Health Careers Opportunity Program

Academic Years 2015-2020

The Health Resources and Services Administration (HRSA), is the primary federal agency for improving health care to people who are geographically isolated or economically or medically vulnerable. 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.

Since 1972, the Health Careers Opportunity Program (HCOP) has provided grants to educational institutions to create health professions pipeline programs for individuals from economically and/or educationally disadvantaged backgrounds.¹ Awardees perform the following activities:

- **Recruit qualified individuals from disadvantaged backgrounds**, and facilitate entry into health professions training programs
- **Address academic, social, and financial needs** to improve retention, matriculation, and graduation rates
- **Provide training opportunities in primary care settings**, especially in medically underserved and rural communities

Where did HCOP operate in AY 2015-2020?

As the map below illustrates, HCOP awardees were distributed across the U.S. Thirty-eight HCOP awardees² contributed data for this report, and these awardees represented a variety of institutions:

- 25 medical schools or universities with medical schools
- 22 state schools
- 15 private universities
- 4 historically black colleges and universities
- 2 community colleges
- 1 Area Health Education Center

These institutions partnered with local school districts for their K-12 activities and worked with local organizations to offer field-based training opportunities to students.

¹ “Economically disadvantaged” means an individual’s family has an annual income less than 200 percent of the U.S. Department of Health and Human Services’ poverty guidelines. “Educationally disadvantaged” means an individual’s social, cultural, or educational environment inhibited them from obtaining the knowledge, skills, and abilities needed to succeed in a health professions training program. See the 2018 HCOP Notice of Funding Opportunity (pages 9-11) and the Bureau of Health Workforce Glossary for more information: [https://bhw.hrsa.gov/glossary](https://bhw.hrsa.gov/glossary).

² Awardees were from AY 2015-2018 and/or AY 2019-2022 grant cycles or had no-cost extensions.
What makes HCOP a *pipeline* program?

The process of becoming a health professional takes years and requires multiple steps, which are depicted in Figure 2. While many of HRSA’s programs support future or current health professionals (Steps 4 and 5), HCOP is a pipeline program because it encourages students to pursue health professions careers (Steps 1-4).

*Figure 2: Diagram of How HCOP Supports Students throughout the Health Professions Pipeline*

HCOP awardees recruit disadvantaged individuals into HCOP and the health professions pipeline (Step 1). For those individuals who are still in high school, awardees provide academic and social supports to help students graduate from high school and matriculate in 2- or 4-year colleges or health professions certification programs (Step 2). HCOP then provides the academic, social, and financial supports students need to graduate from college (Step 3) and complete advanced health professions training such as medical school (Step 4).
Did HCOP succeed in recruiting individuals from disadvantaged backgrounds?

- As shown in Figure 3, HCOP awardees trained approximately **4,000 to 8,500** disadvantaged students per year, reaching a total of **19,984** disadvantaged students from AY 2015-2020.³
- HCOP participants were at different stages of the health professions pipeline. Overall, **58.7 percent** of disadvantaged HCOP trainees were in programs for K-12 students (mostly grades 9-12), **27.6 percent** were in programs for post-secondary students (i.e., out of high school, in college, or in graduate/professional school), and **13.8 percent** were in combined K-12/post-secondary programs.⁴

**Figure 3: Disadvantaged HCOP Trainees per Year by Stage in the Health Professions Pipeline**

Why does HCOP include students in grades K-12?

Early intervention in the health professions pipeline is important because disadvantaged students lack access to resources that shape a young adult’s vocational aspirations, such as school- and parent-based vocational guidance, internships, and occupational role models.⁵

Through activities that included *(11.6 percent)* or focused exclusively on K-12 students *(35.7 percent)*, HCOP awardees reach disadvantaged students at Steps 1 and 2 of the health professions pipeline. HCOP’s mixed K-12 and post-secondary programs have the added benefit of connecting K-12 students (particularly high school students) to potential role models who are just a step or two ahead of them in the health professions pipeline.

³ “Total trainees” de-duplicates students who participated in HCOP across multiple years.
⁴ HCOP activities for younger students focus on rising juniors and seniors. However, when reporting on younger participants, awardees are limited to selecting either “K-8” or “9-12” to describe a student’s grade level. As some K-8 students were included in HCOP activities, this report uses “K-12” to describe younger participants, with the understanding that the majority of these participants were in high school.
What were the other demographic characteristics of HCOP participants?

- Structured activities are a series of curriculum-based training activities given to a person or group of people over a specific period.6
- During AY 2015-2020, 6,856 individuals participated in structured HCOP activities, including 2,677 K-12 students and 4,179 post-secondary students (Figure 4).
- As illustrated in Figure 4, K-12 and post-secondary students in structured activities were more likely to be female (75.5 percent and 72.6 percent).
- K-12 and post-secondary students in structured HCOP programs were less likely to have rural backgrounds (11.3 percent and 12.4 percent).
- The majority of K-12 and post-secondary students in structured programs were from URM populations (74.9 percent and 72.8 percent).
- The average K-12 participant in a structured HCOP program was 17.1 years old when they began HCOP, while the average post-secondary participant was 24.1 years old.

Figure 4: Demographic Characteristics of HCOP Participants in Structured Activities

<table>
<thead>
<tr>
<th>Demographic Characteristics</th>
<th>K-12 Structured Activities (N = 2,677)</th>
<th>Post-Secondary Structured Activities (N = 4,179)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>17.4 (average)</td>
<td>24.1 (average)</td>
</tr>
<tr>
<td>Female</td>
<td>75.5%</td>
<td>72.6%</td>
</tr>
<tr>
<td>Underrepresented Minority</td>
<td>74.9%</td>
<td>72.8%</td>
</tr>
<tr>
<td>Rural Background</td>
<td>11.3%</td>
<td>12.4%</td>
</tr>
</tbody>
</table>

How many students did awardees reach through structured HCOP activities?

- Across all structured activities with specific time requirements (i.e., summer programs, Saturday academies, and pre-matriculation programs), awardees provided over 800,000 hours of structured learning to HCOP students (Figure 5).7
- Most K-12 students in structured HCOP activities participated in six-week summer programs (60.7 percent) or multi-year health professions academies/HCOP Ambassadors programs (23.4 percent). Another 14.6 percent participated in 20-week Saturday academies.
- Similarly, most post-secondary students in structured HCOP activities participated in summer programs (47.5 percent) or health professions academies/HCOP Ambassadors programs (16.9 percent).
- In addition to Saturday academies (8.6 percent), post-secondary students also participated in pre-matriculation programs (13.7 percent) that helped prepare them for the next phase of the health professions pipeline.

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7 This was calculated by multiplying the time requirements for each program by the number of students per program.
How did HCOP provide support to students in grades K-12, college, and graduate school?

- Awardees offered a wide range of academic and social supports to help students in structured HCOP activities progress through the health professions pipeline (Figure 6).
- Faculty/staff-led advising sessions were the most common type of academic support for both K-12 (67.4 percent) and post-secondary (73.3 percent) students.
- Faculty/staff-led counseling sessions were the most common type of social support for K-12 (61.8 percent) and post-secondary (58.0 percent) students.

<table>
<thead>
<tr>
<th>Grades K-12</th>
<th>HCOP Activity</th>
<th>Post-Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>60.7%</td>
<td><strong>Summer Program</strong>&lt;br&gt;Summer programs provide at least 6 hours of structured learning per day for a minimum of 6 weeks.</td>
<td>47.5%&lt;br&gt;1,986 Students</td>
</tr>
<tr>
<td>23.4%</td>
<td><strong>Health Professions Academy/HCOP Ambassadors</strong>&lt;br&gt;These multi-year programs prepare students to advance to the next step of their health professions training.</td>
<td>16.9%&lt;br&gt;708 Students</td>
</tr>
<tr>
<td>14.6%</td>
<td><strong>Saturday Academy</strong>&lt;br&gt;Saturday academies provide at least 6 hours of structured learning once a week for a minimum of 20 weeks.</td>
<td>8.6%&lt;br&gt;361 Students</td>
</tr>
<tr>
<td>N/A</td>
<td><strong>Pre-Matriculation Programs</strong>&lt;br&gt;Pre-matriculation programs provide at least 6 hours of structured learning per day for a minimum of 4 weeks.</td>
<td>13.7%&lt;br&gt;571 Students</td>
</tr>
<tr>
<td>1.3%</td>
<td><strong>Other Programs</strong>&lt;br&gt;Other Programs include college academic support, community-based outreach, and post-baccalaureate programs.</td>
<td>13.2%&lt;br&gt;553 Students</td>
</tr>
</tbody>
</table>
Financial support was the most common form of support overall, as 81.8 percent of K-12 participants and 87.7 percent of post-secondary participants received stipends.

The average stipend varied between $816 - $999 for K-12 students and $1,566 - $2,831 for post-secondary students. In total, HCOP awardees distributed nearly $15.5 million in stipends from AY 2015-2020.
Did HCOP participants train in primary care settings and medically underserved and rural communities?

- During AY 2015-2020, 21,028 students gained exposure to health care settings or hands-on experience at HCOP’s 519 field placement sites.  
- Figure 7 depicts the geographic distribution of the sites, which were in 27 states, the District of Columbia, and three U.S. jurisdictions (not pictured): the Federated States of Micronesia, Palau, and the Northern Mariana Islands.  
- **25.4 percent** of sites were located in primary care settings and **64.4 percent** of these sites were in medically underserved or rural communities.  
- Of the 7,671 students who trained in primary care settings, **92.5 percent** did their training in medically underserved or rural communities.  

**Figure 7: Map of HCOP Training Sites by Primary Care Setting and Medically Underserved/Rural Community Status (N = 519)**

- Structured HCOP participants accumulated **83,582 hours** of training in primary care settings, **550,179 hours** in medically underserved communities, and **43,729 hours** in rural areas.  
- Participants trained at sites such as academic institutions (**32.4 percent**), hospitals (**17.1 percent**), community-based organizations (**12.1 percent**), and health centers (**10.6 percent**).  

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8 Students may have been counted twice if they served at multiple sites across multiple years.

9 Hours served are not mutually exclusive.
Did disadvantaged K-12 students in HCOP complete the program and graduate on time?

- During AY 2015-2020, **11,725** disadvantaged students in grades K-12 completed a structured or unstructured HCOP program.

- For those disadvantaged students who were in structured HCOP programs, **2,104** completed the program by AY 2019-2020, and **1,672 (79.5 percent)** graduated from high school on time, exceeding the national high school graduation rate for low-income students (78.3 percent). Note that HCOP participants are economically disadvantaged and/or educationally disadvantaged, so the comparison between state graduation rates for low-income students and HCOP students is not completely equivalent.

- Figure 8 shows how the state-level on-time graduation rate for disadvantaged students in HCOP compared with state graduation rates for low-income students. The HCOP graduation rate exceeded the state graduation rate for 16 of the 18 states (88.9 percent) with HCOP awardees.

- When outliers Georgia and Indiana are removed from the analysis, the on-time graduation rate for disadvantaged HCOP students is **99.9 percent**, which exceeds the national graduation rate for non-low-income students (90.2 percent).

Figure 8: State-Level High School Graduation Rates for Low-income Students and HCOP Students from Disadvantaged Backgrounds

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11 One of the HCOP awardees in Georgia reported an on-time graduation rate of 29.5 percent in their annual performance report, but in a separate qualitative report the awardee said 100 percent of their high school participants graduated on time, which suggests there was a data entry error in their annual performance report.

12 Two of the three HCOP awardees in Indiana reported low on-time graduation rates (34.2 percent and 23.8 percent), while the third awardee had an on-time graduation rate of 100 percent.

13 State-level graduation rates for low-income students were not available for Alabama and the District of Columbia, so the national graduation rate for low-income students (78.3 percent) was used instead.
Did disadvantaged post-secondary students in HCOP complete the program and graduate on time?

- During AY 2015-2020, 5,509 disadvantaged students out of high school, in college, or in graduate school completed a structured or unstructured HCOP program.
- For those disadvantaged students who were in structured HCOP programs, 2,945 completed the program by AY 2019-2020.
- Additionally, 2,623 (89.1 percent) of structured program completers from disadvantaged backgrounds earned their degrees on time.
- For those students for whom degree data was available, nearly 100 percent graduated on time, vastly exceeding the national rates in all degree categories, as illustrated in Figure 9.14,15

Figure 9: HCOP On-Time Degree Completion by Degree Type with National Rates as Reference Lines (N = 557)

Did HCOP prepare disadvantaged post-secondary students to advance to the next stage of the health professions pipeline?

- 1,077 post-secondary disadvantaged HCOP completers intended to apply to a health professions training program within the next 12 months, and 623 planned to remain enrolled in their health professions training program.
- 66.5 percent of disadvantaged HCOP completers that earned associate's, bachelor's, or master's degrees intended to apply to a health professions training program within the next 12 months. This includes 58.3 percent of those who earned associate’s degrees, 70.0 percent of those who earned bachelor's degrees, and 33.3 percent of those who earned master's degrees (see Figure 10).

Figure 10: Disadvantaged HCOP Program Completers Planning to Apply to a Health Professions Training Program within the Next 12 Months by Degree Earned (N = 538)

14 Associate’s and bachelor’s graduation rates are based on completion within 150 percent of normal time to degree. Associate’s degree data comes from a cohort that entered their degree program in 2016, and bachelor’s degree data comes from a cohort that began their degree in 2013. HCOP uses a similar time frame for “on-time” completion for both degree types. National Center for Education Statistics. 2021. The Condition of Education 2021.

15 Master’s and professional degree data comes from the Baccalaureate and Beyond Longitudinal Study, 1993-2003. Participants completed their bachelor's degree in AY 92-93 and were followed until 2003, so “on-time” degree completion in this context means within the ten years that elapsed between college graduation and study follow-up. HCOP defines “on-time” for professional degrees as completion within five years, but it does not define “on-time” for master's degrees. Baum, Sandy, and Patricia Steele. 2017. “Who Goes to Graduate School and Who Succeeds?” Urban Institute.
What are the long-term impacts of students’ participation in HCOP?

- In addition to supporting economically and educationally disadvantaged students, HCOP helps increase the diversity of the health workforce. Health workforce diversity is important because patients with physicians from the same racial/ethnic backgrounds are more satisfied with their care and may have better health outcomes.\textsuperscript{16,17}

- **72.8 percent** of post-secondary participants in structured HCOP programs ($N = 4,179$) were underrepresented minorities (URMs).

- Of post-secondary graduates for whom discipline data was available ($N = 678$), HCOP produced **459** URM graduates (**67.7 percent** of all graduates with discipline data) in **20** different professions (Figure 11). Each discipline had at least one underrepresented population (excluding allied health and public health, for which URM workforce data was unavailable).\textsuperscript{18}

### Figure 11: Underrepresented Minority (URM) Post-Secondary HCOP Graduates by Discipline ($N = 678$)

<table>
<thead>
<tr>
<th>Disciplines of Post-Secondary HCOP Graduates</th>
<th>URM HCOP Graduates</th>
<th>Total HCOP Graduates</th>
<th>Percentage of HCOP Graduates That Are URM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certified Nursing Assistants and Licensed Practical/Vocational Nurses</td>
<td>20</td>
<td>21</td>
<td>95.2%</td>
</tr>
<tr>
<td>Social Workers and Psychologists</td>
<td>19</td>
<td>23</td>
<td>82.6%</td>
</tr>
<tr>
<td>Dentists, Dental Assistants, and Dental Hygienists</td>
<td>42</td>
<td>54</td>
<td>77.8%</td>
</tr>
<tr>
<td>Public Health</td>
<td>109</td>
<td>148</td>
<td>73.6%</td>
</tr>
<tr>
<td>Physicians and Physician Assistants</td>
<td>154</td>
<td>211</td>
<td>73.0%</td>
</tr>
<tr>
<td>Allied Health</td>
<td>78</td>
<td>140</td>
<td>55.7%</td>
</tr>
<tr>
<td>Radiology Technicians and Clinical Laboratory Technicians</td>
<td>6</td>
<td>13</td>
<td>46.2%</td>
</tr>
<tr>
<td>Physical Therapists, Occupational Therapists, and Speech Therapists</td>
<td>14</td>
<td>33</td>
<td>42.4%</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>9</td>
<td>24</td>
<td>37.5%</td>
</tr>
<tr>
<td>Other*</td>
<td>8</td>
<td>11</td>
<td>72.7%</td>
</tr>
</tbody>
</table>

* Includes medical assistants, registered nurses, and chiropractors.

