

Pueblo Community College

Case Study Report

Consortium for Healthcare Education Online

Education and Employment Research Center

Released February 2015



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School of Management
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ABOUT RUTGERS SCHOOL OF MANAGEMENT AND LABOR RELATIONS

Rutgers' School of Management and Labor Relations (SMLR) is the leading source of expertise on the world of work, building effective and sustainable organizations, and the changing employment relationship. The school is comprised of two departments—one focused on all aspects of strategic human resource management and the other dedicated to the social science specialties related to labor studies and employment relations. In addition, SMLR provides many continuing education and certificate programs taught by world-class researchers and expert practitioners.

SMLR was originally established by an act of the New Jersey legislature in 1947 as the Institute of Management and Labor Relations (IMLR). Like its counterparts that were created in the other large industrial states at the same time, the Institute was chartered to promote new forms of labor-management cooperation following the industrial unrest at the end of World War II. It officially became a school at the flagship campus of the State University of New Jersey in New Brunswick/Piscataway in 1994. For more information, visit smlr.rutgers.edu.

ABOUT THE EDUCATION AND EMPLOYMENT RESEARCH CENTER

Rutgers' Education and Employment Research Center (EERC) is housed within the School of Management and Labor Relations. EERC conducts research and evaluations on education and workforce development programs and policies. EERC research expertise includes community colleges, state and federal workforce developmental systems, skills development, college completion, and innovative and technology-based programs.

INTRODUCTION

The Consortium for Healthcare Education Online (CHEO) is a United States Department of Labor (USDOL) Trade Adjustment Assistance Community College and Career Training (TAACCCT) funded grant project intended to develop new or redesigned online and hybrid courses leading to credentials in health care fields in high demand across the West and Midwest. CHEO is an interstate consortium consisting of eight colleges across Colorado, Wyoming, South Dakota, Montana, and Alaska. The consortium includes Pueblo Community College (PCC), Otero Junior College (OJC), Red Rocks Community College (RRCC), Laramie County Community College (LCCC), Lake Area Technical College (LATI), Great Falls College Montana State University (GFC MSU), Flathead Valley Community College (FVCC), and Kodiak College (KoC).

Each of the eight colleges is required to integrate the following components into its program/course design/redesign: 1) open education resources (OER), 2) use of the North American Network of Science Labs Online (NANSLO), 3) a CHEO-funded career coach, and 4) use of the CHEO Health Career Hub.

Open education resources (OER) are teaching tools and resources that are licensed for free, public use. They include teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge.

Under the CHEO grant, consortium colleges are encouraged to use OER resources in the creation/redesign of their online or hybrid courses. Consortium colleges are also required to create or redesign their courses/programs so that they can be packaged and licensed OER for use by other educators and institutions. The CHEO colleges will package, license, and post their course material during the course of the grant. OER materials will be uploaded to a skills commons repository under MERLOT. The MERLOT skills commons repository consists of discipline-specific learning materials, learning exercises, and web pages, designed to enhance the teaching experience.

The North American Network of Science Labs Online (NANSLO) is a remotely operated robotic lab designed to innovate the distance lab experience for students through a web-based portal. CHEO partners will collaborate to develop lab exercises to be used in health- and science-related courses. Faculty in the designed/redesigned CHEO programs will incorporate the developed labs into courses, using one of the three NANSLO nodes. Nodes are equipped laboratories that remotely run the specified labs for consortium colleges. Three total nodes exist, one newly created under the CHEO grant at GFC MSU. The other two nodes are located at North Island College in Vancouver, British Columbia, and RRCC in Denver, Colorado.

The NANSLO science lab network is managed by the Colorado Community College System (CCCS). For the purposes of the CHEO grant, the Western Interstate Commission on Higher Education (WICHE) in Boulder, Colorado serves as the public's primary resource for information about NANSLO. WICHE coordinates communication among the network's lab partners and coordinates the faculty discipline panels that plan and develop individual science experiments for the nodes.

WICHE additionally serves as CHEO's professional development coordinator, scheduling webinars and workshops for instructional designers, faculty and career coaches through three years of the grant. Specifically, in the first year of the grant, WICHE was responsible for one face-to-face workshop that included instructional designers and faculty members, a separate face-to-face workshop for career coaches, and four webinars (two for faculty and two for coaches). In the second year of the grant, WICHE was responsible for a face-to-face workshop for faculty and one for coaches, as well as six webinars (three for faculty and three for coaches). In the third year of the grant, WICHE is responsible for one face-to-face workshop for faculty and one for coaches, in addition to six webinars (three for faculty and three for coaches). If subsequent support during any grant-funded year is deemed necessary, the PCC CHEO administration team is responsible. For example, based upon project needs relative to employer engagement and job placement, a second face-to-face workshop was provided for coaches in year three. The PCC CHEO team also provides organization and facilitation of annual face-to-face meetings for project leads. Additionally, 10 trainings for the CHEO Health Career Hub are the responsibility of College in Colorado. Hub trainings began in year two and extend into year three.

Each college in the consortium is required to employ a career coach to collaborate with employer partners, local workforce centers, community and nonprofit organizations, and students to ensure student access to CHEO resources. Within each of these areas of collaboration, coaches work according to their institution's needs to build CHEO programs, recruit and retain students for CHEO programs, and assist students in multiple ways as each institution designates. Coaches also track their interactions with students to report outcomes based on a model of "intensive advising," assisting students throughout their education with multiple interactions and points of intervention to ensure student success and, ultimately, employment.

The CHEO Health Career Hub is a sophisticated regional and web-based portal that promotes and supports those pursuing a career in health care fields with a wide variety of high-impact interactive tools and services. PCC, the lead applicant and fiscal agent for the CHEO grant, has worked with College in Colorado hub development and Kuder, a company that designs online career planning systems, to create the CHEO hub. The hub is to be used as a case management tool by coaches and as an interactive career management tool for students in CHEO programs across all eight consortium colleges.

This report is one of eight created to highlight each individual college's contributions to the CHEO project to date. The purpose of this case study is to provide a summary of PCC's activities, successes, and challenges to date and to identify the best practices, innovative strategies, and unique contributions of the college to the CHEO project to date. This case study begins with an overview of its methodology and data sources and then moves on to the contextual frame—demographic and socioeconomic background information about PCC, its student population, and its service region. These sections are followed by a) a summary of the goals of PCC's CHEO program, b) a discussion of the baseline targets and subsequent changes relative to the CHEO project, c) the identification of PCC's emerging best practices, innovative strategies and unique contributions to CHEO, and d) a summary of successes and challenges to date along with next steps.

METHODOLOGY/DATA SOURCES

This report examines the development and implementation of the first two years of the CHEO grant at PCC, including experiences of the project team members and participating staff, faculty, and students. As such, this report uses qualitative data and analysis. Subsequent EERC evaluation reports will include outcome measures and report on quantitative data collection and analysis.

The qualitative methodology for this report includes content analysis of consortium goals and activities to date, relevant proposals, and project- and college-specific statements of work, quarterly reports, career coach tracking spreadsheets (also called "stitched-in reports"), strategic plan information and materials, and websites developed by individual colleges. EERC team members have also conducted phone and in-person interviews with the CHEO coordinator, grant administrators, senior WICHE administrators, college project leads, NANSLO Discipline Panel participants, and faculty and career coaches. EERC team members have also been participant-observers at many project workshops including those for faculty, project leads, instructional designers, and career coaches. Finally, members of the EERC team have "observed" conference calls with project leads and career coaches and joined in webinars.

Most interviews were taped and transcribed; non-taped interviews involved extensive note taking. These transcriptions and notes as well as the documents cited above have been coded through the use of NVivo qualitative data management software and analyzed by EERC team members to represent each college's individual story relative to the CHEO project.

As noted above, while quantitative analysis will be presented in subsequent reports, this summary is meant for contextual purposes only and will only utilize data from qualitative analysis. For this reason, grant targets relative to each college, student counts, course counts, NANSLO lab counts, industry- and workforce-related targets, and other quantitative objectives will not be discussed as part of this report.

COLLEGE DESCRIPTION AND OVERVIEW OF STUDENT POPULATION

Established in 1933, PCC is a multi-campus, nonresidential college with its main campus in Pueblo, Colorado. PCC also maintains the Freemont campus in Cañon City and a division called Southwest Colorado Community College (SCCC) with sites in Durango and Mancos. The latter were established in 2009 when PCC merged with San Juan Basin Technical College.¹

PCC is a two-year community college within the Colorado Community Colleges System (CCCS), offering more than 50 associate's degree programs and over 150 career and technical certificate programs and preparing students for transfer to four-year colleges.² PCC prides itself as a leader in health care education and is especially known for its allied health programs.

During the 2012-2013 academic year, PCC served 2,588 full-time and 4,844 part-time students.³ The majority of PCC students were female (about 52%, N=3,865), and most students were considered "non-traditional;" 25 years or older (54%, N=4,013). The ethnic distribution of the local population is quite diverse, with the largest Hispanic population in Colorado living in Pueblo (50 percent).⁴ PCC is therefore designated as a Hispanic-serving institution by the U.S. Department of Education. Although the main campus of PCC is located in Pueblo, considered an urban area (population 108,249),⁵ the rest of the PCC's service region PCC is considered rural. These communities are located in the central area and the most southwestern corner of Colorado.

To better serve the education needs of a large rural population, PCC offers online and hybrid programs. In addition to its own online programs, PCC uses the CCCOnline educational resource shared by all members of CCCS.⁶

Additionally, the management team for the CHEO grant is housed at PCC. This has provided some implementation benefits for staff and faculty; for example, the career coach reported that the proximity to the grant management was helpful in determining what role she was expected to serve.

¹ *Pueblo Community College 2014-15 Catalog*. (n.d.). Retrieved August 12, 2014, from Pueblo Community College: <http://www.pueblocc.edu/Catalog-2014-15.pdf>

² *Pueblo Community College 2014-15 Catalog*. (n.d.). Retrieved August 12, 2014, from Pueblo Community College: <http://www.pueblocc.edu/Catalog-2014-15.pdf>

³ *Community Colleges: Pueblo Community College*. (n.d.). Retrieved August 12, 2014, from U.S. News & World Report Web site: <http://www.usnews.com/education/community-colleges/pueblo-community-college-CC06991>

⁴ *State and County Quick Facts*. (2014, July 8). Retrieved August 12, 2014, from the Bureau of Labor Statistics: <http://quickfacts.census.gov/qfd/states/08/0862000.html>, <http://quickfacts.census.gov/qfd/states/08/08101.html>

⁵ *State and County Quick Facts*. (2014, July 8). Retrieved August 12, 2014, from the Bureau of Labor Statistics: <http://quickfacts.census.gov/qfd/states/08/0862000.html>, <http://quickfacts.census.gov/qfd/states/08/08101.html>

⁶ *Pueblo Community College 2014-15 Catalog*. (n.d.). Retrieved August 12, 2014, from Pueblo Community College: <http://www.pueblocc.edu/Catalog-2014-15.pdf>, p. 56

PCC's CHEO GOALS

PCC was involved in round one of the TAACCCT grants,⁷ as well as a statewide sector grant. Given its past experience with external grant funding, PCC entered into the CHEO consortium fully cognizant of the multiple opportunities that the CHEO grant could provide the college, especially expanding and transforming existing programs. The college proposed to use the grant primarily to integrate and innovate with online and hybrid delivery and new technologies.

PCC was moving toward a hybrid or fully online model (depending on the program) for some of their health programs at the time that the CHEO grant project was proposed. As such, the college has used the CHEO grant to grow its health information technology, emergency medical services, and polysomnography programs and transform them to hybrid or fully online formats. This has given the college the opportunity to expand the geographic reach and flexibility of their health programming.

PCC's grant goals have changed slightly since the writing of the program. About two years after the grant began, PCC suspended its polysomnography program and, as a result, transferred CHEO resources to the radiologic technology program instead. This change will be discussed in more detail below.

Creating hybrid and online programming is important to PCC; the college's strategic plan includes mastering online and hybrid instructional delivery. The CHEO grant has been central to realizing this strategic imperative. It has expanded the geographic reach of the college and allowed PCC to provide programming that fits into students' busy lives. In a number of interviews, PCC staff and faculty noted that this was one of the most important effects of the CHEO dollars on their campuses. An instructional designer spoke with Rutgers about the online transformation of the HIT program, stating,

I just think it's a really amazing thing to be able to serve people that have other jobs, have families: the flexibility, the fact that they don't have to commute, the fact that we have students that are really from all over the state and outside the state for that online program.

The instructional designer related that the ability to reach out to such students is "the passion part" of her job.

The CHEO grant has allowed PCC to focus its attention on innovations and curriculum development in three programs: health information technologies (HIT), emergency medical services (EMS), and radiologic technology (rad tech). The HIT is a program in the IT business area, which has been transformed with CHEO dollars from hybrid to fully online. The EMS

⁷PCC was involved in the round-one Colorado Online Energy Training Consortium TAACCCT grant focused on the creation and redesign of energy programming and the redesign of developmental education in the state.

program has moved from a traditional to a hybridized curriculum. This program includes stackable certificates that can lead to an associate of applied science (AAS) degree. With the CHEO grant, PCC sought to expand the reach of the program to (i) rural areas and (ii) areas that have a need for trained EMS practitioners. The rad tech program was a late addition to the CHEO-approved proposal. As mentioned above, PCC had previously proposed to use CHEO dollars to redesign their polysomnography program. Some courses were redesigned, and the program ran for the first 18 months or two years of the grant; some students completed the program and obtained jobs in the field. However, demand decreased, and jobs became scarce for the endorsement, so PCC suspended the program for the time being and shifted CHEO money to redesigning the rad tech program.

In addition to these curriculum goals, PCC also purchased new technologies for their health classrooms to enhance training opportunities for students and to innovate health and prerequisite science courses.

CHEO PROGRAMS AND PROCESSES

Development and Implementation

The CHEO programs at PCC are part of two separate divisions: the HIT program is part of the information technology/business division, and the EMS and rad tech programs are part of the health sciences division. Because of this, there are two project leads at PCC, each in charge of the CHEO program that falls under their respective division.

PCC's CHEO programs were in existence prior to the grant project. All three of them are being modified under the grant, as mentioned above. EMS and rad tech are moving from a traditional (face-to-face) model to a hybrid (30% minimum online and the remainder face to face) model, and health information technology is moving from a hybrid model to a fully online model (100% online).

Health Information Technology

The HIT program leads to an associate of applied science degree, allowing specialization, including an additional certificate and the ability to take a national certification exam in one of three areas: HIT medical coding, HIT implementation management and support, and HIT network security.⁸ The HIT program at PCC is very popular because it does not have a clinical component, it has no enrollment cap, and students can now—thanks to CHEO—take it fully online. PCC instructional designers are also using CHEO resources to identify course materials for OER publication and utilizing more technology purchased by the school (such as various software tools and a document camera) to improve the HIT program's online courses.

⁸ *Pueblo Community College 2014-15 Catalog*. Retrieved August 12, 2014, from Pueblo Community College: <http://www.pueblocc.edu/Catalog-2014-15.pdf>, p. 134

Career opportunities for health information technicians make this a popular program because the related occupations represent a critical component of the electronic health record (EHR) workforce that is increasingly in demand.⁹ Health care practitioners and technical occupations, including medical records and health information technicians, are ranked number seven among the occupations with the highest projected job growth in Colorado by 2022.¹⁰ Jobs for this occupation will grow at a faster-than-average pace in the country, reaching a projected 22 percent growth by 2022.¹¹ Nationally, medical records and health information technicians made \$37,710 (annual mean wage) in 2013, while those in Colorado made slightly more (\$43,860).¹²

Because the HIT program is accredited by the American Health Information Management Association (AHIMA), PCC receives some interest from students outside of Pueblo's service area. PCC has two training options for students: a 42-credit HIT certificate program and a 52-credit AAS degree with an emphasis in medical coding. The coursework of the certificate is fully stackable into the AAS degree. The degree portion adds prestige to the certificate and opens doors to medical office management as well as further education.

Since HIT does not have a clinical component, it was fairly straightforward to redesign to a fully remote model. The HIT program does include an internship during the students' summer semester, but students find their internship site independently, and as such, this aspect of the program does not limit the geographic reach of the program.

To date, all courses in the HIT program have been redesigned and moved into an online format. Courses are being offered, and changes and additions are now being made, as lessons have been learned about delivery. The redesigned, fully online HIT program has received positive feedback from students—the instructional designer (who reviews the course evaluations) noted that students had said that the courses were getting better and better as the faculty and administrators got more practice with online teaching.

The redesign of the program to fully online delivery has allowed PCC to fulfill its CHEO goals by providing training options for remote students, including rural students in both southern Colorado and elsewhere in the country, and to provide employment for students seeking education in the HIT workforce without saturating the local market. This had been a concern for the sustainability of the program. As one administrator said, "[W]e thought if we could move into a national market, because the certification is one that's valued by business and industry all

⁹ *Why Choose a Career in Health Information?* Retrieved August 14, 2014, from AHIMA:

<http://www.ahima.org/careers/healthinfo?tabid=why>

¹⁰ *Labor Market Facts*. Retrieved August 8, 2014, from the Colorado LMI Gateway:

<https://www.colmigateway.com/vosnet/lmi/faq.aspx> (Questions on Employment and Unemployment in Your Local Area: What occupations have the highest employment in an area?/Colorado)

¹¹ *Medical Records and Health Information Technicians / Occupational Outlook Handbook, 2014-15 Edition*. Retrieved August 14, 2014, from the Bureau of Labor Statistics: <http://www.bls.gov/ooh/healthcare/medical-records-and-health-information-technicians.htm>

¹² *Occupational Employment Statistics*. (2014, April 1). Retrieved August 12, 2014, from the Bureau of Labor Statistics: http://www.bls.gov/oes/current/oes_co.htm

over . . . we can have a larger student [body].” The administrators noted that students are still getting jobs upon completion, so there is as yet no evidence of market saturation near PCC to date but that they are prepared for this eventuality. Currently, the PCC service area extends to the Durango and Cortez area, but the HIT program hopes to expand its reach even further to avoid saturation. There are already a handful of remote students in the program, but there is hope that this number could be expanded. As such, program administrators have begun to think about getting the word out about PCC’s HIT program. On campus, the program receives interest from word-of-mouth promotion locally and from the student advisors at PCC. They get the word out to a wider audience through the AHIMA website, which lists PCC as a certified provider, and to date, some students have been directed to the program from that listing.

Radiologic Technology

PCC’s rad tech program is a two-year program that, if the student completes it successfully, feeds into a registry examination for a national certification. PCC’s rad tech program is the only one in the state south of Colorado Springs. As such, students from a wide geographic region access the program. As mentioned above, the CHEO program has been used in the rad tech program to move some parts of the curriculum online.

The chair of the program noted that new job openings were on the rise—the Bureau of Labor Statistics projects a rise of 21 percent in the number of radiologic technologists in the country¹³—and that PCC’s rad tech program had a 70 percent placement rate. The average annual wage for a radiologic technologist in Colorado was \$59,300 in 2013, higher than the national mean annual wage of \$56,760.¹⁴

The program is given on two of PCC’s campuses, the main campus at Pueblo and an extension campus in Durango. Classes for the Durango students were conducted either face to face on the Durango campus or connected via videoconference (Polycom) to the Pueblo classrooms. There are typically about 20 students on the Pueblo campus and 10 students at PCC’s campus in Durango. Faculty members and students on both campuses were dissatisfied with the videoconference technology. In a focus group with remote and in-person students, they all spoke about the many challenges of being in a Polycom class. Students talked about the limitations of the Polycom technology and technical issues that took away from important class time. Technical issues included audio delays and being unable to see the teachers or demonstrations that the teachers were doing. They also talked about the challenges of effective learning in this separated classroom set-up. Students in Pueblo said that the remote students were distracting, and students in Durango complained about not feeling connected to their peers and teachers. Both groups of students said that this delivery system hampered learning, and students in Durango talked about feeling like “second-class citizens.”

¹³ *Radiologic and MRI Technologists / Occupational Outlook Handbook, 2014-15 Edition*. Retrieved January 8, 2015, from the Bureau of Labor Statistics: <http://www.bls.gov/ooh/healthcare/radiologic-technologists.htm>

¹⁴ *Occupational Employment Statistics*. (2014, April 1). Retrieved January 8, 2015, from the Bureau of Labor Statistics: http://www.bls.gov/oes/current/oes_co.htm

It is clear that this method of remote delivery caused problems for instructors as well as students in both cohorts. CHEO offered a solution to these problems, and immediately after being incorporated into the CHEO grant, the rad tech chair made it her first priority to redesign some of the program courses as online modules. In addition to eliminating the problems presented by the older technology, the chair drew upon her experiences with online education and the instructional designers at PCC to develop courses that are well suited to online delivery. She found that the structure of online courses could provide benefits, giving otherwise quiet students the opportunity to interact with the professor without being lost among more extroverted classmates.

To date, CHEO resources have been used to compensate the chair for additional work performed over the summer converting the courses to hybrid delivery. The rad tech program also purchased a second demonstration skeleton with CHEO money. Two tablet computers were purchased by PCC (although not with CHEO funds) that allow the rad tech staff to use e-textbooks in their courses. Students prefer the e-books over traditional textbooks, primarily because they cost so much less.

As of the time of the Rutgers site visit, PCC was redesigning the rad tech capstone class from face-to-face delivery to hybrid. The capstone is primarily preparation for the certification exam that students will be prepared to take upon program completion. The chair indicated that she was planning to put exercises from the capstone class on Desire2Learn as well to give students more options for preparing for the examination. For even more preparation for the certification, the chair plans to use CHEO money on a certification preparation curriculum to help students afford the materials (~\$200) that the chair believes would actually provide a benefit.

Emergency Medical Services

PCC has also used CHEO grant money to redesign parts of its EMS programming, which includes EMT and paramedic certificates. The EMS program is stackable; students can complete an EMT basic certificate in one semester or stack that certificate for three semesters to receive a paramedic certificate. The EMT basic certificate can also be latticed with the fire science program and lead to an AAS in fire science. The three levels of the EMS program are EMT basic, EMT intermediate, and paramedic. The nationally accredited paramedic program requires EMT certification, but it need not be from PCC or even a “transcripted” program. Upon graduation, students may take the national exam administered by the National Registry of Emergency Medical Technicians (NREMT) and then apply for the Colorado state certification. EMS programming under CHEO was developed into a hybrid course with a lab and a clinical component. This change reduced the number of hours that students had to be on campus but did not eliminate the important hands-on components of training. While students can do aspects of the course work online, they are asked to be on campus for some classes and hands-on activities. They also need to be able to complete their clinical experiences at a partner medical facility.

EMTs and paramedics—when not volunteers—make an average of \$39,470 per year in Colorado, substantially higher than the national median income of \$31,020 annually. Additionally, the Bureau of Labor Statistics projects that the number of EMTs and paramedics in the workforce will increase by 22 percent over the next ten years.¹⁵

The EMT basic program is a one-semester, ten-credit-hour program that results in EMT certification. While the division head reported that not all of the graduates of the EMS program received employment post-completion, many of them were not treating the EMS program as the final step in their education: “going into a nursing program or something else, it can be of benefit to them in other ways than besides becoming an EMT. I think most people that really want to work as EMTs do get jobs as EMTs. But many of our students don’t because that’s just not the goal.”

PCC defines “hybrid” as having 30 percent of a class online. By this definition, the basic EMT certificate is fully hybrid. The paramedic program has been slower to change, but the EMS faculty members have been deeply engaged in determining what parts of the challenging content can be successfully transferred to an online format. Thus far, a number of lectures have been put online for student use, and the program is sufficiently hybrid that entire days can be spent by the students online. At first, among some faculty members, there was some reticence toward moving coursework online because of the conceptual nature of the subject matter, but over time, the view has improved, and coursework is being transitioned. All faculty members have attended professional development to aid in the development and teaching of the online portions of the classes, specifically the online instructor course given by PCC. Faculty members received extra compensation for the hybrid development.

The redesigned EMS program was intended to help train people in more remote areas near PCC. The division head noted that the distant communities ask for PCC to come to them and train small numbers of people to fill vacancies in their volunteer EMT services. This cannot be done for logistical reasons, but it is hoped that the hybrid nature of the redesigned curriculum could allow more people from those areas to receive the education they need to serve their local communities. The online courses have meant that students spend less time and money traveling to campus, which could be substantial in Colorado. As such, it has helped the college achieve the goal of expanding access.

Clinical locations for the program are scattered throughout Colorado. Clinical locations include St. Mary Corwin and Parkview Hospitals in Pueblo, hospice and dialysis facilities in Pueblo and other towns, and even the Children’s Hospital of Denver. A new clinical site was created in early fall 2014 at Memorial Hospital in the labor and delivery department. Labor and delivery experience has historically been difficult for students to receive. The certificate requires witnessing two births, which is often difficult to plan and coordinate. Having additional clinical

¹⁵ *Occupational Employment Statistics*. (2014, April 1). Retrieved August 12, 2014, from the Bureau of Labor Statistics: http://www.bls.gov/oes/current/oes_co.htm

locations is crucial to filling this need. The CHEO career coach helped the EMS division secure this additional location.

Because the program is not conducted entirely remotely, more EMS students tend to be local to the area than those in the HIT program, though one student from Colorado Springs interviewed by an EERC team member noted that she selected the program because of the hybrid component.

Recruitment and Enrollment

PCC's EMS program has used CHEO resources to advertise their hybrid program on Facebook and in local newspapers. PCC's EMS programs have had some trouble filling the hybrid sections, but the chair and PCC's marketing director believe that, by focusing on Facebook and other similar places, marketing efforts can reach tech-savvy potential students with the message that the PCC program is available to people farther from campus. The EMS program is also focusing on small, local newspapers in the remote communities from which it would like to recruit students for the hybrid sections. PCC administrators also acknowledged that prospective students were sometimes unsure of the educational value of an online or hybrid degree, and that marketing would have to be designed to address that problem as well.

Given that so many students are already looking for 1) a certificate rather than a degree HIT program and 2) a fully remote option, PCC has not had to recruit students for HIT because they simply request it. As mentioned above, the online HIT program is listed on the American Health Information Management Association (AHIMA) website as an accredited program and has been able to recruit a handful of students through that listing. Administrators noted that the AHIMA website is "where the majority of our referrals come from." The programs further use employer advisory boards to communicate with potential employers and use them to promote the programs.

The rad tech program has had less time to work with CHEO resources and has focused mainly on redesigning courses for the hybrid delivery and integration of new classroom resources rather than recruiting new students. To date, the program cohorts have been full, however, and there has been no need to recruit. The program chair cited projections indicating that there will be substantially increased demand for radiological technologists in Colorado, so this trend will likely continue.

NANSLO

As mentioned previously, the North American Network of Science Labs Online (NANSLO) is a network of three science labs that serve the CHEO consortium and CCCS. PCC primarily utilizes the Denver, Colorado node housed at Red Rocks Community College (RRCC).

Reception

PCC faculty members initially did not respond positively to NANSLO, primarily as a result of an initial demonstration held on campus that did not work as planned. Some technical glitches arose during the demonstrations, and faculty members had difficulty logging into the system and using the instruments. This initial presentation made a lasting impression on faculty members at PCC. Two instructors in the science department who had used a NANSLO lab in their classes reported that they would not use NANSLO technology in the future unless required to do so. Each of these instructors is currently using NANSLO in their classes as a requirement of the grant. However, they are not pleased with it, noting that there were extensive technical problems, primarily related to lag between the students' instructions and the motion of the apparatus. One faculty member noted that students had difficulty logging in to the NANSLO system for the one lab that was scheduled for his class.

Some faculty members reported that the labs simply did not work when it was time to use them. One faculty member talked about a visit that PCC staff members took to the Denver NANSLO node location to observe a demonstration and said, "It did not even work then." There have been other unsuccessful demonstrations as well. Additionally, Bio 212 was scheduled to use a NANSLO lab in spring 2014, but the person in charge of opening the lab at the NANSLO node was not present to open the lab at the scheduled time. Later, this person attempted to call the students and re-schedule their lab time, but only one student was able to reschedule and complete the lab.

Faculty members also reported that NANSLSO did not offer many choices for the health curriculums they have focused on. The instructional designer said that, "if [the NANSLO lab offered] doesn't really fit into ... an exact lesson or module, they'd [the faculty member would] have to ... redesign the course to try to figure out how to fit that in potentially." One instructor noted that the supposed benefit of the NANSLO lab—the ability to conduct experiments remotely—does not add much value to a student if she still has to be on campus for fifteen of the other sixteen weeks of the semester. Some faculty members also expressed anxiety that science students needed "hands-on" experience with the laboratory equipment. These faculty members perceive value in students' actually handling microscopes since they will be using them later in employment.

The overall use of NANSLO at PCC has been minimal to date. The perception of NANSLO among many faculty members who have used it in their classrooms or observed demonstrations is generally not good. To date, use in the focus health care areas is minimal or nonexistent because faculty members feel that the available labs do not fit their current needs. PCC has gone to significant lengths to try to implement NANSLO labs, mostly without success.

OPEN EDUCATION RESOURCES

Open education resources are teaching tools, lessons, interactive activities, recorded lectures, or any other teaching element that can be shared openly without copyright or licensing. As part of the requirements for the CHEO grant, the colleges are to integrate as many open educational resources as possible into their courses, as well as to design/redesign their courses in such a way that the pieces can be shared as open education resources. The instructional designers at PCC have worked to redesign all courses in the CHEO grant to include OER components. They began by developing a course map for all courses and running evaluations for each course to determine what OER material could be added. The total list of courses as of November 2014 was 34—a huge job. The HIT program, as mentioned, is completely online, and the instructional designers have worked with faculty in the hybrid programs—EMS and rad tech—in developing the online portions of the courses and putting them in OER format. The statement of work for PCC relative to CHEO stated that 14 courses were to be redesigned, but once redesign began, it became clear that the process was significantly improving delivery of instruction. Therefore, the number of courses to be redesigned was increased to create a more comprehensive redesign effort.

Instructional designers, however, noted some trepidation on campus concerning the process of publishing course material in OER format. Significant copyright issues are associated with course materials, and the process of determining what is instructor-created and what is copyrighted is complicated.

PCC's instructional designer set up a webinar with a representative from Creative Commons who spoke to "every instructional designer, plus others from the whole grant" to educate them on OER implementation issues. This was one of four professional development webinars and trainings that the Creative Commons team has developed for the consortium. The Creative Commons website also has numerous tutorials that are available to the consortium. As the CHEO project director noted, OER can be a difficult concept for faculty members to embrace and requires a paradigm shift away from publisher-created materials that are "plug and play" to a more customized approach to teaching. She finds that understanding relative to OER has increased exponentially since the beginning of the grant period.

CAREER COACH

Background

PCC's current career coach has a background in counseling, having worked as a high school counselor and college liaison for nine years, and she was the Director of Admissions and coordinator of the educational opportunity center at Trinidad State Junior College before that. She also worked as a grant administrator at the high school. Five days after being hired, she attended a career coach workshop in Boulder, and she was able to talk to other career coaches and figure out her role at PCC.

Role

The career coach has been active in student outreach from the very beginning of her tenure in the summer of 2014. She started her work by reaching out to the students in all CHEO programs by email and phone. To get students to come to see her, she drew on some of her talents and past knowledge. One example of this occurred at the beginning of the semester when she identified students who had not yet filled out financial aid applications and worked with them to do so.

Her next order of business was getting to know the resources on campus so she could better help her students. She reached out to different areas of campus and met faculty and staff members in the departments that she is supporting and in the campus resource areas of importance. After this outreach, she began directing applicants to the learning center “so that they know where to gain academic support.” Her outreach to faculty members in the health departments led her to ask about their needs and the role that she could play. In one of those meetings, faculty members spoke about needing more labor and delivery clinical sites. As a result, the career coach began calling local service providers to locate possible clinical sites and was able to secure a new training partner. As mentioned earlier, the career coach was instrumental in finding and securing this additional labor and delivery site at a Colorado Springs hospital.

She also attended meetings at the local workforce center with TAACCCT round three (CHAMP) grant representatives from PCC, which will be discussed in more detail below. At the time of the interview, the career coach had only been on the job for a few months but had accomplished a great deal in terms of student, campus, and community outreach.

The current career coach is actually PCC’s second in the grant. The original career coach was an important player in the development of the career coach role in the grant. He created several management tools for his own use at PCC as well as for all coaches across the consortium, including the “stitched-in” reporting tool.

PCC’s original career coach also created a “quick-start guide” for career coaches that was distributed to the consortium coaches. The coach also shared many strategies for assisting students online with other coaches in the consortium. The project director relied on the PCC career coach to act as a sort of leader for the CHEO coaches and to help her “understand the needs of the career coaches.” In addition to providing support for grant goals, the career coach also launched an online tutoring innovation at PCC that will be discussed in more detail below.

PCC has a large student population in their CHEO programs, creating a large caseload for the career coach. In March 2013, the original career coach at PCC had just under 1,000 students in his caseload. Because of this, the career coach felt that he was able to do much less intrusive advising than a career coach at a smaller school.

In particular, her outreach with students in the entirely online HIT program was complicated by its remote nature. She noted in November 2014 that she intended to meet with one of the HIT instructors and planned to integrate the CHEO Health Career Hub into the HIT program's internship class so students would necessarily be exposed to that resource. She feels that the hub can provide some concrete value to the students, especially in providing them with an e-portfolio site that they can show to potential employers. Additionally, embedding the hub in the course forces students to interact with her in some way; she has had little success in contacting students via blind email, so she hopes that this will change.

In addition to the emails, the career coach has met in person with both the first- and second-year students in the rad tech program and has planned interview workshops with the latter. For both groups of students, she has planned to deal with testing anxiety since so much of the program is geared toward the national certification exam. The rad tech chair has also noted that the career coach has worked with the local workforce center to help students with financial resources to complete their programs, having taken on that responsibility from the rad tech faculty.

The career coach has reached out to the students on satellite campuses in an effort to prevent them from feeling that they are unimportant to PCC, a concern that she identified early. She plans to return to conduct various programs such as resume building workshops and mock interviews. She has also developed relationships with career coaches at other grant schools—RRCC and OJC, in particular—and helped set up career hub workshops. She has also been instrumental in securing clinical sites for the programs. She credits her success to luck and her willingness to repeatedly contact potential internship sites: “the squeaky wheel gets the grease. So I just kept squeaking.”

COLLEGE-INDUSTRY/EMPLOYER/WFC RELATIONSHIPS/PARTNERSHIPS

PCC's career coach works closely with the workforce center. These interactions include both working with local industry and providing and receiving referrals for CHEO-funded programs.

There is a high population of veterans in southern Colorado, and many of the workforce center referrals are veterans. The career coach noted that rad tech is a program that is fundable by the workforce system, but HIT and the EMS program are not. She noted that the availability of funding for particular programs is tied to whether or not the programs' corresponding occupation is considered a high-demand occupation and that she plans to research each program's job-placement capabilities to the degree that the workforce center requires. This will allow the workforce center and PCC to request that these programs be added to the high-demand occupations list to make the programs eligible for funding. High-demand occupations lists are created at the state level, and this change will need to have state approval.

The career coach also noted that the CHEO Health Career Hub provides students with a direct link to the workforce center and to workforce centers in other areas—her example was that, if you study in Durango, you could have access to workforce centers in a number of different states (the “four corners” area).

The career coach also called a number of hospitals to set up internships for the EMS program and has developed and maintained professional connections with people there. The new career coach has also developed relationships with internship sites for students in PCC’s programs.

The EMS program has a very good working relationship with industry, represented by the donation of an ambulance and help with specialty maintenance issues for it. The division chair spends substantial amounts of time coordinating the internship sites for the EMS students and has been successful at placing them.

PROFESSIONAL DEVELOPMENT

PCC’s instructional designers commented that, after the initial rush to complete the course redesigns, the introduction of faculty to online and hybrid teaching was done “slowly and gently, ... really allowing [faculty members] to consider what portions they can make” available online. She reported that faculty members initially thought that a transfer to online and hybrid could not be done, but “they’re beginning to embrace it a little more” as the instructional designers expose the faculty to more online coursework.

Desire2Learn and SoftChalk were the subject of the October 17 faculty development day where instructional designers presented the software to faculty. PCC hosts a regular “faculty first Fridays” program each month, with technology and online instruction sometimes serving as topics.

The instructional designers are also open to faculty members dropping in for advice on how to use Desire2Learn or SoftChalk or other online teaching software: “there’s a lot of that’s just ad hoc, drop-in kind of help.” The instructional designers also offer training at the beginning of every semester on using the software that is available to PCC instructors. The same is offered as part of the part-time instructor orientation before each semester.

The instructional designers developed an “online instruction certificate” for faculty members and administrators to take to become more familiar with the technology options that are available to them. The course covers various aspects of online instruction: “the pedagogy of teaching online ... how it’s different from face-to-face, ... how do you manage groups, and how do you build community online.” They have run the class twice successfully and as of November 2014 were running it a third time with increasing numbers of faculty members taking the course. The feedback has been positive, and a number of faculty members have reported that they took the class and that the class provided value. For community college programs focused on preparing students for employment in particular fields, many courses

involve instruction from practitioners in the field who may not have as much experience with innovative educational techniques; PCC's course for online faculty provides important lessons for faculty members who may be skeptical of the value of online education.

PROJECT MANAGEMENT TEAM

PCC houses the grant management team for the CHEO grant. A project director, data analyst, and fiscal staff were hired for the grant and work from the PCC campus.

The project director's job is to ensure project- and college-level success for PCC and for each of the partner colleges. She feels that open communication consortium-wide is key to the success of CHEO:

The project's organizational foundation is based upon a collective impact model whereby constructive input is valued and accountability is clear and consistent. The college leads are wearing many hats, meeting numerous requirements and demands. They need the support in order to seamlessly deploy these processes. I attempt to consistently provide clear and responsive communication, direct approaches to problem solving and strategic thinking.

The project director has built her organizational design on the collective impact model,¹⁶ providing cohesive management and oversight, a communication methodology, common agendas, and shared matrices for successful partnership implementation. For example, she has developed several tools for and in conjunction with consortium partners to help with implementation and better management of the grant for each college. These tools include project fact sheets, project dashboards, performance benchmarks, the strategic work plan by priority, and strategic mapping tools that have helped each college better understand its vision and risks relative to the CHEO grant. As mentioned in the introduction, the project director also steps in to offer workshops, webinars, and trainings when needed for coaches, instructional designers, project leads, and faculty members.

The CHEO data analyst is also a liaison between the overall project efforts guided by the project management team and the consortium coaches. He worked with PCC's first career coach to develop a career coach tracking spreadsheet (the "stitched-in report") to help coaches track each student relative to his or her engagement with the career coach. Since CHEO coaches are responsible for recording and submitting important data relative to their interactions with students, the data analyst found that regular communication with the coaches made this data exchange easier. As mentioned previously, the data analyst runs monthly "coffee talk" sessions with the consortium coaches and facilitates a Basecamp site for them. These communication tools give coaches better networking opportunities and support mechanisms. They have also fostered a trusting relationship between the coaches and the data analyst that in turn creates a

¹⁶Kania, J. & Kramer, M. (2011). Collective Impact. *Standard Social Innovation Review*, winter, 36-41. Retrieved 1.29.2015 from http://www.ssireview.org/articles/entry/collective_impact

propensity for them to be honest about challenges and needs that they may have, allowing the project staff to better respond and ensure success. The CHEO data analyst has found the monthly coffee talk sessions are helpful for cross-consortium communication among coaches, and changes have been made recently that have facilitated communication even more:

Coffee talks are an opportunity for coaches to come together and discuss their job experiences and offer each other support. In September 2014, a template was created to facilitate discussion among the coaches on important topics such as employer engagement, teaching students professional skills, and career hub evolution.

The project director, accountant, and data analyst have been instrumental in working with College in Colorado and Kuder Systems to create the CHEO Health Career Hub management tool for the consortium colleges. The hub is envisioned as a tool for students to create a portfolio for themselves that will help them visualize and achieve their career trajectory and goals. Coaches will also be able to use the tool to track engagement with their students, and the hub's case management tool will replace the stitched-in reports. Rollout of the hub began in November 2014, and a training for project leads and career coaches took place in December 2014. Ten trainings are planned.

HIT program administrators expressed to EERC team members that the presence of the grant administration team was positive: "[W]e felt lucky to have had the lead here as far as [the project director] and her team because they've been able to support us in ways that I thought many times, 'Wow, what would we do without them?'" The project management team provides guidance and leadership to the HIT program and other CHEO-related program administrators and lessens their responsibilities in overseeing the career coach and other grant-related activities.

The project management team has been helpful with the career coach as well—the coach has been able to work with the management team in filling out quarterly reports and giving them feedback on what is happening in her work. The career coach noted that it helped her develop a clearer picture of the grant needs and what she has to do in her position, to which she is new.

The career coach also noted that the project management team has been responsible for connecting employers with the Career Hub website, specifically noting the involvement of the CHEO project director. The career coach described the project director as "taking the lead" in involving employers and discussing employer involvement with Kuder. Since the project director is located on the PCC campus, it is easy for her and the rest of the CHEO grant management team to provide additional support to PCC. The director stated, "We are a part of [PCC's] leadership team, provide fiscal filters, etc. However, we do our best to provide the same/a similar level of services for the rest of the consortium. It is easier for PCC to access us, so we have the opportunity to support daily operations."

PCC'S INNOVATIVE STRATEGIES

EMS Program

As part of its EMS program, PCC has developed an ambulance “lab” that allows students to get real-world experience with using the equipment in, moving patients into and out of, and traveling in ambulances. The EMS program used CHEO grant money to outfit an ambulance that had been donated by a local emergency transportation company and to purchase several manikins for use by the students. Following the receipt of the grant, the college pushed to get the ambulance donated because CHEO finally provided them with the resources that they would need to buy the equipment necessary to make the ambulance a useful training tool. The grant dollars paid for permanent and disposable supplies for the ambulance to help provide students with more learning opportunities and chances to test their skills. PCC has also developed some creative learning activities using the ambulance and a local home that was donated to the program, discussed in more detail below. Because PCC is concerned about giving students the tools that they will need to succeed in the “real world,” faculty members felt that the addition of an ambulance to the EMS program was a necessity: “We wanted to be able to work with our students in a ‘real’ environment. There is no substitute for the movement and atmosphere of an ambulance when taking care of a patient.”

The ambulance was donated by one of the program’s primary internship sites, American Medical Response Pueblo. The EMS program has a “very good working relationship” with the agency; when the manager heard that the program was in need of an ambulance, he put them on the donation list. Additionally, PCC was able to get a larger ambulance than the “standard” van-sized ones usually donated. The large ambulance allows for multiple students, a “patient,” and the instructor to fit inside it at the same time, decreasing the number of simulated trips that the ambulance has to make for each class.

The ambulance was stocked with equipment and supplies by utilizing CHEO funds: a manikin with simulation capabilities, a cot, backboards and splints, a suction machine, intubation equipment, and many more items were purchased to stock the ambulance for students to experience “real” situations in caring for a patient in an ambulance.

In the spring of 2013, the EMS program held an interdisciplinary mass casualty exercise using the ambulance, a house, and a simulation lab at the hospital. The exercise was comprised of a “family” in a house overcome with carbon monoxide. Students from PCC’s Fire Science program entered the house and brought out the patients (a combination of manikins and real people). The EMS students then provided patient care at the scene and then transported the patients to St. Mary Corwin Medical Center, where Pueblo houses a simulation lab for its nursing students as well as the hospital’s medical staff. The program instructors made the exercise as real as possible, using radios for communication and reporting and with patient care occurring en route to the hospital. The EMS students then handed off the patients to physician and nursing students, who took care of the patients in the hospital setting using PCC’s

simulation lab there. The students in the program were extremely positive about the entire experience. The exercise would not have been possible without the donated ambulance.

Faculty members are supportive of the ambulance lab, although it does take some planning to put together a good “real” experience for students, especially something as elaborate as a mass-casualty experience. The one drawback of the ambulance is the inability to use it with more than a few students at a time, which means that it has to be part of a “round-robin” scenario experience. PCC has not received any feedback from employers to date, though the staff members feel that employers will appreciate students’ receiving some training and experience in these “real-world” scenarios.

Although the ambulance is currently used for students only on the Pueblo campus because the re-design of the program to hybrid format is underway, there are also plans for the ambulance to be used on PCC’s other campuses as well as remotely for more rural students to get the same lab simulations and experience. Because it is fully mobile, it will serve as a lab component for students taking the program remotely.

Because the ambulance is part of the state fleet, no additional fees or licensure costs are required to run it. The program allows only PCC employees who have previously driven ambulances as EMS providers to drive it; however, since the EMS program faculty members are comprised of previous or current EMS professionals, this has not been an issue.

PCC has considered sustainability relative to the use of the ambulance lab after the CHEO grant period has ended. Since they do not need a special license or permit for the vehicle, the costs of keeping it are relatively low. If they take it to remote locations in the future, they may require an additional lab fee and would need to have students grouped together so the lab could be done once or twice for all students in an area. Routine maintenance on the vehicle is a limited cost to the college since there is an auto mechanic program on campus at PCC. Recently, the mechanic program addressed some battery-charging issues so the EMS program could have an electrical system problem checked out by a specialty mechanic. For the rare instances when a specialty mechanic has been required, AMR, the agency that donated the vehicle, has donated their mechanics’ time to troubleshoot problems and get the ambulance running smoothly again.

PCC has also used the ambulance as another innovative tool: a rolling billboard advertising the college and the program as it drives through the streets of Pueblo. Students and faculty members have participated in local parades and taken the ambulance to a local children’s museum to participate in “Hero’s Day,” and paramedic students have used the vehicle to work with local children providing education about Halloween safety. These types of events serve two purposes, according to the EMS division chair: “this was not just good PR but also a good chance for the paramedic students to experience advocating for public safety, which is part of our curriculum.”

Online Tutoring

Another innovative strategy that Pueblo has focused efforts on is an online tutoring tool. In addition to PCC faculty members, PCC's full-time instructional designer, the CHEO data analyst and other PCC staff members have been working to create the framework for the tool, along with PCC's first career coach prior to his leaving the college. The tutoring tool is designed as mini-tutorials that students can access from an online library or through learning stations (computers set up for student use) in the PCC Learning Center. Instructors record tutorial sessions for areas that students often find difficult to learn, such as challenging content in biology, anatomy and physiology, and math. Instructors, chairs, and deans of various departments are working together to identify potential problem areas for students and record the tutorial sessions. By summer 2014, the IT division had finished several modules and was working on creating several more. Once they are recorded, they require very little maintenance and will be stored in a repository via a specially created YouTube channel. The online tutoring tool is sustainable through the college, and although it is being developed for CHEO programs first, it will later be expanded to include other programs and course tutorials. PCC also anticipates duplicating this concept eventually to build process tutorials for frequently asked questions relative to various departments, such as information technology, human resources, etc.

This tool will serve online students who may need extra help with challenging areas of courses and are unable to access instructors on campus. Since students considering online courses are often afraid that they will not have instructor assistance if and when they need it, this is a tool that will help online students feel connected to PCC and have the help they need to succeed. Selected tutorials are being embedded into course shells and will be available to students at any time during the course. The larger YouTube repository is also searchable by students at any given time. As a member of the grant management team stated,

Pueblo has done a very good job at getting redesigned curriculum into the classroom, reaching a very high number of students. There is great work being done to build resources for students that wouldn't have been thought of without the CHEO funding.

Online Teaching Assistant

The CHEO grant provided the HIT program with some interesting opportunities for innovation and experimentation with new technologies and ideas in their online curriculum. One such innovation is the use of an online teaching assistant (TA). Prior to the grant, online students sometimes had to wait for questions to be answered and problems to be solved by their instructors, who were not always online—many of the faculty members teaching in the program also work full-time in industry. This delayed interaction was frustrating for students, and according to faculty members, could have had implications for retention and success. With the newly implemented online TA, students have a resource to help answer questions and solve their problems more quickly. The TA provides answers to questions, fixes broken links,

provides opportunities for skills testing, and offers students support. The current TA brings a wealth of experience with her to the position. She was a student in the program and noted that this helps her to relate to the many challenges that online students encounter. This experience has also led to her to be innovative in her own position. One of the most recent innovations that she has implemented is the use of online tutorials in the program. Using a new online tutorial technology being developed at PCC, the TA has created various modules that can be used by the HIT program, including introducing students to the program and another that provides information about the importance of joining the professional organization for HITs.

Service across Campuses

As discussed above, the CHEO grant allowed PCC to better implement the rad tech program. They used the grant to rethink distance delivery and find more effective ways to serve students on both its campuses.

SUMMARY OF CHALLENGES

PCC faced a number of challenges throughout the implementation of the CHEO grant, primarily centered on personnel turnover at the school. A substantial number of duties changed hands, and the school, along with the grant-wide administrative team, has worked to address the complications that were the result.

The people who wrote the scope of work and proposal for the CHEO grant in Colorado do not and have never worked at PCC. As a result, the team implementing the grant has had to work within the scope provided to them by the grant writers at the state level. To make the grant work best for PCC, courses originally planned to include NANSLO have been replaced with other courses, and prerequisites for the programs have also changed.

In March of 2014, PCC also lost its instructional designer (ID), though a new one has recently been appointed. In between, however, four searches for a replacement had failed. Twenty-seven courses were nearing completion are in need of refinement and finishing, and without an ID, the process was on hold. Turnover had caused some delays and slowed progress for PCC, but the new instructional designer has experience at PCC and in hybrid and online instruction, and she has hit the ground running on the daunting task of cataloguing 34 online courses.

As previously mentioned, the original career coach at PCC left and was replaced in August 2014. Although the position was filled fairly quickly, there has been some transition time.

PCC science faculty members experienced a great deal of technical difficulty with the NANSLO experiments and have accordingly been reluctant to add more NANSLO to their courses. They also reported that there are few NANSLO lab experiments and that, if the experiments do not fit well into one's course, it is difficult to integrate, and the instructors fail to see the value in

offering a “hybrid” course where very few of the lab exercises allow a student to participate from home.

The EMS program had some delays in acquiring some equipment for the ambulance lab. Because of state contract rules, there was a delay in ordering the cardiac defibrillator, but the issues have been resolved, and the defibrillator was on its way at the time of this case study.

The hold imposed on the polysomnography program created some challenges and delayed the start of innovation in the rad tech program.

SUMMARY OF ACHIEVEMENTS

PCC developed a video for promotional purposes for its own use and the use of the other consortium colleges. The video was created as a foundational piece that could be modified to fit the needs of each college. The CHEO project director has taken the lead in developing the videos, and although not all consortium colleges have asked for one, four have been developed and distributed. Each college was able to tailor the video to fit its own needs. The video highlights the CHEO program and the goals behind it.

PCC has also led the way in professional development for online instruction with the online course for online faculty members developed by the instructional designers. The school’s experience with online instruction has allowed them to create the course and could be a model for other schools dealing with the challenges of faculty buy-in for hybrid and online course delivery within the consortium and beyond.

PCC has also focused in several ways on the challenges of bridging the multiple campuses that the school manages. From the rad tech program’s Durango contingent to the career coach’s efforts to make sure that students located on extension campuses are not perceived as less important, PCC administrators and faculty members have borne in mind the complications that come from being a multi-campus institution.

The ambulance donation and simulation exercises have been a great achievement for PCC. The possibility of using the ambulance for simulations for remote students is also an area for expansion for the program in the future.

NEXT STEPS

Building on its already substantial accomplishments in managing multiple campuses, PCC’s EMS program aims to expand to the Cortez campus in southwest Colorado. The expansion of the programs not only to students distant from the main PCC campus but to the other campuses run by PCC was mentioned by several administrators and faculty members at PCC. Existing technology has allowed PCC to serve those students more than before, but faculty members intend to use additional technology improved by CHEO resources to serve them even better.

The EMS and rad tech programs also intend to complete the transfer of their programs to hybrid delivery. In particular, the capstone course in the rad tech program – primarily designed as preparation for the registry examination—will be converted to a hybrid format that will allow students not to have to come to campus for one of the classes two days each week. Faculty members noted that the hybrid conversion will allow students to review practice examinations from home with their own schedule.

PCC's instructional designers also plan to expand the reach of the online teaching certificate for faculty members involved in hybrid and online instruction: "Our hope is that, at some point, we'll be able to say, 'If you want to teach online for PCC, you must have passed this course.'"