

## Creighton Collaborative Health Professions Partnership

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Creighton University School of Medicine, a private Jesuit institution in Omaha, has included Health Professions Partnership Initiative (HPPI), herein referred to as Creighton Collaborative Health Professions Partnership (CCHPP), as part of its long-term effort to increase the pool of qualified applicants by identifying students early and encouraging their progress through elementary, middle, and high schools and college and professional schools. The program's principal investigators are both African-American physicians passionately committed to increasing the enrollment of underrepresented minorities into the health sciences.

Founded in 1878, Creighton University is nationally recognized as a high-quality teaching and research institution that offers undergraduate, graduate, and professional degrees, including those in health professions (medicine, dentistry, pharmacy, occupational therapy, physical therapy, and nursing). The Schools of Medicine and Dentistry have a long and proud history of helping economically and educationally disadvantaged students prepare for careers in the health professions through postbaccalaureate programs. The campuses are located in the heart of Omaha's inner city and a designated medically underserved area of health professional shortages. The Omaha Public Schools, a partner in this pipeline program, serves 14% of all Nebraska public school students and nearly 50% of all minority students in the state. Over half the enrollment of the Omaha Public School partners meets low-income guidelines, and in a partner middle school 80% of the students are low-income. These students are

educationally at risk because their reduced competitiveness has an impact on their ability to gain college admission. Creighton University's CCHPP offered an infrastructure to enhance the communication, coordination, and effectiveness of the partner institutions in implementing programs to increase the academic achievement and health career preparation of African-American students in the targeted schools. It was hoped that participation in CCHPP would translate into enrollment in Creighton University and Metropolitan Community College health professions programs.

### Building a Pipeline Partnership

The partnership was originally guided by Dr. Roy Wilson, who was at the time the vice president of health sciences and dean of the School of Medicine. After Dr. Wilson's departure, leadership transferred to Dr. Sade Kosoko-Lasaki, the associate vice president for multicultural and community affairs. Deans or their associates represented Creighton's School of Medicine, School of Pharmacy and Health Professions, School of Dentistry, School of Nursing, and College of Arts and Sciences. Other partners were Metropolitan Community College, Omaha Public Schools and the Banneker Partnership, The Jesuit Middle School, Sacred Heart Elementary School, Boys and Girls Clubs of Omaha, and 100 Black Men of Omaha. Prior to the partnership, Creighton's health sciences had very limited cooperative efforts with the other entities. With the partnership, each of these organizations was represented by principals or high-ranking administrators who could effectively make decisions, work directly with persons involved, coordinate activities, and implement change.

In developing the HPPI grant proposal, Creighton University met with the partners to come to agreement on the mission, goals, and outcomes of the proposal. The group identified and acknowledged the strengths, limitations, and resources of each partner. With an inventory of skills and strengths, the group developed the appropriate roles,

responsibilities, and key tasks for each partner. These preliminary steps were a criterion of the grant application.

Two levels of governance were established: (1) an executive board consisting of key personnel at the partnership schools and organizations, and (2) the coordinating partnership committee. The executive board, which met once or twice a year, made the major decisions regarding the implementation and execution of the CCHPP goals and initiatives. The coordinating partnership committee was the "hands-on" partnership that actually executed the different activities for the students. Partners met monthly early in the funding period, then every other month. Rotating meeting locations empowered the hosting partner to take a leadership position in moderating the meetings. Meetings provided venues for sharing progress reports, exchanging ideas, and voicing concerns. The partners also took turns attending Association of American Medical Colleges annual meetings of all HPPI projects.

Every year, an outside evaluation specialist, Dr. Lynne Houtz from Creighton's Department of Education, was contracted to assess the different components of CCHPP and the program overall, and to identify those program components requiring changes or improvements. The identified problems were addressed by partners by remaining goal-focused and solution-oriented and by solving the problems cooperatively.

The CCHPP hired a full-time coordinator from the community to facilitate the programs and to serve as the liaison between the partners. The coordinator also visited each partnering school on a regular basis and coordinated their requests for speakers in the classroom, campus visits, and student volunteers.

### Partnership Activities

Development of the partnership activities was informed by a needs assessment. CCHPP offered its participants regular meetings, mentor/mentee sessions at Creighton University, workshops on

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study skills and time management, Office of Health Sciences—Multicultural and Community Affairs' (HS-MACA's) summer research institutes, enrichment activities including presentations by medical professionals in the classroom, shadowing, ACT skill building, priority registration for science and math programs, college prep planning, and academic counseling (see Table 1). The impact of these programs was not limited to the students identified in the HPPI cohort database. Because some HPPI presentations or activities were made to a whole class, other students and their teachers within settings shared the benefits.

The need for increased mentoring became evident through the administration of surveys, focus groups, and interviews. The partnership had hoped to involve the 100 Black Men of Omaha in a mentoring role, but this never materialized due to changing leadership and membership within that organization. To meet the mentoring need, HS-MACA developed its own mentoring activities, where opportunities were provided for one-on-one mentoring by faculty, staff, and upper-level classmates. The mentoring activities were advertised with posters and brochures. One-on-one assistance was offered by the staff of HS-MACA. This included

tutoring, mentoring, shadowing, and role playing. Elementary students were paired with high school students while the undergraduate students were paired with health science graduate students, faculty, or staff. Socials were held every two months to share success stories of the mentor-mentee relationships.

Creighton's School of Nursing and Metropolitan Community College (MCC) already had an articulation agreement in place, but there was a "blockage" in the Arts and Sciences pipeline. In other words, students were unable to transfer from MCC until CCHPP managed to accumulate data and

Table 1

**Creighton Collaborative Health Professions Partnership Programs and Activities**

Programs and activities	Target students	Description
Start Smart	Grades 4–7	Students learn about drug, tobacco, and alcohol prevention.
SMART Girls	Grades 5–8	Girls discuss healthy eating habits, personal hygiene, and other issues that they face.
Act SMART	Grades 6–9	HIV/AIDS prevention program designed with age-appropriate activities.
Goals for Growth	Grades 4,5,7,8	Students learn to set goals and develop the skills needed to achieve those goals.
Goals for Graduation	Grades 6,9,10	Students develop skills to achieve academic goals through special activities.
Power Hour	Grades 4–9	Students receive concentrated time for homework help, tutoring, and skill-building games.
Science Club	Grades 4–12	Students experience hands-on activities involving all areas of science.
Teen Homework Help	Grades 6, 9–12	Homework assistance from supportive and knowledgeable adults and peers.
Passport to Manhood	Grade 8	Boys discuss the issues they face.
The Real World	Grades 11–12	Budgeting, savings accounts, credit, and other facts for preparing to live in society.
College Prep	Grades 11–12	Students receive help filling out scholarship applications, financial aid forms, and admission forms.
Health Science Students Visit Schools	Grades 4–8	College students share background information on hygiene, physical and mental health issues, safety, and career preparation.
Presentations at Boys & Girls Club	Grade 8	Students learn health, hygiene, and safety from physical therapy, medical, and nursing students.
Hospital Tour	Grade 9	Students tour Creighton University Medical Center to observe procedures, role play, and learn about medical careers.
Health Science Day	Grade 10	Students visit Creighton University campus to explore medical, dental, and physical therapy activities.
Biomedical Library Exploration	Grade 11	Students tour the Creighton University facility to learn how health care professionals access and utilize information.
Shadowing	Grade 12	Students shadow Creighton students in a health care field of interest in dentistry, medicine, nursing, and pharmacy/allied health.
Mentor/Mentee	Grades 13–16	Students partner with a Creighton student as role model.
Expanding Your Horizons	Grades 7–8	Girls experience presentations and activities by female professionals in Science, Technology, Engineering, and Mathematics (STEM) fields.
Build a Human Project	Grades 7–8	Students explore the structure, function, and care of the human organism in a two-week workshop at the School of Medicine.
Summer Research Institute	Grades 11–12	Students participate as medical researcher for two months in the summer.
HCOP Summer Institute	Grades 9–12	Students deepen their knowledge of STEM content and skills essential for college admission and success.
ACT Prep Classes	Grades 10–12	Students develop skills for successful completion in each area.
Study Skills/Time Management Workshops	Grades 9–12	Students learn strategies essential for success in high school and college.

cooperate with Creighton's dean of arts and sciences to formulate an articulation agreement in 2004 between the two parties.

### Lessons Learned

The evaluation specialist synthesized issues discussed in partnership meetings, focus groups, and interviews into a matrix, a living document that clarified the challenges, the solution strategies, and results and from which she made recommendations.

#### Population numbers, consent, flow, and attrition

The CCHPP initiative targeted economically and educationally disadvantaged minority students, in five Omaha public and parochial schools. The target of 500 participants was unrealistically high, however. It had been based on estimates used for an earlier city-wide systemic initiative and did not accurately consider the actual population in the target schools who met eligibility requirements. Also, recruiters encountered some reluctance on the part of potential participants and their parents. Students were concerned about the time commitment. Parents, not knowing what to expect, were hesitant to sign assent forms. The partnership discussed these issues. To expand the pool of eligible participants, the CCHPP increased the number of school partners and lowered the academic criteria for participation. Communication with the community was also improved. The CCHPP Project Coordinator and an Omaha Public Schools administrator, both African-American women, recognized and respected in the community, served as liaisons between the project and the participants and their families. The CCHPP's purpose was clarified, encouragement was spread, and familiarity with Creighton's campus and personnel was expanded. Students were personally invited to get involved and parents/guardians were given personal explanations of the assent forms.

The population was very fluid. Pipeline schools did not necessarily "flow" students into each other, particularly after district attendance areas were redefined and students were given more school options. As students left the pipeline to attend different schools or by natural attrition, the number of target schools was expanded and new students

were invited to participate in activities, when reasonable. Ultimately, over the course of four years, 500 disadvantaged students (primarily African-American, with ten Hispanic students) from fourth grade through college from 15 different schools participated to varying extents. The Omaha Public Schools liaison assisted with tracking students and the project coordinator maintained portfolios and a database on all participants. The partnership eventually accepted the need to streamline the number of students and schools and to discontinue replacing students lost to attrition.

#### Time constraints

Students expressed concern about time conflicts related to their participation in CCHPP-sponsored activities. Because students were concerned about missing classes or tests when presentations were held during school, some presentations were given to an entire class rather than to registered CCHPP participants. After-school or weekend activities conflicted with other school activities, transportation, jobs, sports, babysitting siblings, daycare, child-rearing, and other personal concerns. Activities were rescheduled for lunch periods or immediately after school, and incentives such as pizza increased participation for some events.

#### Funding

The partnership soon recognized that the lofty goals and numerous activities supported by the CCHPP infrastructure were grossly under funded. To contribute funds for manpower, instructors, mentors, and summer projects, the CCHPP sought and received supplemental support from the medical school dean's office, HS-MACA, and other grants. Nonetheless, most personnel contributed time and effort far beyond their compensation.

#### Evaluation

The program's original strategic plan included quantitative interim outcome goals built upon previous math and science efforts from an area-wide systemic initiative, including the expectation of significantly improving scores on standardized achievement tests and college entrance exams. These data sources included math percentiles on the California Achievement Test, science benchmark scores from the Omaha Public Schools, geometry grades, and

ACT scores. Math ITBS scores and science grades used in the parochial partner schools were added. Although improving these numbers is worthwhile, the evaluation specialist and the partners soon recognized that the CCHPP's programs could have little direct impact on these scores, and that many intervening variables impacted achievement. The data were collected and reported each academic year, but no significance could be attributed to CCHPP involvement. Therefore, the evaluation specialist incorporated multiple methods, quantitative and qualitative, direct and indirect, embedded and ongoing, to systematically measure academic achievement and knowledge of and attitudes towards health careers. The results were shared with partners and the funding agency in reports.

The evaluation specialists' recommendations included:

- Clarify student's participation criteria and identify a reasonable number of participants for the personnel, time, and funding resources. Partners recommended 50 as an optimal number of participants. Long-term pipeline programs like the CCHPP should anticipate mobility, attrition, and personnel change challenges.
- Continue efforts to inform participants of the health career options and the academic and financial assistance available.
- Recognize the essential value of personal relationships in recruitment, retention, participation, academic success, and reaching project goals. Individual contacts have an enormous impact.
- Solicit crucial support and involvement of parents and teachers.
- Provide increased opportunities for tutoring, mentoring, shadowing, and homework and science project assistance.
- Communicate the importance and the cause and effect relationship between academic success, performance on standardized achievement tests, and on the completion of entrance exams to pursuit of career goals.
- Involve the program evaluator at the time of proposal and budget development to identify assessment strategies that are logical, valid, and congruent with the program's goals and

impact potential. Provide the evaluator with the correct data in a timely way. Consider involving graduate students on research for publication.

- Promote participants' self-efficacy by providing them increased opportunities to serve as mentors, tutors, and role models.
- Identify and recognize the major and minor success stories along the way.

### Conclusion

Overall, the CCHPP was a successful collaboration and did a commendable job with the resources available to encourage academic achievement and the exploration of health sciences as a career choice. The quantitative academic indices cannot adequately measure the impact of the CCHPP, and should be disregarded

when measuring its effectiveness. Importantly, longitudinal comparisons are also inappropriate because the participant population is fluid; students are continually lost to attrition and replaced with new participants. Survey results and qualitative indices reveal that CCHPP-supported activities significantly impact career awareness and preference. Groups of marvelous young people are developing positive attitudes towards themselves, their peers, academic successes, health careers, and Creighton University. Students are making better-informed personal choices regarding career options, academic efforts, health, and safety.

### Institutionalizing the Project

The Creighton Collaborative Health Professions Partnership will continue

to work together to coordinate opportunities for students to experience the activities. School and community agencies contact Creighton for the activities, presentations, and assistance desired. For example, health science professionals and students collaborate in preparing or judging science fair activities, mentoring, and serving as role models. Relationships and efforts at collaborative decision making will be maintained. Financial concerns become the limiting factor as staff, programs, and activities require ongoing expenditures. Some activities will be funded and organized through other existing programs, including Health Careers Opportunity Programs and HS-MACA's Focus on Health Professions Initiative.