority trainees into health professions training programs.
2. Provide support to **retain** underrepresented minority trainees.
3. **Recruit** and **develop** underrepresented minority faculty.
4. Support **collaborative research** on underrepresented minority-related health issues.

Awardees also use HRSA funding to improve clinical education, curricula, and informational materials on topics related to minority health issues and cultural competency. This report details the COE Program's activities and accomplishments from Academic Year (AY) 2015 through 2020.

Key Findings

- Between Academic Years (AY) 2015-2016 and 2019-2020, HRSA funded 24 COEs, which trained 18,520 individuals, with 16,832 program completers. This included 6,060 trainees and 5,438 program completers in structured programs.
- Of the 1,067 COE structured program completers who intended to remain enrolled in their current degree program and provided follow-up data, 82 percent remained enrolled one year later and less than one percent withdrew from their training program.
- Among the 502 COE structured program completers who intended to apply to a health professions school and provided follow-up data, 49 percent applied and were admitted one year later.
- COEs trained approximately nine percent of all U.S. dental students from underrepresented minority backgrounds and eight percent of all U.S. medical students from underrepresented minority backgrounds through structured training programs.
- Eighty-nine percent of dental, medical, and pharmacy students who completed a COE structured training program intended to remain enrolled in their degree program.

Which Institutions Received HRSA Funding to Develop or Maintain COEs?

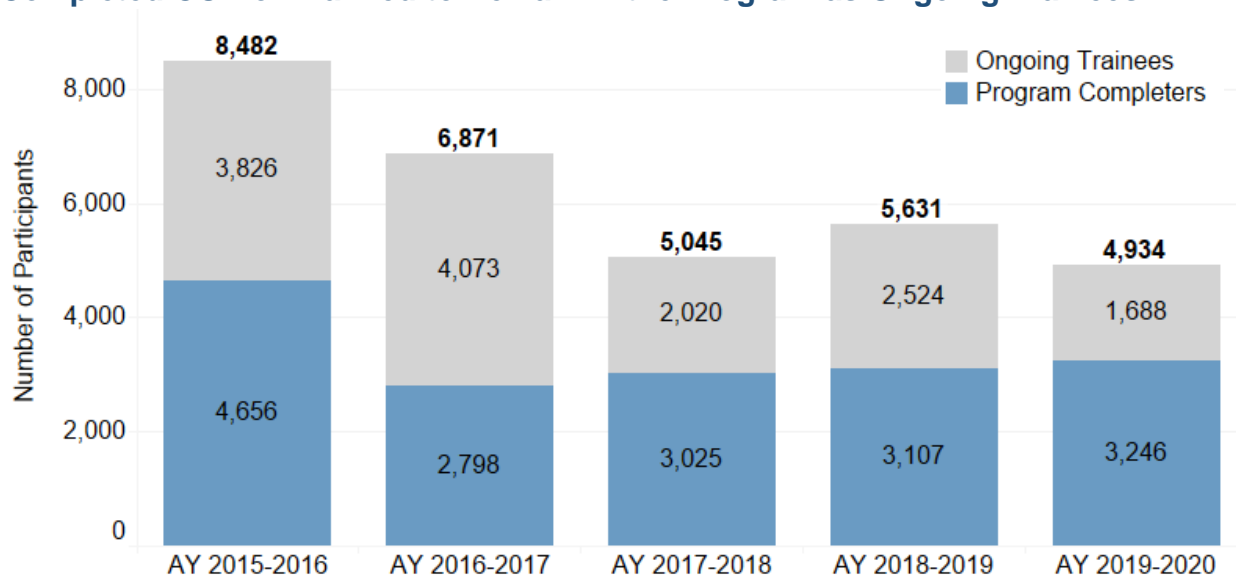
Between Academic Years (AY) 2015-2016 and 2019-2020, HRSA funded 24 COEs:



How Many Trainees Did COEs Reach?

- From AY 2015-2016 to AY 2019-2020, COEs recruited, supported, and trained 18,520 individuals. During this timeframe, 16,832 individuals completed a COE program.
- Sixty percent of trainees were from disadvantaged backgrounds, 59 percent were female, and 58 percent were 20-29 years old.

Figure 1. Total Number of COE Trainees Each Year by Whether Trainees Completed COE or Planned to Remain in the Program as Ongoing Trainees²



- The total number of trainees (i.e., the sum of ongoing trainees and program completers) ranged from 4,934 to 8,482 trainees per year (Figure 1).
- In addition, 2,798 to 4,656 individuals completed a COE program each year (Figure 1).

¹ Four Historically Black Colleges and Universities are permanent, non-competitive COEs per statute.

² AY 2015-2016 represents the end of a grant cycle for COE. Numbers of trainees and program completers are often higher at the end of a grant period. During the new grant period, COE awardees redesigned their recruitment strategies to further prioritize the enrollment and graduation of individuals from underrepresented minority backgrounds in health professions training programs, resulting in a decrease in the total number of participants over the five-year period.

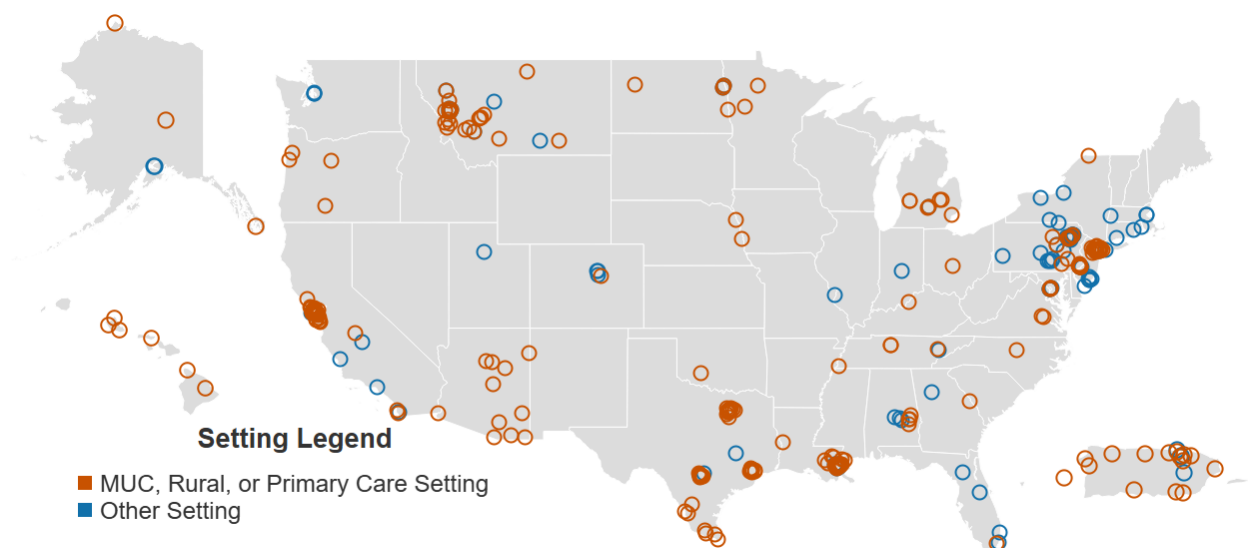
What Kinds of Training Programs Did COEs Provide?

- COEs offered four main categories of activities to support students and faculty: brief activities (e.g., daylong workshops), field placements at clinical training sites, student-led research projects, and curriculum-based structured activities (e.g., year-long Saturday academies).
- The remainder of this report will provide additional details about the three most time- and resource-intensive activities within the COE program: field placements at clinical training sites, student-led research projects, and curriculum-based structured activities.

Field Placements at Clinical Training Sites

- COEs partnered with 681 sites to provide clinical training to 19,704 individuals in 36 states or territories.³ Training in medically underserved communities, rural areas, and primary care settings helped COE participants increase their cultural competency by working with a variety of patient populations.

Figure 2. COE-Supported Clinical Training Sites by Setting, AY 2015-2020 (N = 681)*



* Setting categories are not mutually exclusive. Map is not to scale.

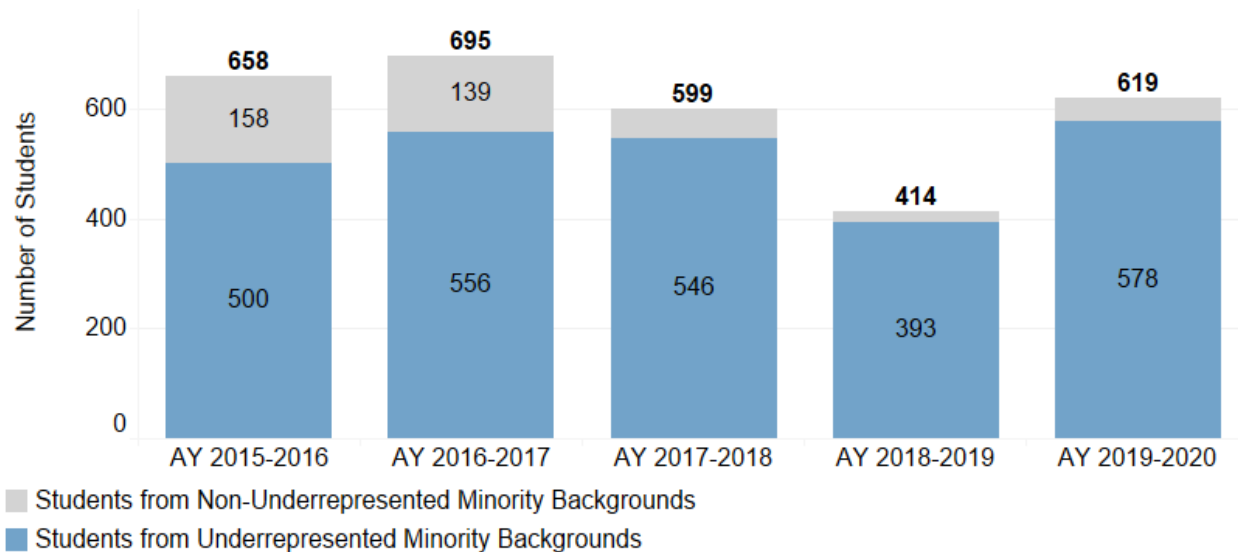
- Sites included locations along the U.S. – Mexico border, in Puerto Rico, and in frontier areas such as northern Alaska (Figure 2), as well as sites in Haiti, Jamaica, and U.S. Armed Forces abroad locations (not pictured).
- Sixty-four percent of COE-supported sites were located in medically underserved communities, rural areas, and/or primary care settings (Figure 2).

³ The total number of trainees at clinical sites (19,704) is larger than the total number of COE trainees (18,520) because individuals may train at more than one site.

Student-Led Research Projects

- From AY 2015-2020, COEs supported 986 unique student-initiated, faculty-mentored research projects.
- Between AY 2016-2020, 37 percent of projects focused on individuals with chronic illness, 17 percent on low-income families or individuals, 15 percent on children or adolescents, and 10 percent on individuals with mental illness or substance use disorder.⁴
- In AY 2019-2020, COE began collecting data on research project goals. These included studying health disparities and cultural competency (27 percent), conducting community or environmental health assessments (25 percent), and researching underrepresented minority health (20 percent).

Figure 3. Total Number of Students Participating in Student-Faculty Research Projects, by Underrepresented Minority Status



- The percentage of students from underrepresented minority populations increased from 76 percent in AY 2015-2016 to 93 percent in AY 2019-2020 (Figure 3).

Structured Training Programs

- From AY 2015-2020, COEs trained 6,060 individuals in structured training programs.
- During this timeframe, 5,438 individuals completed a COE structured training program.
- COE structured programs provided longitudinal support to help trainees successfully navigate the health professions pipeline.
- Forty-eight percent of structured program trainees participated in summer programs (e.g., Medical College Admissions Test (MCAT) prep).
- Another 19 percent participated in health careers enrichment activities (e.g., Tribal health scholars program).
- Other structured COE activities included high school academies (15 percent), pre-matriculation programs (11 percent), and post-baccalaureate programs (four percent).

⁴ These data were not collected in AY 2015-2016.

What Kinds of Trainees Participated in Structured COE Training Programs?

- From AY 2015-2020, 96 percent of trainees in COE structured programs were from underrepresented minority backgrounds.
- COEs trained approximately nine percent of all U.S. dental students from underrepresented minority backgrounds⁵ and eight percent of all U.S. medical students from underrepresented minority backgrounds⁶ through structured training programs.

Figure 4. COE Trainees and Program Completers by Discipline, AY 2015-2020

Primary Discipline	Trainees (N = 6,060)	Program Completers (N = 5,438)
Pre-College	1,675 (28%)	1,583 (29%)
High School	1,432 (24%)	1,352 (25%)
Post-High School or Pre-College	243 (4%)	231 (4%)
Undergraduate	1,158 (19%)	969 (18%)
Professional School	1,732 (29%)	1,429 (26%)
Dental School	401 (7%)	399 (7%)
Medical School	1,191 (20%)	893 (16%)
Pharmacy School	140 (2%)	137 (3%)
Graduate School	145 (2%)	136 (3%)
Professionals	1,324 (22%)	1,298 (24%)
Dentistry	521 (9%)	521 (10%)
Medicine	87 (1%)	87 (2%)
Pharmacy	184 (3%)	168 (3%)
Veterinary Medicine	532 (9%)	522 (10%)
Other*	26 (0%)	23 (0%)

* Includes behavioral health providers, dental assistants, dental hygienists, nurses, nutritionists, physical therapists, physician assistants, and public health workers.

- Twenty-eight percent of COE structured program trainees were pre-college, 19 percent were undergraduates, 29 percent were in professional school, 2 percent were in graduate school, and 22 percent were professionals (Figure 4).
- Trainees in COE structured programs included high school students (1,432), undergraduate students (1,158), medical students (1,191), and dental students (401), among others (Figure 4).

⁵ American Dental Education Association. 2022. "U.S. Dental School Applicants and Enrollees, 2021 Entering Class." <https://www.adea.org/data/students/Applicants-2021-Entering-Class/>.

⁶ Association of American Medical Colleges. 2022. "2021 FACTS: Enrollment, Graduates, and MD-PhD Data." <https://www.aamc.org/data-reports/students-residents/interactive-data/2021-facts-enrollment-graduates-and-md-phd-data>. The number of underrepresented minority students enrolled in medical school from AY 2015-2020 was calculated by taking the average percentage of medical student enrollees from American Indian or Alaska Native; Black or African American; Hispanic, Latino, or of Spanish Origin; and Native Hawaiian or Other Pacific Islander backgrounds in AY 2017-2020. This percentage was then applied to the total count of medical school matriculants in AY 2015-2020 to approximate the number of students from underrepresented minority backgrounds during those years.

How Did COEs Support Students in Structured Training Programs?

- To help students complete their training programs, COEs provided trainees with a mix of stipends and academic and social supports.⁷
- During AY 2015-2020, COEs provided 5,392 stipends to students in structured programs—an average of \$1,579 per stipend.

Figure 5. Financial, Academic, and Social Supports Received by Students in Structured COE Programs, AY 2015-2020

Supports	AY 2015-2016 (N=1,461)	AY 2016-2017 (N=1,278)	AY 2017-2018 (N=1,567)	AY 2018-2019 (N=1,341)	AY 2019-2020 (N=1,615)
Financial					
Received Stipend	1,077 (74%)	815 (64%)	1,020 (65%)	1,232 (92%)	1,248 (77%)
Academic					
Academic/Career Advising	821 (56%)	673 (53%)	871 (56%)	941 (70%)	1,336 (83%)
Study Skills Training	797 (55%)	682 (53%)	763 (49%)	673 (50%)	838 (52%)
Time Management Training	603 (41%)	514 (40%)	635 (41%)	626 (47%)	817 (51%)
Academic Coaching	551 (38%)	297 (23%)	396 (25%)	528 (39%)	638 (40%)
Group Tutoring	545 (37%)	485 (38%)	591 (38%)	604 (45%)	755 (47%)
Other Academic Supports	488 (33%)	429 (34%)	645 (41%)	500 (37%)	715 (44%)
Academic Support Program	463 (32%)	299 (23%)	387 (25%)	535 (40%)	688 (43%)
Individual Tutoring	292 (20%)	175 (14%)	238 (15%)	115 (9%)	394 (24%)
Social					
Counseling	795 (54%)	729 (57%)	754 (48%)	674 (50%)	1,088 (67%)
Peer Support Groups	585 (40%)	332 (26%)	499 (32%)	555 (41%)	767 (48%)
Peer Support Advisors	459 (31%)	433 (34%)	474 (30%)	400 (30%)	826 (51%)
Service Learning Opportunities	403 (28%)	273 (21%)	359 (23%)	438 (33%)	547 (34%)
Other Social Supports	262 (18%)	177 (14%)	222 (14%)	263 (20%)	437 (27%)

- Stipends, academic/career advising, and counseling were the most frequently utilized supports: each year, 64 to 92 percent of students received stipends, 53 to 83 percent of students received academic/career advising, and 48 to 67 percent of students received counseling (Figure 5).

⁷ Professionals and trainees in the “other” category were excluded from the student-focused analyses in this section.

- Although the rank order of the academic and social supports received remained relatively stable, the percentage of trainees receiving a particular form of support increased across 13 of the 14 categories from AY 2015-2020 (Figure 5).
- By AY 2019-2020, the majority of students in COE structured programs participated in academic/career advising (83 percent); received stipends (77 percent) or counseling (67 percent); or had study skills training (52 percent), time management training (51 percent), or peer support advisors (51 percent) (Figure 5).

How Did Financial, Academic, and Social Supports Vary by Level of Education for Students in Structured COE Programs?

- COEs provided a mix of financial, academic, and social supports to help students succeed at each stage of the health professions pipeline.⁸

Figure 6. Financial, Academic, and Social Supports Received During Students' Final Year in the COE Program by Discipline, AY 2015-2020 (N = 4,117 Students)

Primary Discipline	Average Stipend Amount	Average Number of Academic Supports	Average Number of Social Supports	Most Frequently Received Support
Pre-College	\$360	2	1	Stipends
High School	\$293	2	1	Stipends
Post-High School or Pre-College	\$699	2	1	Stipends
Undergraduate	\$2,451	4	2	Stipends
Professional School	\$896	4	2	Academic/career advising
Dental School	\$605	6	3	Stipends
Medical School	\$1,328	4	2	Academic/career advising
Pharmacy School	\$672	2	2	Academic support program
Graduate School	\$8,277	2	1	Stipends

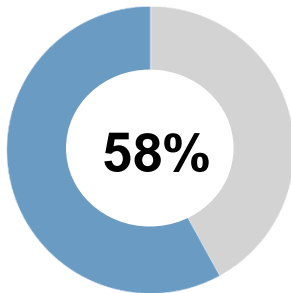
- In general, stipends were the most common form of support in students' final year of a structured COE program, although academic supports were more common among medical and pharmacy students (Figure 6).
- Stipend amounts in a student's final year of a COE structured program varied by education level, ranging from \$360 for high school students to \$8,277 for graduate students (Figure 6).
- Undergraduate students and those in professional schools received twice as many academic and social supports as students in other disciplines. (Figure 6).
- COE structured participants typically received twice as many academic supports as social supports (Figure 6).

⁸ Professionals and trainees in the "other" category were excluded from the student-focused analyses in this section.

What Did Trainees Intend to Do after Finishing a Structured COE Program?

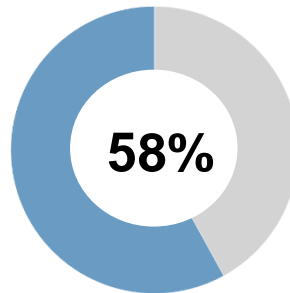
- Of the 2,765 post-high school; pre-college; undergraduate; graduate; and dental, medical, and pharmacy students who completed structured COE programs during AY 2015-2020, 2,614 (95 percent) reported what they intended to do after the COE program:⁹

Undergraduate Students (N = 898)



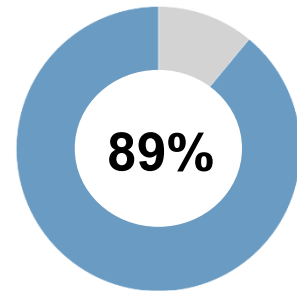
After completing a structured COE program, **58%** of undergraduate students **intended to apply** to a health professions training program

Graduate Students (N = 93)



After completing a structured COE program, **58%** of graduate students **intended to work or train in a medically underserved community**

Dental, Medical, and Pharmacy Students (N = 1,389)



After completing a structured COE program, **89%** of dental, medical, and pharmacy students **intended to remain enrolled** in their degree program

How Were COE Academic and Social Supports Related to Whether Undergraduates Planned to Apply to a Health Professions Program?¹⁰

- Undergraduates are at a critical stage in the health professions pipeline, as they must choose whether they want to remain at the undergraduate level of their field or pursue additional education, which is often necessary for clinical work.
- The average number of academic and social supports received by undergraduate COE program completers was similar for those intending to apply to a health professions training program (seven supports) and those who were not intending to apply to a health professions training program (six supports).¹¹
- A detailed look, however, showed that some supports were closely associated with whether undergraduates planned to apply to a health professions training program.

⁹ Trainees could select more than one post-completion intention. High school students and professionals were excluded from this analysis because the selection options for post-completion intentions were not as relevant for these groups.

¹⁰ A similar analysis was conducted for other levels of education, but COE program completers' intentions were not as closely linked to the number of academic and social supports received.

¹¹ Those who were remaining in their degree program were excluded from the analysis, as they may not have been ready to begin the application process.

- Compared to undergraduate COE structured program completers who did not intend to apply to a health professions training program, undergraduate COE structured program completers who intended to apply to a health professions training program were:
 - six times more likely to receive **counseling (social support)**¹²
 - six times more likely to receive **individual tutoring (academic support)**¹³
 - four times more likely to have **peer support advisors (social support)**¹⁴
 - three times more likely to receive **group tutoring (academic support)**¹⁵

What Happened to the AY 2015-2020 COE Completers One Year Later?¹⁶

- Of the 5,438 trainees who completed a COE structured program in AY 2015-2020, 57 percent reported their academic or employment status one year later.¹⁷

- For those who **intended to remain enrolled in their current degree program** (N = 1,067), 82 percent remained enrolled one year later, five percent applied to and were accepted into a health professions program, and less than one percent withdrew from their program.

82%

Remained enrolled in their current training program one year after their COE program

- Among those trainees who **intended to apply to a health professions school** (N = 502), 49 percent applied and were admitted to a health professions school one year after completing their COE program. Only five percent had applied but not been accepted and 10 percent were still waiting to learn whether they had been accepted.

49%

Were accepted into a health professions training program within 12 months of completing their COE program

- Of those trainees who **intended to seek additional training or employment in a medically underserved community** (N = 130), 48 percent were doing so one year after completing their COE program.

48%

Were training or working in a medically underserved community one year later

¹² Wald (1, N = 704) = 92.56, $p < .001$, 95% CI [4.3, 9.0]

¹³ Wald (1, N = 704) = 26.24, $p < .001$, 95% CI [2.9, 11.2].

¹⁴ Wald (1, N = 704) = 38.30, $p < .001$, 95% CI [2.6, 6.3].

¹⁵ Wald (1, N = 704) = 41.22, $p < .001$, 95% CI [2.3, 4.6].

¹⁶ Results are from AY 2016-2021, based on COE-program completers from AY 2015-2020.

¹⁷ Trainees could select more than one post-completion intention and report more than one training or employment status one year after program completion.