

# *Otero Junior College*

## *Case Study Report*

*Consortium for Healthcare Education Online*

**Education and Employment Research Center**

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Heather McKay  
James Lloyd  
Renée Edwards

Education and Employment Research Center  
School of Management and Labor Relations  
Rutgers, The State University of New Jersey  
Janice H. Levin Building  
94 Rockafeller Road  
Piscataway, NJ 08854

[smlr.rutgers.edu/eerc](http://smlr.rutgers.edu/eerc)

**RUTGERS**

School of Management  
and Labor Relations

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Heather McKay  
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Education and Employment Research Center  
School of Management and Labor Relations  
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Janice H. Levin Building  
94 Rockefeller Road  
Piscataway, NJ 08854

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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](http://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 OJC'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 OJC, its student population, and its service region. These sections are followed by a) a summary of the goals of OJC's CHEO program, b) a discussion of the baseline targets and subsequent changes relative to the CHEO project, c) the identification of OJC'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 OJC, 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 1941, OJC is a two-year residential community college and a member of the Colorado Community College System. OJC grants associate of arts, associate of science, and associate of applied science degrees in agriculture, elementary education, and pre-chiropractic medicine that prepare students for transfer to four-year colleges. The college also offers an array of career and technical education certificate programs. 97 percent of OJC students find employment or transfer to a four-year institution after graduation.<sup>1</sup>

While the presence of a large rural community in Otero County represents an incentive for developing online and hybrid courses, the economic profile of the region may hinder the utilization of opportunities that require a computer with an Internet connection. The economic development in Otero County is lower than the Colorado average: in Otero County, the median household income in 2008-2012 was \$31,860, considerably lower than in Colorado as a whole (\$58,244). Consequently, 24.8 percent of the population lives below the poverty level in Otero County compared to 12.9 percent in Colorado.<sup>2</sup>

OJC served 675 full-time and 781 part-time students during the 2012-2013 academic year, offering 12 associate's degree programs and 32 certificate career programs.<sup>3</sup> 59 percent of the student population is female (N=859), and most of the student body falls into the "traditional" age range of college students: 18-24 (46 percent, N=670). Over half of the student population— 57 percent— identifies as white non-Hispanic, and about 28 percent (N=408) of the student population identifies as Hispanic. Additionally, the college has small percentages of students identifying as African American and Native American and a growing international student population.

## **OJC'S CHEO GOALS**

OJC's primary goal through the CHEO grant has been to develop a medical lab technician (MLT) associate's degree to complement their existing allied health curriculum, which includes emergency medical services (EMS), nurse aide (CNA), practical nursing (LPN), and an AAS in

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<sup>1</sup> *Otero Junior College*. Retrieved July 11, 2014 from: <http://www.ojc.edu/AboutOJC.aspx>

<sup>2</sup> *State and County Quick Facts*. (2014, July 8). Retrieved August 8, 2014, from the Bureau of Labor Statistics: <http://quickfacts.census.gov/qfd/states/08000.html>

<sup>3</sup> *Community Colleges: Otero Junior College*. Retrieved August 9, 2014, from the U.S. News & World Report website: <http://www.usnews.com/education/community-colleges/otero-junior-college-CC06564>

nursing. Before the grant, OJC identified a promising niche: Pueblo, the closest metropolitan area, has a need for MLTs and medical lab scientists (MLS), which requires a four-year degree. There are no colleges in the region providing an MLT AAS, so it seemed like a perfect growth area for the college to help fill a community need. OJC also created a phlebotomy certificate under the CHEO grant; the credits gained from this certificate can be counted toward the MLT program.

The MLT field is an area of growth nationally and in Colorado. Health care practitioners and health care technical occupations, including MLTs, are ranked number seven among the occupations with the highest projected job growth in the nation by 2022. In the fourth quarter of 2013, the healthcare industry was ranked number one among industries with the most establishments and number of employees in Otero County and statewide.<sup>4</sup> Health care support occupations, including phlebotomists, are ranked 15<sup>th</sup>.<sup>5</sup> In 2013, MLTs earned an annual mean wage of \$38,870, and phlebotomists earned about \$24,560 in the region that includes Otero County.<sup>6</sup> The earnings potential is slightly higher in Pueblo County, one of the areas that OJC has targeted for student employment opportunities.

OJC identified a “role for community colleges in preparing medical lab technicians” by providing the prerequisites for the four-year MLS degree. In particular, there is a gap in southern Colorado; only one hospital in the area, Parkview Hospital, offers the MLT training, and Parkview only trains for their in-house need. No other community colleges offer the MLT program. In the future, OJC also hopes to develop a direct transfer to an MLS degree at four-year universities in the state, something that Parkview’s training does not offer. OJC also provides potential candidates with an opportunity to start training at more than one point in the year. This allows students to arrange a start time in the program that is most convenient to them. OJC administrators noted that MLTs and MLSs are needed “locally, statewide, and nationally” and that training MLTs “felt like a service that we could provide. It fit in our area . . . it was feasible. And so that was something that we thought would fit within the CHEO goals.” Administrators also noted that they spoke with potential employers in the area and indicated that “they were all desperate” for trained MLTs.

OJC developed their MLT program in a hybrid format. The student population in the health care programs at OJC is 60-70 percent non-traditional, and this reality meant that the program needed to fit within the busy lives of students juggling many demands, including family and work. Hybrid programming offered students more flexibility and, in some cases, allowed

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<sup>4</sup> *Labor Market Facts*. Retrieved August 8, 2014, from the Colorado LMI Gateway website: <https://www.colmigateway.com/vosnet/lmi/faq.aspx> (Profiles for a Specific Area, Industry, or Occupation/Otero County/Colorado/Area Details/Industries)

<sup>5</sup> *Labor Market Facts*. Retrieved August 8, 2014, from the Colorado LMI Gateway website: <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)

<sup>6</sup> Healthcare support workers, including phlebotomists. *Occupational Employment Statistics*. (2014, April 1). Retrieved August 8, 2014, from the Bureau of Labor Statistics: [http://www.bls.gov/oes/current/oes\\_0800001.htm#29-0000](http://www.bls.gov/oes/current/oes_0800001.htm#29-0000)



students who would not normally be geographically close enough to campus undertake the program. These students could manage the commute because they could take the program without being on campus five days a week. One faculty member spoke about the reasons for creating a hybrid program:

Especially with people's lives now, having to work, take care of families, [we] try to make it as easy as possible for them to access college courses through the use of online and hybrid [courses] so it doesn't interfere with their personal lives so much.

The MLT program also fits within one of the larger goals of the CHEO project: creating a rural health care workforce. Employers in southeastern Colorado note that the retention of skilled MLTs is a challenge for them. They can recruit people, but it is not always easy to get people from outside the region to stay for long periods. One goal of the OJC MLT program is to train local people who want to stay in their community. As one faculty member said, "Being able to train people here . . . they're more apt to stay in the area." Employers have expressed interest in this goal as well. One site supervisor interviewed by Rutgers noted that OJC's MLT program will allow him recruit locally and cut down on hiring "travelers," who can be more expensive in terms of both salary and training needs.

## **CHEO PROGRAMS AND PROCESSES**

### **Development and Implementation**

As discussed above, the OJC MLT program is stackable; students can get their phlebotomy certificate, or they can go on to complete the MLT AAS. This gives students multiple options and timelines for their training. Additionally, it provides them with a certified skill and allows them to begin working in the field quickly. Students can even choose to work as phlebotomists while continuing their studies in the AAS program. The science courses included in the degree are also prerequisites for a four-year MLS degree. As discussed above, OJC has not yet established articulation agreements with four-year colleges but plans to do so after it receives accreditation, which is currently in process.

The phlebotomy certificate requires two courses across two semesters for a total of six credits: MLT 131, Introduction to Hematology, and HBR 112, Phlebotomy. Introduction to Hematology is a prerequisite for the phlebotomy course. In addition to the coursework, the certification requires 100 hours in a clinic and 100 blood withdrawals.

There is no difference in employability or starting salary between the students from OJC who get phlebotomy training and those that who take the training at Parkview Hospital. However, the students who receive their training at OJC get credits for it and have the option to apply those credits toward the MLT AAS degree. This provides students with an option for a career pathway at an institution where they already know the instructors and have experience with the community.

OJC developed ten new courses and four new internships for the MLT program. As discussed above, in an effort to make the program accessible to rural students, the majority of the new courses are being created in a hybrid format that includes a 30 percent online component to allow the face-to-face time to be clustered, reducing the number of times that a student must travel to campus. The MLT faculty is “completely sold on the hybrid format.” Only the internship classes and MLT 253, the seminar class, are not delivered in a hybrid format.

OJC recently hired a curriculum developer to create the courses for the program; this individual is a retired MLS with many years of experience in the industry. In addition to designing the curriculum, she also teaches program courses part-time. As a result of the Department of Labor change allowing faculty members to be an eligible personnel category for the CHEO grant, OJC has also used grant funds to hire a full-time faculty member with a background in MLS; the faculty member began fall 2013 and has been an essential player in getting the program up and running quickly.

OJC was able to get this new program up and running very quickly. The first MLT cohort enrolled in January 2013, and the first half of the program design was completed and delivered by the end of the fall of 2013 and included MLT 131, Introduction to Hematology; HBR 112, Phlebotomy; and MLT 132, Hematology 2. The second half of the program was offered the first time the spring of 2014 and included MLT 231, Clinical Microbiology; MLT 141, Immunology and Immunoematology; MLT 241, Introduction to Clinical Chemistry; and MLT 142, Urinalysis.

While the majority of coursework has been developed in a hybrid format, instructors at OJC have ideas for improving the flexibility of their program delivery. Going forward, MLT instructors want to further expand the geographical reach of the program to avoid oversaturating the job market for MLTs in Otero County. They are interested in finding more ways to use telepresence technology. Once this is established and after the grant period has ended, they also hope to expand the reach of the program by providing high school students with dual-enrollment courses. Additionally, despite acknowledging that there must be an in-person element to the program (“we have to have the clinical and the lab portion”), faculty members have a strong desire to further enhance and expand the online elements of the program.

OJC also has a large number of international students, and they have introduced the community health worker and nursing programs to international students with some success. With the success of these initial enrollments, the MLT faculty began marketing the program to international students to expand the number of international students in the program. There are, however, some limits because of the amount of time that international students spend on campus: “We have some students here for a semester. We have some students here for a year. And sometimes we have students here for two years that are in a transfer kind of a program.”

MLT faculty members have strong visions for the future of the program; they want the OJC program to be “*the* program for MLT in all of Southern Colorado . . . from south of Colorado Springs.” MLT faculty members hope for future cohorts of fifteen students in the program, the maximum that they expect they can handle. Prospects for this are looking good; as of November 2014, OJC already had a waiting list for the next MLT 131 course.

Since the start of the CHEO grant, OJC’s grant administration has undergone some changes. The original project lead for the grant retired and has been temporarily replaced by an interim project lead. The interim project lead is an experienced administrator at the college and is primarily helping with the administrative, reporting, and financial parts of the grant. The college will likely begin a search for a permanent grant administrator, but at the time of EERC’s site visit, plans for this hire had not yet been determined.

### **Recruitment and Enrollment**

The program has been marketed aggressively, including through regular meetings between prospective students and faculty members. Staff at OJC developed a PowerPoint presentation that highlights the MLT profession and the earning potential. CHEO grant staff members also work closely with the OJC Marketing Department. To date, the program has been successful in enrolling some remote students. MLT faculty members identified at least two students who were able to enroll in the program because of the less onerous on-campus requirements, including one who recently graduated.

As mentioned above, OJC recruits from within the student body – informing students about the program at campus events and through the efforts of the career coach. The program seems to appeal to students who want to work in health care but find that they did not like the patient care elements of nursing. In OJC’s nursing program, the first nursing class is a clinical site experience where students are introduced to patient care. Some students look for other healthcare education options after experiencing this course. Two students who met with EERC evaluators had followed that trajectory into the MLT program. Both were advised by the career coach to think about the MLT program after they identified themselves as no longer being interested in nursing: “[W]hen [a nursing student] gets discouraged or decides ‘I don’t like nursing,’ then we sit down and we say, ‘You know what? We have these other programs’ because obviously you wanted to go into healthcare.”

Recommendations can also come from the nursing faculty. One MLT faculty member said that “[nursing faculty members] come to me and say, ‘You know, I’ve got this student. [She’s] a good student, but [she’s] not a nurse. They can see it in their personality.” The relationship that MLT faculty members have with students in the nursing program is shared across the campus: one faculty member noted that she gave presentations in other science classes that show “ways [that students] can use this skill [they’re] learning in the real world doing this job.”

The MLT program also recruits among students who are enrolled in the phlebotomy certificate program and not the full MLT program. One of the MLT faculty members has developed a presentation that she and the career coach present to phlebotomy students that explains “the difference between . . . doing each” and the different pay scales and employment responsibilities for each option. This is done to encourage phlebotomy students to consider continuing their education in the MLT program.

One of the clinical site supervisors is also an Air Force veteran, and he recruits for his laboratory through the military. OJC faculty members have contacted him and worked with him to determine how OJC could recruit students from the military and among veterans. They hope that this will be a focus area for future recruiting.

OJC is also thinking about the future sustainability of the program after the grant period is over and, as a result, has done some outreach to elementary and high schools in the area. Administrators cited 34 high school students who have met with instructors or counselors from OJC and have expressed interest in the MLT program as a result of the outreach. OJC also has representatives from local high schools on campus twice yearly to discuss programming at the college, including the MLT program. OJC also participates in a program called “Girls in the Middle,” wherein middle school girls attend an event on campus where they learn about possible careers. The MLT program has been discussed at this event. While these students cannot be counted as participants under the CHEO grant, OJC is deeply dedicated to future sustainability after the grant period has ended and is exploring ways to sustain and increase enrollment in the future.

## **NANSLO**

### **Reception**

At the start of the CHEO grant, many faculty and staff members at OJC were interested in the concept of NANSLO and in using it in their courses, but to date, NANSLO has not been used a great deal on OJC’s campus. Faculty members in the MLT program and other science programs have experimented with NANSLO, and it seems that the consensus on campus is that NANSLO is an interesting idea but that it has not yet “matured.” This stems from technical difficulties that staff members, faculty members, and students have experienced during either NANSLO demonstrations or actual lab activities since the start of CHEO.

### **Use to date**

NANSLO experiments were slated to be included in the MLT program following the Curriculum Designer and MLT instructors’ introduction to the technology at a NANSLO training in June 2013. After that, in the spring 2014 MLT 231 Clinical Microbiology course, a NANSLO experiment was offered. Instructors and students reported “slow and inferior results.” Following this experience, NANSLO lab use has been discontinued in the MLT

program for the time being. There is still a desire to find ways to partner with NANSLO, however, and discussions are ongoing to find a way to integrate the labs at OJC.

One student interviewed about the NANSLO courses described the concept as “awesome” but noted that the Internet connection to the facility hosting the experiment was “laggy.” The connection issue was bad enough to make the program “unusable,” but he reported that he liked the idea of the experiment. He had some prior knowledge of the subject and believes that he got what he needed from the experiment, even if the interface did not work as well as planned. He later expressed hope that NANSLO would fix the problems with the connection and was open to the use of more NANSLO labs in the future.

### **Future plans**

For the most part, OJC administrators are open to the concept of NANSLO. One said that it was “the coolest idea in the world.” However, like MLT faculty members, they have concerns that the technology does not always work well. In EERC interviews, administrators were concerned that, “if [the NANSLO people giving the demonstration] are really good at it [and there are still technical issues], what’s going to happen for those that are just learning it?” They expressed their feeling that NANSLO has great potential but is “still in the developmental stages.” They are, however, open to its use on campus after refinement. Regarding future costs of NANSLO, the administrators were open to using it if it allowed them to avoid other costs—expensive lab equipment, for example.

OJC would also like to see more labs that fit their needs developed through NANSLO. An OJC faculty member proposed a NANSLO lab for the MLT program, but it was rejected by NANSLO because it would have been “too costly to develop.” At another meeting, OJC faculty members suggested six additional areas where they thought that NANSLO could provide value to their courses. There were some discussions about this, but they never came to fruition. Administrators also thought that NANSLO may have rejected the proposed experiments because NANSLO was designed more for “general science projects and experiments” instead of specific training programs.

### **OPEN EDUCATION RESOURCES**

As discussed above, open education resources (OER) 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 and to design/redesign their courses in such a way that the pieces can be shared as open education resources. At this point, OER is not being used in any of the current OJC CHEO course offerings, but the college is interested in the potential benefits of “cross-fertilization.” Curriculum review is currently ongoing, and instructors “love the [OER] concept but feel that it can be very time consuming to search for the items they need.” One noted, “[W]hen I actually

started looking for stuff that was applicable to my classroom, I'm like, 'Oh, this is taking so much time.' The faculty member expressed that it "would really be exciting" if the program could change over to OER materials entirely and "do away with textbooks because of the cost for the students" but feel that the time it takes to go through the material is prohibitive.

OJC faculty members have encountered the same problems regarding the complicated nature of copyright rules with respect to OER conversions of their coursework. There is some trepidation surrounding the decisions about what can be published and what cannot. In the coming months, faculty members at OJC hope to learn more about OER and the CHEO grant and begin to upload to the repository the OER resources created for the grant.

Until recently, OJC did not have a formal instructional designer, which has created some delays in productivity on some levels relative to OER inclusion, understanding repository requirements, and understanding course-mapping protocols. Since the college is required to incorporate OER into their current course offerings and package their redesigned courses for distribution to the repository, having a dedicated instructional designer will help with this considerably. Additionally, having an instructional designer will help take the time burden off faculty members, as the instructional designer can spend the necessary time searching for material and OER textbooks for course use.

In addition, because it did not have an instructional designer, the college has not had the staff to fully utilize the OER resources available through the CHEO grant. Support mechanisms in place to help increase understanding include a CHEO instructional designer resource site on Basecamp that holds a user's guide to the OER repository, "how-to" documents, dictionaries, course map templates, evaluation templates, etc. There are also OER tutorials posted on the Basecamp site. Additionally, the PCC instructional designer will be traveling to OJC soon to work directly with the college's instructional designer to help her orient more fully.

## **CAREER COACH**

### **Background**

OJC's CHEO career coach has a background both in school counseling and in retention activities for nursing students. OJC administrators noted that they wanted to focus on the career coach's counseling experience rather than experience in the healthcare field; they envisioned the position as one where the coach helps the student "become his or her own advocate." She is funded part-time by the CHEO grant as a career counselor for the MLT program and part-time on a separate grant as a retention specialist for all of OJC's allied health programs. She credits her experience guiding students as they planned their post-high school careers as particularly beneficial in her position as career coach. She has also been able to leverage her work "helping students be successful in the nursing program" to create guidelines to assist students in other areas of allied health.

## Role

The majority of the career coach's time is spent providing a wide range of services focused on academic success:

Originally, it was thought that the career coach would work more on retention and helping students find the resources necessary to be successful in the MLT program, which would have meant I would do what I was doing before but extend my services out to work with all of the allied health students. However, now, I have added some components into the career coach position to include referrals [with] Colorado Workforce, doing career inventories with students who are not sure if they want to go into the MLT program, advising classes, and working with students to see that their remediation is complete before entering the MLT program to increase chances of success.

The career coach often guides students into different programs. For example, students who want to work in healthcare but are unsure about direct patient care—or who have taken the initial internship course and know that they do not want a career involving patient care—can be pointed to the phlebotomy and MLT programs. The career coach's understanding of the programs and how prerequisites can cross over makes the process easier for students.

The career coach also does substantial outreach to attract students to the program, talking with both seniors at the local high schools and potential employers who could direct employees to OJC. She also does a lot of work identifying funding and scholarship opportunities for students, something frequently cited by students interviewed by Rutgers evaluators. She even goes beyond academic counseling—one student was having trouble walking to class on time, and the career coach reached out to her personal and professional networks to get the student a bicycle that helped her attend her classes.

Students entering the MLT program are required to complete an intake session with the career coach, during which they fill out a demographic form for grant reporting and complete a learning styles inventory. The career coach also visits classrooms on the first day of class each semester to introduce herself and the services that she provides to the students. To avoid disruption of class time after the initial visit, her ongoing contact with students is generally conducted through phone calls or emails.

The career coach reports that the most common reason that students come to her is to find resources to handle financial or personal issues, such as scholarship applications, securing transportation to school, or finding daycare facilities for children. The majority of the MLT students come from a low socio-economic background and may struggle to keep their phones or Internet connected; this is a source of academic issues and often makes communication with them a challenge.

As part of OJC's early alert system, the career coach receives a list from student services. The grade reports are pulled three times a semester at week four, eight, and eleven; further, the career coach is notified if any student receives a grade below a C in an allied health course, and she makes contact with them. Outside of the formal early alert system, the career coach works closely with MLT instructors to track student success. Instructors report when students are struggling or having an attendance issue the career coach meets with the student to discuss the problems: "[W]e sit down and say, 'Your grades are struggling. Let's talk about why.'"

In addition to the early alert system, the career coach maintains a list of all students in various allied health programs. The lists are updated every semester so she can address all the MLT students (or those in other programs) in one mailing. She also connects with students by "walking into the classroom and talking to them." She also requires all students to do an intake session at the beginning of the semester that she does not "really think [is] necessary as far as data collection, but gives [the students] an excuse to come in to me and start building that rapport."

The career coach also utilizes social media to solve students' problems. In addition to getting a student a bike, as mentioned above, a student informed the career coach that he lacked a bed, and the career coach went to Facebook and found someone who donated a bed.

The career coach has also presented the CHEO Health Career Hub to faculty members and students as a resource. At the time of the site visit, she was still thinking about how best to use the hub in her program and was looking forward to a coaches' training at the end of 2014 where this was to be discussed.

## **INDUSTRY/EMPLOYER/WFC INVOLVEMENT**

OJC is currently in the process of developing relationships with the local workforce center. The career coach has referred students to the workforce center, but she has not received any referrals in return to date. Since they have not had any students complete the entire program yet (to earn an associate's degree) this relationship will mature.

For one student in particular who could not have completed his internship without additional financial resources, the career coach worked with the local workforce center to arrange for funding for travel that was required to complete the program. He is also the first graduate of the program and a success story heralded across the school that may not have been possible without the work of the career coach and her cooperation with the workforce center. She and a workforce center employee have a good bi-directional relationship. There are some challenges in working with the workforce center, the primary one being confidentiality. The confidentiality regulations at the workforce center mean that they cannot discuss client cases with staff members at the college. As such, exchanges and interventions can be affected negatively, and it is hard for the career coach to follow up on next steps after a student visits the workforce center.



As mentioned above, OJC has also developed an advisory board to connect the college to local hospital labs; it includes ten members from hospitals and from private labs. These connections are particularly important in light of the numerous internships that the program requires: microbiology, blood banking, hematology, coagulation, urinalysis, and chemistry. OJC administrators went to “anybody that had a lab” to find participants for the board—“all of the hospitals in Pueblo, Walsenburg, Trinidad, La Junta, Lamar, Burlington”—and noted that they had 14 or 15 participants at the first advisory committee meeting.

As a result of the advisory board meetings, the MLT faculty developed the courses to meet the needs of the employers. They developed courses with “a lot of non-mechanical hands-on” activities without the use of computers, so the students were not “somebody that punches a computer button and expects a result, and that’s all they can do.” The advisory committee members were also enthusiastic about serving as internship sites for the MLT students.

The professional connections between faculty members and employers are strong. MLT faculty members visit the internship sites to review the students’ participation, and one site supervisor noted that two of his phlebotomy technicians are planning to head to OJC for the MLT program. MLT faculty members even stop by a local hospital to retrieve blood samples for some of the testing done in the classroom, further cementing the partnership with a local employer.

## **PROFESSIONAL DEVELOPMENT**

OJC’s CHEO project lead and career coach both regularly attend the CHEO grant professional development offered by WICHE and the grant management team. The career coach has attended the professionalization webinars and regularly attends the “Coffee Talk” webinars. She noted that, at first, these meetings varied in their helpfulness because the roles of the coaches vary drastically, as do the programs and context that each works in. However, one exercise at a meeting last year gave the coaches time to explore what each of them was doing and compare and contrast their work. It was noted that, since this exercise, the gatherings for coaches have been more fruitful:

I think now it’s starting to become much more helpful. Because we're realizing much similarity and [many] differences. But it also maybe gives us ideas; I hadn’t even thought about trying that . . . [but] so-and-so is doing it. So [in] that way, it is [helpful].

An administrator noted that the webinar developed by the CHEO grant management team and Creative Commons regarding OER was useful. Across institutions, the questions surrounding OER and relevant copyright law have been a challenge for instructional designers and faculty members, so administrators felt that it was good to see a positive reflection of OER in the webinar.

## OJC's INNOVATIVE STRATEGIES

Across TAAACCT grant rounds, OJC has consistently developed and maintained strong industry partnerships that enrich their programs. The MLT program has an advisory board with approximately ten representatives from five different industry partners. The board meets at least once a semester.

OJC has contracts with eight health care facilities for student internship hours. These sites are varied and include rural hospitals, a reference lab, and a larger corporate facility that has several sites. MLT faculty members have developed internships with the assistance of the advisory board, taking into account what the instructors thought was necessary for the students' experience and the areas that the employers thought were important for the students to learn. The process also focused on what knowledge students need before they begin their internships, such as making slides. One site supervisor worked with MLT faculty members to develop a list of things that students will have to do during their internships, the advisory board revised it, and it will be implemented going forward. MLT faculty members also worked on establishing students' soft skills that they will be expected to have in the job market, including a good understanding of patient privacy and confidentiality rules.

A site supervisor interviewed by EERC team members noted that the internship process at his lab has been entirely positive. He noted no problems with productivity while training an intern, and when the internship is coming to an end and the student is familiar with the equipment and procedures, it can even lessen the load on the professional MLTs. The first student who completed an internship in the MLT program was interviewed for permanent hire by the facility where he had interned.

The phlebotomy internship is shorter but still substantial: students must have "100 sticks and 100 hours," which is 100 individual blood drawings from actual patients and 100 hours in a lab setting. The requirements for the internship are standard for the crediting agency; without the "100 sticks and 100 hours," the students could not receive the phlebotomy certification. Phlebotomy faculty members also draw on the students' experiences in their internships to refine coursework for subsequent cohorts.

Some of the laboratories that OJC has partnered with have provided donated supplies. Labs have provided expired but useable lab supplies for student use at OJC. These partners also indicate what types of employees they require and the knowledge and skills that they expect from an entry-level employee.

OJC's innovation in providing a realistic lab experience for their students, augmented by industry input and integration, has been realized through the CHEO grant. OJC has used CHEO funds to purchase quite a bit of equipment necessary to create a true lab experience for its MLT students, simulating laboratory analysis and skills that they can take into the job market. Students practice doing maintenance, calibrations, and quality control and running

patient samples. The college also purchased three simulation arms and other, smaller vein simulation devices for practicing venipunctures. The MLT 131 class and HPR 112 classes use the simulation devices for their first few attempts with a needle and blood drawing tube before they are comfortable enough to move on to live volunteers. Some blood and body fluid testing done in the MLT classes is conducted on simulated patient samples, including expired samples provided through donations from partner facilities.

Students completing the MLT program are able to enter the clinical phase of their studies with increased skills and more confidence in their abilities than they could have achieved previously. The CHEO grant paid for several pieces of equipment in the lab classroom that students use regularly, such as the manikin arms mentioned above and machines that analyze various parts of the blood. An internship site coordinator noted that the equipment used by the students is, for the most part, the same as what they would encounter at a job site. Faculty members made decisions on choosing equipment based on what students will eventually have to use in their post-completion employment; the equipment choices were made with the focus always on the needs of employers and what students will be expected to be able to do.

The site supervisor stated that, in some cases, OJC purposely chose machines that are more difficult to use than those that the students will eventually encounter when employed, which actually results in the students gaining a deeper understanding of the material. One student interviewed by EERC team members reported that, “[i]f you get to know [the machine in the classroom] pretty well, anything that you encounter in the workforce will be much easier.” One faculty member had to choose which chemistry instrument to purchase, and she selected one with manual functions: “I’m choosing the [manual instrument] because I need [students] to know what the instrument is doing . . . we have to teach the theory, and if the instrument does it all, it’s not giving [the students] what they need.” By encouraging students to learn manual functions, learning outcomes are generally better, and students are more prepared when entering the workforce.

Like some of the other equipment in the laboratory, the manikin arms are also more difficult to use than those of actual humans, thereby creating a situation where the students find working with patients even easier than their studies. The CHEO grant also funded purchase of large numbers of consumables—needles, vials, etc.—which helped to alleviate some of the lab fees for MLT and phlebotomy students.

## **SUMMARY OF CHALLENGES**

OJC has experienced a number of logistical challenges. The most significant challenge to date has been finalizing the accreditation process. The National Accrediting Agency of Clinical Laboratory Sciences (NAACLS) accreditation process imposes requirements for the MLT program director that have made filling that position “one of [the] biggest challenges to date.” NAACLS requires a faculty member with teaching experience and a master’s degree in the subject, and there are very few people in the field with those qualifications, primarily because it

is a field where very few people pursue master's degrees at all. As such, the college had a long search process to try to find an appropriate candidate. All the MLT faculty members stressed the importance of accreditation to the development of the program.

Because of the nature of the program and the high number of internships required, developing internship sites is a priority. There were challenges in cultivating internships and arranging the contracts with hospitals because of the liability issues involved, but the MLT faculty and the career coach have developed good relationships with providers in the area and have a sufficient number of internship sites for their students at this point.

Students requiring developmental education classes have been incorrectly advised in the past, which has resulted in students being out of sequence for some of their courses in the program. A plan was developed that includes a new advising sheet aimed at students needing remediation to prevent the problem in the future. In addition, moving forward, only the CHEO career coach or MLT faculty members are allowed to advise students in the MLT program.

As mentioned above, the career coach reported that the confidentiality rules surrounding students' visits to the local workforce center make it more difficult for her to coordinate her efforts with the center. She shares business cards and referrals with her contact at the office, and she can refer students to the workforce center, but she cannot find out anything after their visit.

After the original project lead for OJC retired, the transition was challenging in that it was difficult to impart the full working knowledge of the intention and methodology of the grant to the interim project lead in a timely manner. Additionally, since the college only recently hired an instructional designer, the process of including OER material and preparing courses for the OER repository has been delayed. These staffing challenges have slowed OJC's progress in many ways, but the college is getting "up to speed" quickly.

## **SUMMARY OF ACHIEVEMENTS**

To date, 24 students have completed the phlebotomy certificate portion of the AS degree. Several students have either been certified by taking the ASCP certification exam or applied to take that exam. One of those students currently has a job as a phlebotomist. Several more students have enrolled in MLT classes and continued into the MLT program, stacking the certificates and continuing their education.

Although the MLT program is still awaiting accreditation, the phlebotomy program was officially accredited by NAACLS in April of 2014.

Rapport building with students has been a point of particular achievement for the career coach. She has used the mandated intake process to establish relationships with the students and the early alert system to maintain connections with those who are struggling. As mentioned above, many of the students at OJC are struggling with personal and financial hardships that impair

the potential for academic success. The development of relationships that facilitate referral to services can provide a major improvement in retention.

The career coach has also worked with the nursing program to help identify students who do not have a desire to pursue a nursing degree for one reason or another but still want to be involved in the healthcare sector. Because of the career coach's knowledge of the programs and her relationships with faculty across the campus, students have been recruited to the MLT program, providing the CHEO-funded program with students and providing the students with an opportunity to pursue their interests in training for a job that is more suited to them.

OJC's relationship with employers is excellent. Because of the advisory board, the frequent visits regarding internship students, and the trips to pick up blood samples for class, there is a strong connection between MLT faculty members and potential employers for OJC's students.

## **NEXT STEPS**

FVCC received a capital development project from the legislature and has begun building a new addition to the health care and nursing wing that will create lab space beginning in the spring of 2015. Within the wing, a designated MLT classroom lab is being built and is slated to be open for use by January 2015. It will hold up to 24 students, which will allow the program to expand significantly.

MLT faculty members are working on developing articulation agreements with four-year institutions to allow students who complete the program to transfer into MLT bachelor of science programs in the area. The MLT program's accreditation will make this step easier, and faculty members and administrators have set May 2015 as the target for the articulation agreements to go into effect.

Faculty members from the MLT program expressed a desire to turn the OJC program into a four-year bachelor of science program. Plans are still tentative as they work through the challenges of implementing the CHEO grant and transforming the program to a hybrid format—it is anticipated "down the road"—but it is a goal shared by faculty members interviewed by EERC team members.