

The Central and Eastern Oregon Distance Nursing Education Project

A Project of
Cascades East Area Health Education Center
Central Oregon Community College
Harney District Hospital
Lake District Hospital
Mountain View District Hospital
Pioneer Memorial Hospital
St. Charles Medical Center – Bend
St. Charles Medical Center - Redmond

Project Evaluation

Prepared for
Cascades East Area Health Education Center
by
Oregon Health Career Center

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Central and Eastern Oregon Nursing Education Project

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Central and Eastern Oregon Nursing Education Project Project Evaluation

Overview

The Central and Eastern Oregon Nursing Education Project (NEP) was a collaborative effort of the Cascades East Area Health Education Center (CEAHEC), Central Oregon Community College (COCC), and six hospitals from the Central Oregon Hospital Network (CONet): Harney District Hospital in Burns, Lake District Hospital in Lakeview, Mountain View District Hospital in Madras, Pioneer Memorial Hospital in Prineville, St. Charles Medical Center-Bend, and St. Charles Medical Center-Redmond. Together, the regional medical center in Bend and the five smaller community and critical access facilities serve more than 220,000 residents in a 40,000 square mile area.

The primary goal of the Nursing Education Project was to reduce nursing shortages in central and southeastern Oregon by expanding access to entry level nursing education for area residents, increasing the pool of trained nurses in rural/frontier communities, and enhancing retention of nursing personnel at remote hospital sites. The project model featured an 18-month accelerated training program with a number of unique characteristics:

- Selection of incumbent workers to receive training as registered nurses (RNs)
- Distance delivery of nursing curriculum
- Compressed skills lab training that brought students to campus for two or three weekends each term
- A fully-preceptored model for site-based clinical training at participating hospitals
- Case management and other support services to facilitate student success
- An off-cycle start date with instruction scheduled during six consecutive terms (Summer 2004 through Fall 2005)
- Links to opportunities for continuing education toward a Bachelor of Science in Nursing (BSN).

Project design was based on national research regarding retention of healthcare employees in rural areas and anecdotal information obtained from regional healthcare providers in central/eastern Oregon. The design theorized that training locally-identified healthcare employees would result in improved retention and long-term worker commitment to health care facilities in rural/frontier areas and thereby reduce the need to recruit out-of-area nurses to fill vacancies. In the Nursing Education Project, students completed a significant portion of academic and clinical course requirements in their home community and/or at their place of employment. The model relied on in-kind financial support from participating hospitals, particularly the use of hospital staff to provide clinical education under the supervision of college faculty. In turn, hospitals anticipated being able to reduce expenditures for contract nurses and staff overtime as more trained nurses completed the program. The project also provided opportunities for

hospitals to establish career ladders for employees who demonstrated an interest in career advancement and the potential to become nurses.

This evaluation focuses on start-up and implementation of the NEP and on the first cohort of incumbent workers/students who participated in the distance delivery of an associate degree nursing program piloted at COCC. It relies primarily on qualitative feedback from students, preceptors, COCC faculty, CEAHEC staff, and hospital partners to identify areas for improvement and provide information that will guide policy and operational decisions for future iterations of a distance program. Student outcomes related to program completion and licensure are compared for distance and traditional students; information regarding job placement after graduation is also provided for the distance cohort.

Project Background

Community site visits conducted in 2000 by Cascades East AHEC identified nursing shortages as a top healthcare concern for the region. In November 2001, CEAHEC hosted a statewide summit in Bend to examine steps that could be taken to address healthcare issues in rural Oregon. Participants included community stakeholders, educational partners, regulatory board members, health professionals, and employers. Summit attendees noted that significant barriers to training would need to be resolved in order to guarantee a reliable pipeline of registered nurses for rural communities. They identified two key strategies for expanding capacity and addressing the shortage of trained nurses: 1) distance education and 2) the use of experienced nurses as clinical preceptors/clinical teaching associates in local hospitals. Other Oregon healthcare initiatives during this same time supported the findings of the CEAHEC summit:

- A Northwest Health Foundation report published in March 2001 confirmed the need for new approaches to nursing education in Oregon¹, and in June 2001, the Oregon Nursing Leadership Council included the need to “redesign nursing education to more directly meet the changing health care needs of Oregonians” as an element of its strategic plan.²
- The Governor’s Healthcare Workforce Investment Board Taskforce report in 2002 highlighted the need for innovative partnerships and new systems to deliver education, particularly in rural areas.³
- State and regional workforce projections indicated growth in nursing positions as well as increased vacancies due to retirement.

¹Christine Tanner (June 2001). *Oregon’s Nursing Shortage: A Public Health Crisis in the Making*. Northwest Health Foundation. Portland, OR.

²ONLC (June 2001). *Oregon Nursing Leadership Council Strategic Plan: Solutions to Oregon’s Nursing Shortage*. NW Organization of Nurse Executives, Oregon Council of Deans, Oregon Nurses Association, Oregon Council of Associate Degree Programs, Oregon League for Nursing, Oregon State Board of Nursing.

³Oregon Workforce Investment Board/Governor’s Office (Fall 2002). *Taking AIMM at a Growing Crisis: Final Report of the Health Care Sector Employment Initiative*. Salem, OR.

Following the statewide summit, a survey of area hospitals commissioned by Cascades East AHEC and conducted by the Oregon Health Career Center (OHCC) pointed out significant financial implications resulting from high nursing vacancy rates and a lack of trained personnel, particularly for smaller rural/frontier facilities. At the same time, informal conversations with hospital employees revealed frustration with the lack of access to education, which limited opportunities for career advancement in fields such as nursing. In Spring 2002, CEAHEC convened a series of regional meetings to address educational pipeline issues for nursing and allied health occupations, based on results of the November summit. At these sessions, representatives from CONet hospitals, COCC, and Oregon State University (OSU)-Cascades met with local economic and workforce development specialists to devise a regional solution to the nursing shortage. After initial meetings, a formal planning process began, and CEAHEC engaged OHCC to provide consultation and input during the early stages of project development.

OHCC shared design elements and research from the Chemeketa Community College/OHCC N2K project and the Nursing Paradigm Program in Fresno (CA). OHCC's experience in the development and delivery of allied health training programs suggested that case management services contributed to the success of non-traditional (working, minority, first-generation college) students and led to a decision to include case management as a component of the NEP. Cascades East AHEC looked at how other institutions used distance education to deliver training in health occupations and shared concepts and ideas with the planning group. Throughout this exploratory phase, conversations continued to stress the need for expanded outreach to rural and frontier communities, and the resulting project design meshed local concerns with key aspects of several model programs.

The design also emphasized links to opportunities for further education. Coursework for the associate degree in nursing (ADN) was aligned with Oregon Health Sciences University so that students could easily move on to complete a BSN. Oregon State University-Cascades served as the local conduit to the BSN program at OHSU and was available to connect students to resources for continuing their nursing education.

In November 2003, COCC received approval from the Oregon State Board of Nursing (OSBN) to utilize distance delivery for nursing instruction and to select and train hospital-employed preceptors to provide clinical supervision. In January 2004, faculty at COCC began the process of converting curriculum to distance format, and in June 2004, a cohort of 18 students at six different hospital sites began receiving instruction via distance delivery. Eighteen months later, in December 2005, 16 graduates from the Nursing Education Program (15 students from the original entering cohort and one individual who was admitted as a second year student) received their pins and prepared to take state licensure exams for employment as registered nurses in their home communities. All of these graduates successfully passed the NCLEX-RN examination, and as of June 2006, all 16 were employed—13 in their home hospitals, one in a regional hospital/county health department, and two in hospitals outside the region.

One additional student from the original entering cohort completed program requirements in March 2006 and passed the NCLEX-RN exam in Summer 2006, bringing the final number of cohort graduates to 16 and raising the total number of program graduates to 17.

Conceptual Framework

The conceptual framework of the Central and Eastern Oregon Nursing Education Project that evolved from initial planning sessions was divided into three distinct phases and laid out a number of specific steps for implementation. (See Appendix A – Figure 1)

Phase I (Spring-Summer 2003): Pre-nursing assessments

Assess all students at each hospital site who are interested in participating in a distance delivered model for nursing education. Provide initial advising and a distance learning catalog to assist students in locating appropriate pre-requisite courses.

- Potential students complete interest forms and attend informational meetings coordinated by CEAHEC.
- COCC provides testing/assessment, transcript evaluation and initial advising for interested students.
- CEAHEC and COCC assess student pool regarding readiness/next steps and classify students into two groups: 1) potential candidates for Summer 04 distance nursing cohort and 2) possible members of future cohorts.

Phase II (Fall 2003-Spring 2004): Curriculum transformation, instructor readiness, and student preparation

Offer 'hard-to-get' pre-requisite courses or help students locate and enroll in on-line courses provided by other institutions. Target students most likely to complete all pre-requisites by spring 2004, with a goal of (at least) two eligible candidates each at Burns, Lakeview, Madras, Prineville, and Redmond from which to select an entering cohort. COCC faculty engage in modifying curriculum for distance delivery and preparing preceptor training.

- Students take remaining pre-requisites necessary to be eligible for selection into the Summer 04 distance cohort.
- CEAHEC provides case management/advising services to assure student readiness.
- COCC nursing faculty develop distance curriculum and student support materials.
- COCC and hospital employers select the Summer 04 NEP cohort.
- Preceptors are identified, submit OSBN paperwork, and attend training to prepare them for their role in clinical training for students.
- Work begins on design for project evaluation.

Phase III (Summer 2004–Summer 2006): Nursing education program delivery and follow-up

Start nursing education in Summer 04 with a plan to graduate 16-18 students by the end of Fall 05. Students sit for the RN exam and have opportunities for employment at home hospitals. Students also receive advising about available opportunities for advanced nursing education (ADN to BSN).

- Selected students begin nursing education through distance delivery and clinical training. Students complete clinical education close to home and participate in skills training at a central location on weekends during terms.
- Students are linked to tutoring and support services to ensure success.
- Cohort completes requirements for associate degrees in nursing by end of Fall 05 term and takes NCLEX-RN exam in Winter 06.

Project Funding

Under CEAHEC leadership, project funding was obtained from a variety of sources. Substantial in-kind and cash contributions were made by the major NEP partners (Cascades East AHEC, CONet hospitals, and COCC). Other principal funders included:

- Oregon Department of Community Colleges and Workforce Development (Incumbent Worker Training Fund)
- Workforce Response Teams from Regions 10 and 14 (Employer Workforce Training Fund/Central Oregon Intergovernmental Council and Employer Workforce Training Fund/Training and Employment Consortium for Harney County)
- Governor's Strategic Training Fund (U.S. Department of Labor Workforce Investment Act Title 1B)
- PacifiCorp Foundation for Learning
- Oregon Rural Health Association

During early stages of the project, Cascades East AHEC also provided funds for COCC to release staff to work on various aspects of design and start-up.

Partner Roles

Cascades East AHEC, COCC and participating CONet hospitals committed significant time and staff resources to ensure project success, and the roles and responsibilities of these major partners are listed below. In addition, Oregon Health Career Center played an important consultative role in the early stages of planning and design for the NEP. OHCC attended initial meetings of the partners, made presentations to the CONet board, surveyed and interviewed stakeholders in the region, provided input regarding format and structure of the project, and assisted with resource development.

Cascades East AHEC

- Lead/facilitate program planning, design, and implementation.

- Provide overall project management, including fiscal management and project reporting.
- Facilitate discussions among partners (hospitals and COCC, hospitals and students) as necessary.
- Develop funding strategy for project implementation.
- Write grants to obtain funds from external sources for program coordination, curriculum development and instructional costs at COCC; tuition, fees and books for students; student, faculty and preceptor travel; case management services; LPN/RN license exam fees; project management and evaluation.
- Provide case management services.
- Provide logistical support for classrooms and videoconferencing at hospital sites.
- Provide oversight for project evaluation.

Central Oregon Community College

- Participate in project planning, design, and implementation.
- Provide academic leadership and support.
- Transform the nursing curriculum for distance delivery.
- Provide web-based course management tools.
- Develop preceptor training and train qualified staff at participating hospitals to become clinical preceptors.
- Provide the educational program, including instruction in all nursing courses, space and laboratory facilities for skills development classes, and supervision for clinical preceptors.
- Work with hospitals to schedule clinicals for students and provide support to preceptors.
- Make regular visits each term to hospital clinical training sites.
- Work with case manager to support student success/reduce rural isolation.

Hospitals/Employers

- Participate in program planning, design, and implementation.
- Provide paid release time for nursing staff to participate in preceptor training.
- Provide hospital nursing staff to serve as clinical preceptors (700 hours/student); pay a preceptor differential (according to individual hospital policy) during student clinical training time.
- Structure flexible and modified work schedules, offer paid release time (if deemed appropriate by hospital administration), and provide in-house mentoring for student/employees.
- Provide classroom and study space and additional workplace support as needed.

- Schedule hospital teleconference facilities for nursing classes; pay system costs to connect.
- St. Charles Medical Center served as an alternate site for clinical skills training and required observations that could not be completed at smaller facilities due to patient loads or range of services provided.
- St. Charles Medical Center coordinated tech support for the video conference system.

Scope of Evaluation

Cascades East AHEC contracted with Oregon Health Career Center to conduct a third-party evaluation of the Nursing Education Project. An extensive evaluation plan was prepared in conjunction with project staff but was only partially implemented due to funding limitations, and in Fall 2005, the plan was modified to focus on two major objectives:

- Evaluation of key program components to identify areas for improvement and guide future decisions related to policy and procedures.
- Assessment of outcomes related to program completion, licensure, and job placement for the first cohort of incumbent worker/students.

Issues of cost effectiveness that are critical to long-term sustainability of the NEP are outside the scope of this evaluation and have been addressed through other channels. A preliminary look at program costs and estimated return on investment was included in an interim report prepared by OHCC in September 2005.² Currently, COCC and CEAHEC are developing potential scenarios for a sustainability model and engaging in discussion with CONet hospitals regarding future distance nursing cohorts.

Data Collection

Qualitative data were collected from participants and partners at various intervals during the project. Operationally, CEAHEC coordinated data collection activities related to students and preceptors; OHCC coordinated interviews and surveys of hospitals, COCC faculty/staff, and CEAHEC personnel. Procedures utilized to collect this information are summarized in Appendix B.

Three aspects of data collection are noted here, since they place some limits on the analysis of information:

- Data are not site-specific, although anecdotal comments allow for some characterization of experience at smaller hospitals compared to SCMC-Bend.
- Experiences varied depending on points in time when individuals were involved in the project (early versus later in the implementation). Only student responses are clearly

² Oregon Health Career Center. (September 28, 2005). *Central and Eastern Oregon Nursing Education Project: Interim project evaluation prepared for Cascades East Area Health Education Center.* (Available from CEAHEC, Bend, OR)

time-specific, and changes in their perceptions are noted as appropriate. Responses from other participant groups do not allow for the same type of comparison.

- Over the course of the project, focus group protocols, survey instruments, and interview questions were developed and administered by a number of different individuals. As a result, there are some variations in question sets and data handling procedures—and there is not a common lens for all information collected.

Despite these limitations, dominant themes appear clearly and consistently across the responses from all participant groups, although—not surprisingly—perspectives varied considerably regarding some aspects of the project, and the analysis captures this where possible.

Quantitative data related to program completion and licensure pass rates for traditional student cohorts and program completion data for the NEP cohort were provided from college records by COCC. Information pertaining to student licensure pass rates and job placement for the NEP cohort was provided by CEAHEC. CEAHEC also provided minutes from project team meetings and other relevant background documents. In addition, staff at COCC and CEAHEC provided information about preceptor assignments at each hospital site, frequency of clinical site visits, faculty/student use of Blackboard course tools, and case manager contacts/interactions with students.

Key Components: Implementation and Findings

The sections below focus on key components of the NEP model. Shaded areas provide a description of implementation activities and background information. Each shaded area is followed by a summary of major issues and concerns that were identified from the data.

Incumbent worker selection/students

Initial outreach and recruitment activities were conducted by participating hospitals and CEAHEC staff in early 2003. Beginning in May 2003, CEAHEC and COCC provided information, advising and counseling, and testing to 73 hospital employees who submitted applications of interest to the program. During 2003-04, CEAHEC also facilitated access to pre-requisite and support courses and helped students prepare program applications. Forty-five (45) individuals who successfully completed all pre-requisites and met all standard requirements for admission to the COCC nursing program were included in a pool of qualified applicants for local site review and selection. In spring 2004, hospitals utilized specific criteria (such as demonstrated professionalism, work relationship skills, and length of employment) to conduct an internal selection process, and 18 candidates chosen by the hospitals were admitted by COCC to the NEP cohort. CEAHEC and COCC conducted a two-day student orientation in late May 2004 that included sessions on Blackboard tools, learning preferences, critical thinking, and working in groups; a full day was devoted to joint team-building activities for students and preceptors.

Students in the program continued to work (at least part time) and were supported by a work-loan repayment agreement that covered educational costs (tuition and fees, books, travel required for on-campus weekends, and licensure exams). Hospitals allowed for modified or flexible work schedules so that students could attend classes and participate in clinical training. Paid release time and/or continuation of salary and benefits while students were in school were offered at the discretion of individual employers. In return, students agreed to work at their home hospital, another CONet hospital, or other community healthcare facility for a designated period following graduation. Students who dropped or failed the program were expected to repay the loan in full, based on support received during their time in the program. Students who were without jobs and/or moved from the region were asked to begin loan repayment within six months of graduation.

Findings: Incumbent worker selection

- Recruitment and selection of students worked well at most sites. Although one hospital noted that guidelines for selection should be clarified, the majority of employers felt the process went smoothly.
- Involvement in the selection process was extremely important to hospitals, which were invested in 'their' students and in their students' success.
- It was difficult for some of the smaller communities to identify potential applicant pools for hospital review, although all sites were able to fill at least two cohort slots initially. One student was unable to complete required pre-requisites prior to program start-up and was replaced by an alternate; one hospital chose to recruit and hire a community member for an on-call position in order to fill a program slot.
- One student who left the cohort during the first year was replaced by an individual who met incumbent worker criteria and was eligible for placement as a second year student in the distance cohort, based on prior completion of first year nursing courses at COCC and subsequent work as an LPN. The departing student was offered a place in the traditional program, repeated a course, and passed the NCLEX-PN exam, which enabled her to work as a Licensed Practical Nurse. As of Winter 2007, the student was enrolled in second year nursing classes at COCC.

Findings: Students

- Demographically speaking, the NEP cohort was female (89%), white (84%), rural (77%), and age 30 or older (72%); 11% were foreign-born. Data collected from 17 cohort members midway through the project (Winter 2005) show that 71% of students were married; more than half (53%) had at least one minor child living at home, and 41% had children under the age of 10. Household income of less than \$30,000 was reported by one out of three (35%). The majority of students (65%) did not have a college degree, and many (59%) were the first in their families to attend college. All students in the NEP cohort were employed throughout their training; at the time this information was collected, most students (71%) worked 20 or more hours per week.
- Basic demographic make-up of the traditional student cohort was similar to the NEP group, based on survey data provided by 30 out of 38 students who were enrolled in

Winter 2005. Traditional students were female (90%) and white (90%); 73% were married, three out of five (60%) had at least one minor child living at home, and 43% had children under the age of 10. Available data suggest greater differences in terms of age, income, and prior college experience: 60% were age 30 or older, household income of less than \$30,000 was reported by one out of four (23%). Somewhat fewer traditional students (56%) did not have a college degree, however, in contrast to students in the NEP cohort, only 23% indicated that they were the first in their families to attend college. One out of three (33%) students in the traditional program lived in rural communities within commuting distance of Bend. Fewer than half of students in the traditional cohort (47%) were employed at the time they were surveyed; one out of three students (33%) worked 20 or more hours per week.

- Faculty felt that students in the NEP cohort were as prepared for the nursing program as their traditional student counterparts and noted that students were responsible about attending class and clinicals, knowing there was little in the way of backup if they missed.
- Preceptors did not have the same basis for comparison but indicated that students were well-prepared and described them as motivated, self-directed, and anxious to participate and learn.
- The students themselves were pleased to be chosen as part of a new, experimental program. Being supported by their employers and the fact they were receiving financial assistance to complete their education were important to them.
- Throughout the program, students were attuned to many of the start-up and operational issues facing faculty and preceptors. The need for more preceptor training, high patient loads during clinical sessions, technical problems with the video conference system, lack of organization for weekend sessions, feedback regarding paperwork, and communication with clinical instructors were all cited as concerns during student focus groups.
- Because this was a pilot project, a number of program modifications did occur—sometimes on short notice—and these required a certain amount of flexibility on the part of students. Changes such as moving students among the sites and requiring HESI exams near the end of the program and a proposal to extend the program by one term in order to take a break between first and second year classes (which ultimately did not happen) were cause for general discussion, and some students expressed frustration when events did not match established expectations for the distance program.
- During the project, time management and the challenges of balancing family, work, and study were the biggest stress-inducers for students.

Distance delivery of nursing instruction

The NEP utilized a combination of distance/distributed methodologies to deliver instruction.

- COCC adapted their existing curriculum for distance delivery. Lecture, lab, and clinical components met OSBN requirements for nursing instruction as well as COCC program requirements.
- Internet protocol (IP) video-conference technology available through CONet was used to deliver didactic instruction. Classes were broadcast from the telehealth hub at St. Charles Medical Center (SCMC) Health and Learning Conference Center in Bend to five remote sites.
- The SCMC Telehealth department provided support for teleconferencing. CEAHEC and telehealth staff at SCMC helped to monitor and troubleshoot connections when classes were broadcast, and a trained teleconference technician (provided by each hospital) was available at the remote site during class times. However, with the rollout of electronic medical records at SCMC, technical problems were increasingly related to larger computer system issues that were often beyond the capability of telehealth staff to resolve.
- COCC utilized a consultant—an experienced educator who specialized in the use of technology to deliver nursing instruction—to prepare faculty for delivering the nursing curriculum via distance and to help orient students to Blackboard tools.
- CEAHEC purchased additional tools for instructors (headset microphone, DVD recorder to capture streaming video) to facilitate delivery of didactic instruction.
- Blackboard course management tools enabled faculty to post course materials, make assignments, give exams, and communicate with students about their work via the web. Students had access to computers and the internet at home and at hospital sites.
- COCC purchased a secure fax to send and receive student tests which were administered by a proctor at remote sites.
- Drive-in weekend skills labs and clinical sessions were scheduled two to three times per term at COCC and/or SCMC-Bend. Students demonstrated skills and required competencies, met with faculty regarding coursework, and had the opportunity to interact as a group. Some structured social events, such as a dinner to which families were invited, took place on these weekends as well.
- Instruction took place during an 18-month period from June 2004 through December 2005; students were enrolled for six consecutive terms, including two summers. The NEP operated on a different timetable from the traditional nursing program, and utilized the summer terms in an effort to reduce the strain on lab facilities at COCC and clinical training sites at SCMC-Bend.

Findings: Distance delivery of instruction

- Prior to start-up, faculty were released from teaching to convert the first year nursing curriculum to distance format, and work began in January 2004, one term later than

originally anticipated. Conversion of the second year curriculum took place concurrently while faculty were teaching (July 04 to March 05), since there was no term break to prepare. Content of instructional models converted to distance format mirrored the traditional program, although faculty reactions were mixed regarding how well some course materials translated in terms of on-line delivery.

- Teaching via distance presented challenges to faculty, who had no experience with video conference technology. Initially they felt tethered to a microphone and podium and were frustrated by constraints on the use of visuals (overheads, Powerpoint, white boards, video clips). Faculty were willing to learn and training was available, but responses to the training varied; some considered it ineffective and others chose not to follow suggestions that were provided. One faculty member noted that the nursing department was so short-staffed they did not have time to “teach each other” and share what they were learning among themselves. With experience, however, most became more comfortable with the technology, gained confidence in their abilities, and were inclined to be more innovative.
- Faculty felt it was difficult to engage students at remote sites (who appeared to them as “small, blurry” images on screen) or to utilize typical classroom management techniques—reading body language, circulating, etc.—to track and monitor learning in progress. To provide variety, the lecture format was augmented by interactive group work such as case studies and the preparation of individual portfolios.
- The distance format changed faculty-student interaction, and each group felt somewhat ‘disconnected’ from the other. Type and frequency of communication outside of class relied heavily on email, telephone, and web-based course tools, and some students felt that faculty were slow to respond when students tried to reach them. While on-campus weekends each term provided time for more direct interaction, faculty missed opportunities for informal, personal contact with students (that normally occurred when students were on campus), and students characterized their relations with faculty as distant and intermittent. There was also some feeling that students at the Bend site had more and better access to faculty than their counterparts at other locations.
- Access to student assignments and feedback regarding performance were handled electronically using Blackboard course tools. Late assignments from students and slow turnaround by faculty were both cited as problems (depending on perspective). Feedback regarding quizzes and exams also presented issues: While grades could be conveyed to students via Blackboard, there was no capability for feedback regarding specific questions missed. To remedy this, tests were scheduled prior to on-campus weekends so faculty could review results with students in person.
- Distribution of course materials was also cited as a problem. Faculty sent materials to students electronically and by regular mail, but term packets and course materials did not always reach students at remote sites in a timely manner—often not until the first day of the term. In some instances materials arrived shortly before (or after) class sessions for which they were required.

Findings: Technology

- Using the CONet video conference system was a cost-effective way to link students at six instructional sites, but reliability was a problem. Remote sites would fall off line periodically and need to be reconnected, and after SCMC implemented electronic medical records, increased user volume on system servers disrupted video conferencing. The worst problems occurred in May 2005 and caused the entire video conference system to go down for a full week, which was frustrating for students and faculty. Reliability improved somewhat as the project neared its close, and a subsequent reorganization of the Information Services department at SCMC to include technical support for videoconferencing should ensure greater network reliability in the future.
- Hospitals acknowledged that technical difficulties were challenging at times but felt strongly that distance technology was an important tool for training in remote areas.
- Clarity of transmission was sometimes a problem, particularly with overhead projections, and lag time in the audio transmission was distracting. Faculty were given tips for background and font sizes to improve the clarity of powerpoint slides, but these tips were not always followed.
- Technical support was often not available when needed, particularly at remote sites, and system problems were sometimes difficult for video conference support staff to understand and troubleshoot. Support from SCMC Information Services was minimal, due in part to system changes and departmental reorganization occurring during this time period, and perhaps some problems could have been avoided with better communication regarding IS decisions that were likely to impact system users.
- Blackboard course tools were purchased by COCC and utilized successfully for a variety of functions: post course syllabus, lecture notes, and learning activities; give quizzes and exams; host a variety of discussion boards; serve as grade book; provide on-line access to program handbook and other resources. Faculty and students were the primary users; preceptors found it difficult to access Blackboard (depending on internet connections at their sites) and generally didn't see the value of it for their work. A more detailed view of Blackboard usage is included in Appendix A – Table 1.

Findings: On-campus weekends

- On-campus weekends were perceived as a valuable component of the project by both students and faculty. In addition to honing their nursing skills, students valued the opportunity to come together as a group, share experiences, and reduce the sense of isolation that many felt at their rural sites.
- Faculty valued weekends as a way to connect in person with students, observe skills, and provide feedback regarding exams and coursework.
- COCC faculty and CEAHEC staff both observed that these sessions enabled students to form a supportive network and build a strong cohort, but they also suggested that weekends would benefit from better planning to make use of time on campus and ensure adequate opportunities for labs and skills practice.

- Social events planned in conjunction with weekend sessions were also considered worthwhile in terms of “bonding” the students into a cohesive group.

Site-based clinical training/Use of preceptors

Clinical experiences were supervised by hospital-employed nursing staff who worked as preceptors under the direction of COCC clinical faculty. Preceptors met OSBN requirements (unencumbered license as an RN and BSN-level preparation plus two years of acute care nursing experience or ADN-level preparation plus substantial nursing experience) and were selected by COCC via the same process used to hire clinical instructors. The original training plan called for 24 hours of preceptor training in year one and additional hours in year two. Many of the preceptors identified during the initial phase of the project participated in two one-day training sessions (April 26, May 25) held in Bend prior to project start-up. Preceptors were also given on-line modules to complete on their own time, but very few reported completion of this material. Informal training was provided for preceptors who were hired after program start-up, and additional training sessions were scheduled during the second half of the program. CEAHEC provided textbooks at each site for first year courses; COCC faculty provided course syllabi and a tool to evaluate student progress and clinical performance, but documents for preceptors that detailed the progressive development of clinical skills were not prepared as originally planned.

Preceptors provided written and oral feedback to faculty regarding student progress in meeting clinical objectives; grades for clinical performance were determined by COCC faculty. Faculty traveled to clinical sites a minimum of twice per term to observe and interact with preceptors and students. Between face-to-face visits, preceptors and faculty communicated via telephone and email to clarify learning objectives, discuss student progress, problem solve, review documentation, and answer questions as they arose.

The project maintained a 1:1 preceptor-student ratio, compared to the 1: 9 ratio used with faculty-led clinical instruction for traditional students. Hospital support for preceptors was intended to include reduced patient loads during precepting shifts and an hourly pay differential. However, the extent to which reduced loads occurred varied by site, and preceptors at some hospitals continued to carry normal patient loads while working with students. This occurred most frequently at the regional medical center.

Students received the majority of their clinical training at their home hospitals, although students from remote sites were sometimes rotated to SCMC to gain experience in obstetrics (OB) and IV therapy and on the med–surg floor. Students were also able to do some clinical rotations at mental health and public health facilities in their communities. During the fourth term of instruction (Spring 2005), COCC needed to provide preceptored experiences at SCMC-Bend for students who were completing the final term of the traditional nursing program. To free up hospital preceptors for this purpose, COCC clinical faculty worked with the distance cohort, and preceptored clinicals were resumed for the last two terms of the project.

Findings: Site-based clinical training/Use of preceptors

- The initial process for preceptor selection worked fairly well, although there was some concern that paperwork requirements limited the number of hospital nurses who applied for preceptor positions. Once the project was underway, nurses were directly recruited by COCC and CEAHEC staff to fill vacancies that resulted from turnover and to augment preceptor numbers at some sites.
- The cadre of preceptors at most rural sites remained relatively stable throughout the project. Lakeview was the exception, and the site experienced considerable turnover during the first three quarters of instruction. SCMC-Bend also experienced some initial turnover, but retained a core group of preceptors for the remainder of the program. A summary of preceptors by site for each term of the project is available in Appendix A –Table 2.
- Training for preceptors did not occur as originally planned. A number of potential preceptors were unable to attend initial training sessions that were provided by COCC in April and May 2004. In some cases, participation for staff at small hospitals was limited by the number of nurses who could be away from a facility at the same time. On-line training was taken by three preceptors; new/replacement preceptors received individual orientation to courses and a training handbook from the COCC project coordinator. It appeared that no preceptors completed the 24 hours of training that were originally envisioned prior to program start-up.
- Preceptors gave the training mixed reviews in terms of its value. They felt there was not enough training at the beginning of the program and that more flexible options to deliver training were needed in order to accommodate varying work schedules. Some clinical faculty were concerned that training for preceptors missed the mark and did not provide enough information on basics regarding how to work with students.
- Preceptors were not familiar with the nursing curriculum, and there was very little other than course syllabi to provide guidance regarding what students should be doing/learning in the clinical setting. While course materials were available on Blackboard, most preceptors did not (or could not) access material via the internet. Preceptors felt they did not have the materials they needed to do their jobs well; clinical faculty felt that preceptors needed training and support in the use of tools used to evaluate student progress and performance.
- Varying shifts for preceptors and work/class schedules for students made it a challenge to establish clinical schedules each term. Clinical schedules provided by COCC were often out of sync with hospital timelines for setting up staff schedules.
- The timeliness and frequency of clinical site visits were issues cited by students, preceptors, and clinical faculty—each from a different perspective. Two COCC faculty were responsible for clinical supervision and made a minimum of two visits to each site during each term. Data based on travel records provided by COCC indicate that beginning with a minimum number of visits in summer 2004, frequency increased and ‘spacing’ of visits improved over the next five terms. A summary of site visits by term is provided in Appendix A – Table 3.

- The focus of clinical visits varied. Some instructors were more hands-on with students; others saw their role as a resource for preceptors and students. In most cases, faculty tried to observe students, review paperwork, and answer questions, but there was no clear definition of what a visit should entail, and some students indicated that they rarely saw faculty during their clinicals. The new nursing department chair took steps in the last two terms of the project to institute more structure for visits as well as increase faculty presence in the clinical setting.
- Coordinating site visits in order to see students in action and confer with preceptors was complicated since shifts varied in length, some preceptors only worked part time, work and class time for students created conflicts, and schedules changed—sometimes without warning. If visits were missed, clinical faculty tried to follow up by phone with students and preceptors the next day.
- Communication with clinical sites also varied, but as a rule, faculty tried to make contact with students and preceptors by phone or email regarding each scheduled clinical—putting faculty on call 24/7 in order to cover all clinical shifts. Phone calls (faculty to preceptors, preceptors to faculty) were not always returned; connections with students were more consistent. As with didactic instruction, students were not always timely in submitting their paperwork, and faculty did not always return assignments in a timely manner. Faculty also voiced concern that students did not have opportunities for post-clinical conference to compare and synthesize clinical experiences.
- During focus groups conducted midway through the project, preceptors indicated that clinical faculty were helpful—when they were on site—but that visits occurred inconsistently. During interviews conducted at the conclusion of the project, preceptors noted that clinical faculty were more available during the last half of the program but ‘too few’ visits was still an issue for some, and timing of visits was cited as a problem by several preceptors. Overall, responses were mixed regarding support and feedback from clinical faculty, but many preceptors found them easy to work with and open to comments regarding student performance.
- Student complaints midway through the program (lack of consistency among clinical faculty in terms of helpfulness, lack of timeliness in returning paperwork, lack of follow-through regarding preceptor assignments) had shifted by the end of the program to majority agreement that clinical instructors were helpful and effective, although a minority still felt clinical faculty spent too little time with students.
- Nurse-patient ratios were not always ideal for clinical instruction. Smaller hospitals were more apt to adjust patient loads; reduced patient loads “almost never happened” at SCMC-Bend. All sites provided a preceptor pay differential according to hospital policy or nursing contract, and compensation was not a frequent complaint.
- Students consistently gave high marks to their clinical experience and work with preceptors. After three terms in the program, students recognized that clinical experiences varied, depending on site and staff; after six terms, they viewed clinical instruction as a good/positive experience.

- Preceptors voiced some concern that smaller hospitals did not offer a full spectrum of clinical experiences—but also suggested anecdotally that students in the distance cohort were better prepared clinically than traditional students as a result of more hands-on experience.
- Faculty noted that, depending on patient census, experiences at rural sites were comparable to those available at SCMC-Bend, citing the broader range of patient care provided by nurses and the potential for rural cases to be more complex.

Case management services

Students in the distance cohort received services from a Nursing Student Advocate and Services Coordinator (usually referred to as the ‘case manager’). This position worked with students and faculty to identify and alleviate barriers to successful completion of the nursing program, paying particular attention to issues associated with

- Rural isolation
- Adaptation to distance delivery of instruction
- Skills remediation and academic support
- Challenges posed by juggling work, home, and school life.

Prior to program start-up, the case manager worked with students at remote sites to assess academic readiness, develop a catalog of pre-requisite courses available on-line, and facilitate access to pre-requisite and support courses. The case manager also helped students prepare applications for admission. Once the program was underway, the case manager made regular visits to all sites and provided services that included mentoring, tutoring, and assistance with study skills and time management; she also helped students problem solve work-life issues and linked them to community and campus resources when needed. Throughout the program, the case manager monitored student progress and communicated with faculty regarding issues and solutions to problems.

The project model included tutoring services for students, but funds were not available to support this as a separate component, and prior to the start of classes in June 2004, COCC and CEAHEC agreed to include tutoring for students in the case management role. It was anticipated that the case manager would be on-site in rural areas more often than faculty—making it possible to answer questions as they arose “in the moment” and provide assistance to students with skills practice and the application of classroom concepts to clinical experiences. Students were also encouraged to approach faculty directly with their questions, but addition of the tutoring function complicated the relationship between case management and instruction, and at the end of the first term, COCC and CEAHEC engaged a facilitator to help clarify the role of the case manager in terms of tutoring and academic support. Student progress discussions were added to regular team meetings, and over time, communication seemed to improve.

Findings: Case management

- There was general agreement by all partners that the case manager role was essential in preparing students for admission to the NEP.
- Student response was very positive, and the case manager consistently received high praise for support and advocacy. The case manager had established a strong connection with students as they prepared for admission, and this continued throughout the project. In lieu of faculty, she was a regular presence at each site and was also accessible to students via telephone and email.
- A summary log provided by the case manager indicates that most student contacts were related to academic aspects of the program. CEAHEC required students to self-report grades throughout the term, and this represented 30% of all contacts with the case manager. Of the contacts that were student-initiated (not required), more than half were focused on questions/concerns related to coursework and clinical assignments (53%); the remainder dealt primarily with clinical/preceptor and work-related matters (20%), personal/financial problems (13%), and program-specific issues (14%). Periodically, the case manager served as a sounding board for students who needed to vent frustrations regarding program and/or personal circumstances.
- Contacts other than those related to instruction tended to be episodic; they were also site-specific (at times) and indicated that some students required more assistance than others. In the last half of the program, fewer contacts were related to personal, work, and financial problems. In particular, contacts related to students' personal/financial circumstances represented almost 20% of interactions with the case manager during the first two terms of the project; by the sixth term, contacts of this nature had tapered off to approximately 7%. A summary of student contacts with the case manager is provided in Appendix A – Table 4.
- The case manager relayed student questions and concerns to individual faculty members and reported on general student issues/concerns at regular meetings of CEAHEC and COCC staff. She encouraged students to contact faculty directly—but, based on agreement between CEAHEC and the college, the case manager also provided tutoring/assistance when faculty were unavailable or slow to respond. While helpful to students, this triangular pattern of communication tended to reinforce the fact that students were “detached” from faculty by virtue of the distance format and gave rise to faculty concerns that there were too many ‘chiefs’ to whom students were reporting.
- Faculty gave case management mixed reviews, and they were polarized in their responses regarding the contribution of this position to student success: Some saw it as a valuable support service for students, others did not. Most faculty did not view the case manager as part of the instructional team, which was very telling in terms of the relationship between the two functions.
- CEAHEC staff, including the case manager, firmly believed that case management was important to the project, and they gave it high marks for contributing to student success.

- More objective data for comparison (such as results from a distance education program that does not provide case management services) are needed to assess the extent to which case management served as a tipping point for student success. In the absence of this, documentation regarding student contacts may serve as the best guide for structuring (or restructuring) the case management function for future distance cohorts.

Project Management

Overall project management was the responsibility of staff at Cascades East AHEC who convened initial planning sessions in 2002 and, beginning in January 2003, conducted regular meetings to address issues related to implementation and identify concerns related to students. A core of staff from CEAHEC and COCC were present at most meetings, although representation from COCC changed somewhat each year, due to staff turnover and shifts in departmental responsibilities.

During the first six months of implementation planning (January-June 2003), the nursing program was represented by the COCC Dean of Instruction and the Allied Health department chair. A retired COCC faculty member (who served as case manager for the NEP) also attended meetings during this period and in March 2003 was approved by the college as the “key planning person for work that needs to be implemented to ready COCC for a distance learning cohort.” Funds for this were provided by CEAHEC as part of a contract with COCC for project planning. Following the resignation of the Allied Health chair in June 2003, designated nursing faculty (typically the department chair and/or the NEP project coordinator at COCC) represented the nursing program and served as conduits back to other staff regarding project implementation. During the last two terms of the project, additional nursing faculty participated in team meetings. It is unclear what sort of intra-departmental communication took place between those who attended project meetings on behalf of COCC and those who did not.

Hospital staff did not participate in implementation meetings, and CEAHEC met with CONet representatives separately to apprise them of project progress and deal with hospital-specific topics such as capacity for clinical training and availability of qualified preceptors. CEAHEC viewed its role as the voice for hospitals which were purchasing contracted educational services. In this capacity, CEAHEC brought matters that impacted hospitals and students to the table at meetings with COCC and also held separate conversations with employers and students about issues related to project success that were raised by the college. Once students were enrolled, COCC and CEAHEC typically met with hospital nursing representatives once per term to address clinical logistical matters. During year one, the meetings took place in person, during year two, they were often held via videoconference.

Policies and procedures appeared to evolve over time. Meeting minutes, which included decisions/agreements related to project implementation, were distributed by email to participants. Students were given a handbook during the first year of the project, which was revised at the beginning of the second year. CEAHEC staff

attempted to document “everything about the program” but acknowledged that some opportunities were missed.

Project roles and responsibilities was an agenda item in the earliest stages of planning, and role clarification was a persistent theme in meetings throughout the project. Partner roles overlapped in a number of areas—particularly where students and preceptors were concerned—and, in some cases, details regarding where partner responsibility and/or authority began and ended had to be worked out along the way.

Findings: Project management

- COCC faculty who participated in implementation team meetings expressed some frustration with the frequency and time required to attend. CEAHEC staff commented that faculty were sometimes too busy to attend, which hampered early identification and resolution of problems.
- When CEAHEC and COCC staff were asked to comment on various aspects of project management, there was agreement that more work was needed to define roles and responsibilities for all partners and that communication could have been more timely. Beyond that, perspectives differed greatly, depending on individual role related to the project.
- CEAHEC viewed its role as one of removing financial obstacles so that COCC could move forward with development of a distance delivered nursing education program, and gave COCC full responsibility for curriculum and clinical matters. However, the lines were somewhat blurred when it came to accountability for students who were enrolled in the program, and this served as a periodic source of tension between the two entities.
- CEAHEC also noted that it brought the commitment of the Cascades East AHEC Board to the NEP and that this project was the Board’s highest regional priority.

Model Implementation

This project moved at a fast pace from planning to implementation, and the process required that CEAHEC and COCC discuss and refine some elements of the model as they went along. It was apparent from comments provided by COCC and CEAHEC that perceptions varied a great deal regarding how the program model would be deployed. COCC assumed the model was a prototype that would be tested and adapted during implementation in order to determine the best delivery system for the region. CEAHEC sought to implement the model and agreements that were originally established with CONet and COCC and tried to keep the project moving along toward stated outcomes. To some extent, COCC and CEAHEC each felt that they were called on to make adaptations as the model was implemented—and that their respective efforts to do so were not fully appreciated by the other.

In the end, however, the basic model for the Nursing Education Program was, with minor exceptions, implemented according to the original design—although many lessons were learned in the process. Based on their experience with the project,

CEAHEC, COCC, and the hospitals are currently looking at modifications needed to improve instructional and clinical experiences for students and negotiating details of a cost-effective sustainability plan for the future to be presented to CONet partners for consideration.

Bottom Line: Project Outcomes

During implementation, a total of 19 students were enrolled in the Nursing Education Project: 18 students began the distance program in Summer 2004 and one additional student was admitted to the NEP as a second-year student in Winter 2005. Results for all students in the program are summarized below and in Appendix A – Table 5A.

- By March 2006, 17 students (89.5%) successfully completed program requirements and graduated from the COCC Nursing program with Associate of Applied Science degrees.
- By Summer 2006, all 17 graduates (100%) had successfully passed the NCLEX-RN exam, qualifying them to work as registered nurses.
- As of June 2006, 16 NEP graduates (94.1%) were employed as RNs—13 in their home hospitals, one in a regional hospital/county health department, and two in hospitals outside the region—and anecdotal reports from hospital nursing administrators indicate that they are satisfied with the job performance of program graduates.

NEP students were also required to take the NCLEX-PN exam midway through the project, and 100% of students who completed Year 1 coursework (17 out of 18) successfully passed this exam.

- Two students who completed Year 1, passed the NCLEX-PN exam, and subsequently left the program before graduating are working as licensed practical nurses.

A standard cohort tracking methodology was used to compare graduation and licensure pass rates for the NEP distance cohort and students enrolled in the traditional COCC Nursing program. Rates were averaged for three traditional cohorts of Nursing students entering prior to the start of the NEP (in Fall 2001, Fall 2002, and Fall 2003). Rates were calculated separately for the Fall 2004 entering cohort of traditional students, which was enrolled concurrently with the NEP distance cohort. Staff at COCC also provided figures for a subset of students who were enrolled via the lottery process, since this more closely mirrored the selection process for the NEP, and rates were calculated for these groups as well. Results are summarized in the table below and more detailed data are provided in Appendix A (Table 5B). When viewing these tables, it is important to note that calculations are based only on students enrolled in entering cohorts for both the NEP and traditional nursing program and do not include individuals admitted after the first term of instruction—so numbers differ slightly from the bullet points above.

Comparison of Graduation and Licensure Pass Rates for Entering Cohorts					
Entering Cohorts		Graduation Rate		NCLEX-RN Pass Rate	
		ALL Students	Lottery Only	ALL Students	Lottery Only
Traditional COCC Nursing Program	Fall 2001 - Fall 2003 3-Year Average	80.6%	74.1%	93.2%	87.7%
	Fall 2004	81.6%	66.7%	93.5%	83.3%
NEP Distance Program	Summer 2004	88.9%		100.0%	

Graduation and NCLEX-RN pass rates were higher for students in the NEP distance cohort than for ALL students in traditional entering cohorts for the Nursing program. Graduation and pass rates for NEP students were substantially higher than rates for the subset of Lottery Only students.

Program Strengths and Weaknesses

Students, preceptors, COCC faculty, and CEAHEC staff were asked to identify program strengths and weaknesses, and their comments reflect many of the issues noted in the findings above.

Across the board, participants agreed that a **major strength** of the program was being able to address nursing shortages at rural facilities by providing training that allowed students to remain in their home communities. Clinical preparation that included opportunities for diverse experiences, more hands-on training, and one-to-one time with preceptors was highly valued. The fact that students were already familiar with the health care environment was seen as a plus by preceptors; students saw case management and financial support as major strengths. COCC faculty (and others) said the NEP gave them an opportunity to try something different—and that experiences with the NEP will be used to inform instruction in the traditional program. Simply being able to successfully implement a new program, overcome obstacles, and see students graduate were also cited as strengths by many. COCC also made a decision to hybridize their traditional nursing program to include distance elements for all students beginning in Fall 2007 based on experience gained during the pilot project.

Comments regarding program **weaknesses** focused on clinical training and the need for more collaborative working relationships. Preparation and oversight for clinicals, more training and feedback for preceptors, and lack of hospital support in terms of reduced patient loads were all items of concern. The need for greater clarity regarding

roles and responsibilities and “partnerships not always feeling like partnerships” underscored the need for improved working relationships. Faculty were concerned that they did not have adequate staff or time for the front-end work that was necessary to implement the model, and students also perceived a lack of planning during program start-up. Students and faculty both felt the video conference delivery system was a weakness.

Conclusions and Recommendations

This was a complex project that required considerable resources and commitment from multiple partners. As in most start-ups, some things worked well and others did not—and there is much to learn based on the collective experience of those involved in this venture. Several themes emerged clearly during the evaluation process and these are outlined below, along with some very basic recommendations for next steps. Focus group and interview participants also suggested many specific recommendations for program improvement that are too detailed to include in this report.

Communication is a major area in need of improvement. Distance delivery complicated communication between students and faculty, and the program design added multiple preceptors and a case manager to the mix. In order for all aspects of instruction to mesh effectively, it is essential to develop new avenues—and standards—for regular communication among key players, including students. In addition, better communication is needed among the major partners (CEAHEC, hospitals, COCC) regarding expectations and accountabilities as well as mutually-agreed upon policies and operating procedures. Hospital administrators need to communicate more effectively with front-line staff to ensure they understand the rationale for the project and the hospital’s commitment in terms of support (staffing ratios, tech support, etc.). Faculty representatives on project teams need to communicate effectively with their colleagues regarding project development and operational concerns—and carry their collective feedback and input to team meetings.

Lack of clarity regarding roles took many forms. Preceptors were initially unsure of how to work with students and to evaluate their skills, and they sometimes confused their role as nurse with their role as teacher, by providing patient care rather than stepping back to let students demonstrate and learn new skills. It was also difficult for some preceptors to assume the role of evaluator with co-workers, and they did not want to jeopardize working relationships with hospital colleagues, particularly if a student they were precepting had authority over them in the workplace (which occurred at one site). More training and support for nursing staff who take on this role is needed to prepare them for becoming part of an instructional team.

For students in the work place, particularly at the smaller sites, hospital staff and co-workers often did not distinguish between employee and student roles—especially when the student normally provided patient care at work. This was less a problem at SCMC-Bend, where it was easier to make preceptor assignments in areas at some distance from where students normally worked. At SCMC-Bend, however, there was some confusion between traditional students who participated in clinicals with COCC faculty

and distance students who worked with hospital preceptors. At one remote site, there was also confusion regarding hospital role and authority related to preceptors and clinical training.

The role of the case manager and expectations regarding the case management function need to be clarified before the project can move forward. This is an area where CEAHEC and COCC overlapped each other in terms of interests related to student preparation, academic progress, and program success—and there were times when the two agencies (admittedly) stepped on each other's toes. To prevent this in the future, clear boundaries are needed to mark where respective responsibilities—for students as well as various aspects of program delivery—begin and end. In addition, since COCC has the primary responsibility for academic policy and for maintaining standards related to program accreditation, it is also incumbent on the college to ensure that institutional and departmental policies regarding student progress and retention are clearly stated and consistently administered.

Perhaps more subtle—although clearly felt—were changes in faculty roles that resulted from delivering instruction by distance and employing a preceptor model, which required them to adapt teaching methods and take on roles as coaches and resource people in lieu of providing hands-on instruction. Working with faculty to understand and explore the possibilities for new roles with students would be very beneficial.

Readiness to implement was key to program success and lack of readiness was a contributor to some of the problems encountered along the way. For most projects, readiness is a function of having adequate resources (staff, time, materials, etc.) to prepare in advance; this project also required a certain amount of readiness for change on the part of those involved. Readiness factors that influenced the success of the NEP—both positively and negatively—included a number of critical elements:

- Student readiness for nursing coursework, participation in a distance learning program, and the real impact of full time enrollment on their family and work lives.
- Faculty readiness to deliver instruction via distance. As a result of an earlier decision by COCC to discontinue distance education, nursing faculty had little or no experience with the distance delivery of instruction. In addition to converting curriculum for the nursing program to a new format, faculty also needed to acquire new skills to teach using both video-conference technology and web-based course tools.
- COCC Nursing Department readiness to implement a new delivery system and to enroll two nursing cohorts on separate schedules. The college underestimated both the time and staff resources that would be required to implement the distance program and, as a result, felt short-staffed throughout the project. Retirements, resignations, and illness had recently depleted the ranks of the COCC nursing department, and several instructors—including the NEP project coordinator—were new to nursing education, unfamiliar with the curriculum and not experienced as clinical instructors. In this context, it was challenging to maintain the integrity of the traditional program and manage start up and implementation activities required for the

NEP—and some things fell through the cracks, most notably the preparation of clinical materials and evaluation tools needed by preceptors.

- Hospital readiness to support preceptor training, support clinical training for students (patient loads), and meet commitments to employ students after graduation.
- Preceptor readiness for clinical instruction—which suffered from the domino effect of a lack of hospital support for participation in training and lack of preparation by COCC.

Complexity

Under normal circumstances, distance delivery presents its own set of challenges for instruction. In this case, the logistics of distributing instruction and establishing fully-preceptored clinical training at six hospital sites substantially increased complexity and strained available resources. Specific aspects of the project that were impacted by this complexity factor included:

- Oversight for clinical training at six facilities—travel to remote locations, scheduling to accommodate preceptor and student shifts, and regular communication with all sites.
- Training for preceptors located at multiple hospitals, many of whom were site-bound and unable to attend because employers did not have staff to replace them.
- Potential opportunities for technical problems and increased need for tech support with this many remote sites.

In addition, the involvement of multiple agencies—with multiple interests, multiple layers of administration, and multiple operational and policy considerations—all contributed to the complexity of moving this project from paper to reality.

Partnerships

Implementation of this project involved the development of new relationships among participating agencies and utilized a contracted services approach for nursing education that was brokered by CEAHEC on behalf of the hospitals. CEAHEC drove the process and served as the link between other major stakeholders (COCC and CONet), so that after initial planning in 2002, the partnership operated along two parallel tracks rather than engaging all players at the same table on a regular basis.

The contracted services approach was new to the COCC Nursing Department, and it is not clear that faculty recognized this was a different way of doing business in order to deliver nursing education. CEAHEC worked hard to provide the resources necessary for COCC to implement their components of the project, but there was some feeling on the part of college staff that the partnership was not on “level ground” as a result of the funding relationship. The latter changed the footing for faculty, who were accustomed to having sole responsibility for program decisions, and if the department hopes to achieve long-term financial sustainability for a distance program, it will have to consider the extent to which it is willing to negotiate with area hospitals/potential funders regarding program design and deliverables that meet local needs.

The challenges faced by CEAHEC, CONet hospitals, and COCC are not unusual for a project of this scale, and partnerships among diverse agencies often do not have clear lines of authority—or partners that are equally vested. For the NEP to move forward, it is imperative that respective roles are clear, accountabilities are understood by all, and agency expectations related to project operations and outcomes are aligned with the realities of implementation.

Final Thoughts

Many factors contributed to the success of this project and it is important to acknowledge these. Clearly, CEAHEC served as a catalyst for rethinking the delivery of nursing instruction in Central Oregon and piloting a new model to serve rural areas of the state. COCC and the nursing faculty deserve credit for their willingness to travel the path of innovation during a time of state budget cuts to education, and CONet hospitals are commended for committing the staff resources needed to extend the reach of instruction to rural communities. Support for goals of the project and tremendous satisfaction that students have benefited from their mutual efforts were clearly expressed by preceptors, faculty, hospitals, and CEAHEC staff.

Adequate time and staff resources for COCC to do the front-end work necessary to fully implement the distance delivery of nursing classes while maintaining a traditional two-year program were significant issues affecting delivery of the instructional component, and many of the issues noted throughout this report might have been averted—or minimized—if these had been in place. However, in the development of any new project, there is always a balance between stalling out while waiting for the “right time” to begin and continuing to push forward despite perceived obstacles, and it is difficult to know whether more time and resources would have appreciably altered the outcomes of this project.

Although it is not possible to say definitively based on available data, three factors appeared to contribute significantly to student success:

- Mature, motivated students who already worked in and were familiar with the healthcare environment
- A 1:1 student-preceptor ratio for clinical experience (compared to 1: 9 for traditional students)
- Support for distance students that included tutoring and mentoring provided by case management.

The goals of this project were to expand access to nursing education for residents of central and eastern Oregon, to increase the pool of trained nurses in rural/frontier communities, and to enhance retention of nurses at remote hospital sites. While it is too early to measure the last of these, the NEP clearly accomplished what it set out to do in terms of the first two goals—as newly-minted nurses begin to assume patient care responsibilities in their home communities.

In the end, it was the people involved in this project that made it work—through a combination of professional skills, the willingness to try something new, and the sheer tenacity that kept them coming back to the table in order to seek solutions to problems encountered along the way. While the process was not pretty at times, the results achieved in terms of student success are a tribute to everyone who participated.

Central and Eastern Oregon Nursing Education Program

Appendix A – Figures and Tables

Figure 1. NEP Project Flow Diagram

Table 1. Use of Blackboard course tools

Table 2. Preceptors by site

Table 3. Clinical visits x site

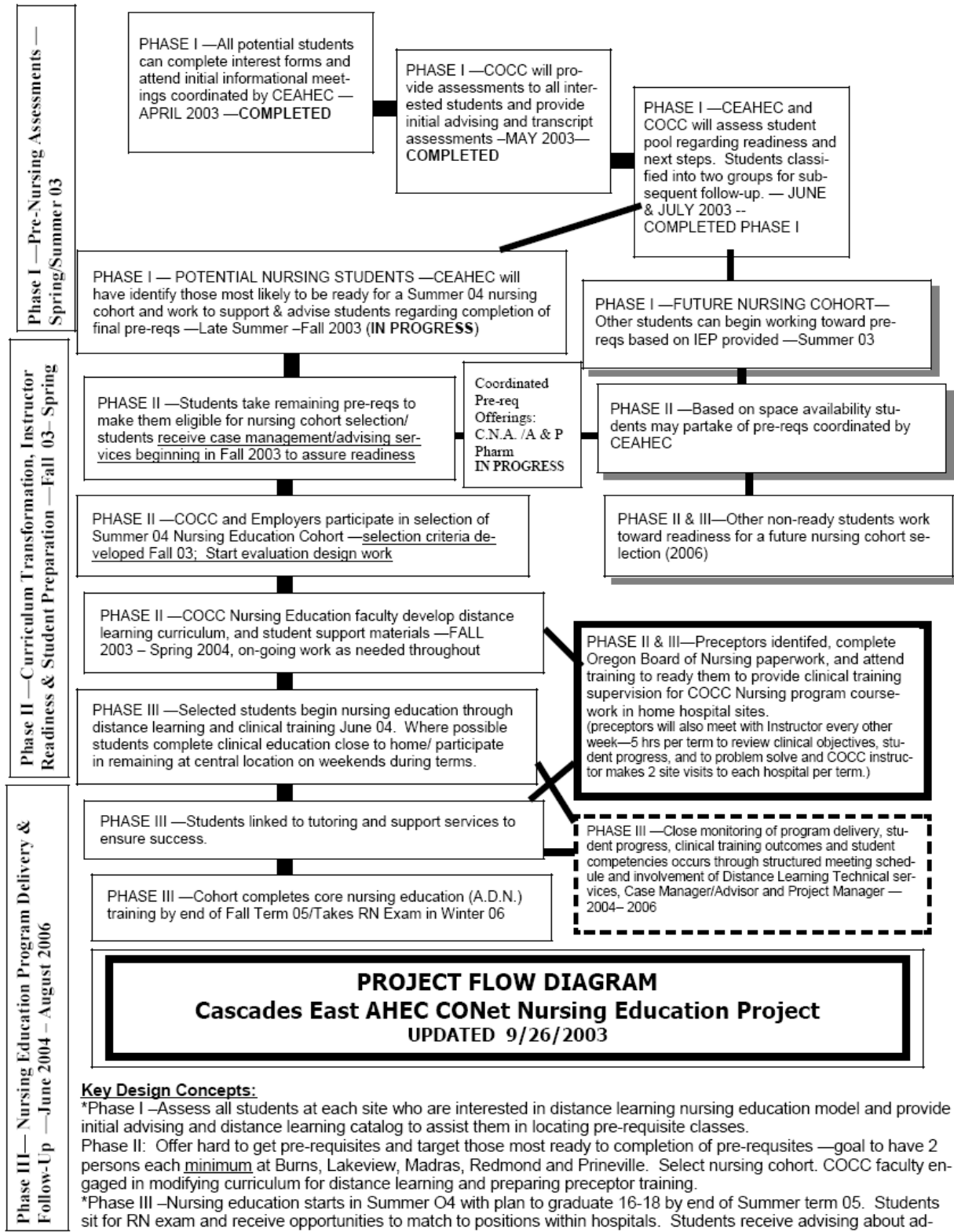
Table 4. Case management contacts

Table 5A. Project Outcomes – All Students

Table 5B. Comparison of Graduation and
Licensure Pass Rates for Entering Cohorts

Central and Eastern Oregon Nursing Education Project

Figure 1. Nursing Education Program project flow diagram



**Central and Eastern Oregon Nursing Education Project
Table 1: Use of Blackboard course tools**

Use of Blackboard Course Tools	Lecture/Clinical						Skills Lab		
	NUR 106	NUR 107	NUR 108	NUR 206	NUR 207	NUR 208	NUR 115	NUR 212	NUR 215
Administrative									
Class syllabus/Class schedule	X	X	X	X	X	X	X	X	X
Gradebook	X	X	X	X	X	X	X	X	X
Instructor information/Announcements	X	X	X	X	X	X	X	X	X
Policies, Handbook, etc.	X	X	X	X	X	X			
Links and resources	X	X	X	X	X		X		
Course Materials									
Lecture notes	X*	X*		X*	X	X*			
Learning activities	X	X	X	X	X	X	X	X	X
Lab skill competency documents	X	X					X	X	X
Clinical documents	X	X	X	X	X	X			
Quizzes and exams							X	X	X
Student-faculty Interactions									
Question and answer discussion	X	X	X	X	X	X	X	X	X
Student clinical reflections		X	X	X	X**	X**			
Group work discussion boards				X		X		X	
Math discussion board	X								
Wellness Forum discussion board	X	X	X	X	X				
Social Forum discussion board	X	X		X	X	X	X		
Provide feedback to students re: written assignments			X						
Provide feedback to students re: exams/quizzes (Mental Health component)			X						

NOTE: Feedback to students regarding quizzes and/or tests was provided in person by faculty during on-campus weekends, in person by clinical instructor during on-site review with student, or via email with specific information about questions missed.

* Not for every subject/class session

** Not used by all clinical instructors

Data source: COCC project staff

Central and Eastern Oregon Nursing Education Project
Table 2. Preceptors by site

Hospital/Location		Program Quarter					
		Q1	Q2	Q3	Q4	Q5	Q6
St. Charles Medical Center Bend	Students	6	6	6	6	6	6
	Preceptors	8	7*	7	**	8	9
	<i>Continuing</i>		5	7		7	7
	<i>New</i>		2			1	2
	Preceptor total includes 2 OB clinical preceptors Q1 through Q5						
St. Charles Medical Center Redmond	Students	2	2	2	2	2	2
	Preceptors	3	3	3	3	3	3
	<i>Continuing</i>		3	3	3	3	3
	<i>New</i>						
	Preceptor total includes 1 OB clinical preceptor Q1 through Q5						
Pioneer Memorial Hospital Prineville	Students	2	2	2	3	3	3
	Preceptors	4	4	4	5	5	5
	<i>Continuing</i>		4	4	4	5	5
	<i>New</i>				1		
	Preceptor total includes 1 OB clinical preceptor Q4 through Q6						
Mountain View District Hospital Madras	Students	2	2	1	1	1	1
	Preceptors	2	2	3	3	2	3
	<i>Continuing</i>		2	2	3	2	3
	<i>New</i>			1			
Harney County District Hospital Burns	Students	4	4	4	4	4	4
	Preceptors	4	5	4	4	4	5
	<i>Continuing</i>		4	4	4	4	4
	<i>New</i>		1				1
	Preceptor total includes 1 specialty (home health) in Q6						
Lake County District Hospital Lakeview	Students	2	2	2	2	2	---
	Preceptors	3	3	3*	3	3	---
	<i>Continuing</i>		1	2	3	3	
	<i>New</i>		2	2			
	Preceptor total includes 1 OB clinical preceptor Q1 through Q5						

*Reflects staffing change during term

Q2 - SCMC-Bend: Added 1 preceptor during term

Q3 - Lakeview: Lost 1 preceptor during term

** Clinical supervision by COCC faculty

Data source: CEAHEC and COCC project staff

Central and Eastern Oregon Nursing Education Project
Table 3. Clinical site visits by term

		Site Visits by COCC Clinical Faculty					
		Year 1			Year 2		
		Sum04	Fall04	Win05	Spr05	Sum05	Fall05
COCC Clinical Faculty/Term		2	2	2	2	3	3
Hospital	Location						
SCMC	Bend	4	13	10	20**	10	18
SCMC	Redmond	3	10	10	5	5	9
Pioneer Memorial	Prineville	2	4	3	10	11	11
Mountain View District	Madras	2	6	5	4	3	5
Harney County District	Burns	2	5	4	3	4	3
Lake County District	Lakeview	2	1*	3	3	4	---

*2-day visit

**Clinical group 2 days/week

Data source: COCC project staff

**Central and Eastern Oregon Nursing Education Project
Table 4. Case management contacts**

		Required		Not Required - Student Initiated	
Term	TOTAL Contacts	Grade Reporting		All Other Contacts	
Summer 04	215	72	33.5%	143	66.5%
Fall 04	287	72	25.1%	215	74.9%
Winter 05	229	68	29.7%	161	70.3%
Spring 05	250	90	36.0%	160	64.0%
Summer 05	299	90	30.1%	209	69.9%
Fall 05	252	72	28.6%	180	71.4%
	1532	464	30.3%	1068	69.7%

	Total Other Contacts	Academic/ Tutoring		Clinical Sites		Personal/ Financial		Program	
Summer 04	143	65	45.5%	39	27.3%	26	18.2%	13	9.1%
Fall 04	215	102	47.4%	60	27.9%	42	19.5%	11	5.1%
Winter 05	161	79	49.1%	29	18.0%	19	11.8%	34	21.1%
Spring 05	160	111	69.4%	32	20.0%	8	5.0%	9	5.6%
Summer 05	209	108	51.7%	38	18.2%	30	14.4%	33	15.8%
Fall 05	180	101	56.1%	18	10.0%	12	6.7%	49	27.2%
	1068	566	53.0%	216	20.2%	137	12.8%	149	14.0%

Type of contact

1. **Academic/Tutoring:** Clarification of class materials, explanation of concepts, questions related to distance education
2. **Clinical sites:** Problems related to student clinical hours and work schedules, preceptor schedules, student-preceptor working relationships, hospital expectations regarding student schedules
3. **Personal/Financial:** Balancing work and family responsibilities, financial concerns associated with attending school
4. **Program:** Student concerns about program. This category was labeled 'Venting' in the case manager's contact log, and frequency and topic tended to reflect program issues that arose during a given term.

Data source: CEAHEC Case Manager

Central and Eastern Oregon Nursing Education Project
Table 5A: Project Outcomes – All Students

Nursing Education Program		Complete Year 1 ⁴		Pass NCLEX-PN ⁵		Graduate ⁶		Pass NCLEX-RN ⁷	
Entering Cohort ¹ Enrolled Summer 2004	18	17	94.4%	17	100.0%	16		16	
Late Admission ² Enrolled Winter 2005	1					1		1	
TOTAL Students	19					17	89.5%	17	100.0%
Transfer Out³ Fall 2004	1			1		--		--	

Notes

1. 18 students were enrolled in the Nursing Education Project (NEP) beginning in Summer 2004. This group is defined as an **Entering Cohort** for purposes of comparing graduation and licensure pass rates of NEP students with graduation and licensure pass rates of Entering Cohorts of students in the COCC traditional Nursing program in Table 5B. (See next page)

2. One additional individual was admitted to the NEP as a second-year student in Winter 2005. Results for this student (shown above) are **NOT** included in the comparison of rates in Table 5B since he/she was not a member of the original NEP Entering Cohort.

3. One student from the original Entering Cohort transferred out of the NEP at the end of Fall 2004 and enrolled in the COCC traditional Nursing program in Winter 2005. As of Winter 2007, this student was enrolled in second year nursing classes at COCC.

- Results for this student (shown above) are **NOT** included in graduation/pass rate data for the NEP in Table 5B since he/she was no longer a participant in the project.

- Results for this student are also **NOT** included in data for the COCC traditional Nursing program since he/she was not a member of the Fall 2004 Entering Cohort for the traditional program.

4. Number and percent of students who successfully completed Year 1 of NEP/COCC Nursing program.

5. Number and percent of students who successfully passed NCLEX-PN exam at end of first year of project.

6. Number and percent of students who successfully completed the NEP/COCC Nursing program.

7. Number and percent of graduates who successfully passed NCLEX-RN exam.

Data source: COCC Admissions and Records Office
CEAHEC staff

Central and Eastern Oregon Nursing Education Project
Table 5B. Comparison of Graduation and Licensure Pass Rates for Entering Cohorts

COCC Traditional Entering Cohort	All Students					Lottery Students				
	Enrolled	Graduated ¹		Passed NCLEX-RN ²		Enrolled	Graduated ¹		Passed NCLEX-RN ²	
Fall 2001	36	28	77.8%	26	92.9%	18	13	72.2%	11	84.6%
Fall 2002	36	28	77.8%	27	96.4%	18	13	72.2%	13	100.0%
Fall 2003	36	31	86.1%	28	90.3%	18	14	77.8%	11	78.6%
3-year Average	36	29	80.6%	27	93.2%	18	13.3	74.1%	11.7	87.7%
Fall 2004	38	31	81.6%	29	93.5%	18	12	66.7%	10	83.3%

NEP Entering Cohort	Enrolled	Graduated ¹		Passed NCLEX-RN ²	
Summer 04	18	16	88.9%	16	100.0%

Notes

1. Number and % of students from entering cohorts who successfully completed the COCC traditional Nursing program or the Nursing Education Project. Results for students who are not members of entering cohorts are **NOT** included in graduation rate data.

2. Number and % of traditional and NEP graduates who passed NCLEX-RN exam. Results for students who are not members of entering cohorts are **NOT** included in licensure pass rate data.

Data source: COCC Admissions and Records Office
 CEAHEC staff

Central and Eastern Oregon Nursing Education Program

Appendix B – Data Collection

Table 6. Data collection matrix

Data collection instruments

- Student focus groups
- Preceptor focus groups/interviews
- Hospital/employer survey
- COCC faculty/staff interviews
- CEAHEC staff survey

Central and Eastern Oregon Nursing Education Project
Table 6. Data collection matrix

Students		
Focus groups held in...	March 2005 (End of Year 1)	November 2005 (End of Year 2)
Participants	N = 18 (out of 18)	N = 18 (out of 18) <ul style="list-style-type: none"> • 17 participants on-site plus 1 telephone interview
Participation rate	100%	100%
Questions developed by...	Susan Norwood* Oregon Health Career Center Tualatin, OR <ul style="list-style-type: none"> • Reviewed by CEAHEC staff and COCC faculty <i>*Faculty member, School of Nursing, Gonzaga University</i>	Susan Norwood Oregon Health Career Center Tualatin, OR <ul style="list-style-type: none"> • Reviewed by CEAHEC staff and COCC faculty
Focus group conducted by...	Thomas Wright American Research Institute, Inc. Portland, OR	Thomas Wright American Research Institute, Inc. Portland, OR
Preceptors		
Focus groups held in...	March 2005 <ul style="list-style-type: none"> • Survey sent by mail in Summer 2005 to non-attendees 	November 2005 <ul style="list-style-type: none"> • Telephone interviews with non-attendees completed during November 05 - January 06
Participants	N = 11 (out of approximately 26 preceptors at all sites) <ul style="list-style-type: none"> • 8 (March 2005) • 3 (Summer 2005 follow-up) 	N = 34 (out of 37)
Participation rate	42%	92%
Questions developed by...	Susan Norwood <ul style="list-style-type: none"> • Reviewed by CEAHEC staff and COCC faculty 	Susan Norwood <ul style="list-style-type: none"> • Reviewed by CEAHEC staff and COCC faculty
Focus group/ interviews conducted by...	Thomas Wright, PhD	Thomas Wright, PhD

Central and Eastern Oregon Nursing Education Project
Table 6. Data collection matrix, continued

Hospitals/Employers	
Interviews conducted...	June-July 2005
Participants	N = 14 participants from 6 hospital employers <ul style="list-style-type: none"> • On-site interviews (13) • Telephone interview (1)
Participation rate	100% (based on hospitals represented)
Questions developed by...	Gary Wappes, Ken Venzke Oregon Health Career Center <ul style="list-style-type: none"> • Reviewed by CEAHEC staff
Interviews conducted by...	Ken Venzke
COCC Faculty/Staff	
Interviews conducted...	November-December 2005 <ul style="list-style-type: none"> • Telephone interviews in December and January
Participants	N = 10 (out of 11) <ul style="list-style-type: none"> • On-site interviews in Bend (3) • Telephone interviews (3)
Participation rate	91%
Questions developed by...	Susan Bach Oregon Health Career Center <ul style="list-style-type: none"> • Reviewed by CEAHEC staff
Interviews conducted by...	Shirley Anderson Oregon Health Career Center
CEAHEC Staff	
Survey conducted...	March 2006
Participants	N = 3 (out of 3)
Participation rate	100%
Questions developed and survey administered by...	Susan Bach <ul style="list-style-type: none"> • Reviewed by CEAHEC Executive Director

Central and Eastern Oregon Nursing Education Project Student Focus Group Questions - March 2005

How's it going?

What is going particularly well?

What would you identify as strong points of the program?

What is causing problems?

Please comments on the **effectiveness or helpfulness** of the following program components –

Use of technology

On-campus session

Clinical experiences

Preceptors

Site visits

Clinical faculty

Case management

Other program staff

Clinical setting – support, role confusion, other staff

Biggest *positive* surprise?

Biggest *negative* surprise?

Have you thought about quitting the program? Why?

Program stressors? (Balance, time, money, family, work)

Top 5 program strengths?

Top 5 program weaknesses?

Five recommendations – rank in order of most to least important/needed

What do you need to help you do your job as a student more effectively?

What do you think your preceptors need?

Assign a mid-term grade to the program.

Central and Eastern Oregon Nursing Education Project Student Focus Group Questions - November 2005

How's it going?

What has gone particularly well?

What would you identify as strong points of the program?

What has caused problems?

Please comments on the **effectiveness or helpfulness** of the following program components –

Use of technology

On-campus session

Clinical experiences

Preceptors

Site visits

Clinical faculty

Case management

Other program staff

Clinical setting – support, role confusion, other staff

Of these components, which do you think is most instrumental to your success as a student?

Biggest *positive* surprise?

Biggest *negative* surprise?

Have you thought about quitting the program? Why?

Program stressors? (Balance, time, money, family, work)

Have you stayed healthy during the program?

Top 5 program strengths?

Top 5 program weaknesses?

Five recommendations – rank in order of most to least important/needed

What would you suggest program administrators pay attention to in planning for future cohorts to enable students to be more effective?

What improvements would you recommend to improve the program in the future?

**Central and Eastern Oregon Nursing Education Project
Student Focus Group Questions - November 2005, continued**

Are there any changes you feel absolutely must be made to the program?

Is there anything that would prevent you from recommending the program to other students?

How has the college faculty been supportive of you as a student?

How has feedback from the college faculty been?

What would you ask college faculty to do differently in the future?

How has the AHEC staff been supportive of you as a student?

How has feedback from the AHEC Staff been?

What would you ask AHEC staff to do differently in the future?

How has your hospital been supportive of you as a student?

How has feedback from the hospital administration or staff been?

What do you think your preceptors need?

Do you plan to apply to work at your home hospital when you are done?

Assign a final grade to the program.

**Central and Eastern Oregon Nursing Education Project
Preceptor Focus Group Questions - March 2005**

How's it going?

What is going particularly well?

What would you identify as strong points of the program?

What is causing problems?

Please comments on the **effectiveness or helpfulness** of the following program components –

Preceptor training

Use of technology

Clinical faculty

Site visits

Case management/case manager

Other program staff

Students

Clinical setting issues – support, other staff, role confusion issues

Biggest *positive* surprise?

Biggest *negative* surprise?

Have you thought about quitting as a preceptor? Why?

Top 5 program strengths?

Top 5 program weaknesses?

Five recommendations – rank in order of most to least important/needed

What do you need to help you do your job as a preceptor more effectively?

What do you think the students need?

Assign a mid-term grade to the program.

**Central and Eastern Oregon Nursing Education Project
Preceptor Focus Group/Interview Questions - November 2005**

How's it going?

What has gone particularly well?

What would you identify as strong points of the program?

What has caused problems?

Please comments on the **effectiveness or helpfulness** of the following program components –

Preceptor training

Use of technology

Clinical faculty

Site visits

Case management/case manager

Other program staff

Students

Clinical setting issues – support, other staff, role confusion issues

Of these components, which do you think is most instrumental to your success as a preceptor?

Biggest *positive* surprise?

Biggest *negative* surprise?

Have you thought about quitting as a preceptor? Why?

Top 5 program strengths?

Top 5 program weaknesses?

Five recommendations – rank in order of most to least important/needed

What do you need to help you do your job as a preceptor more effectively?

How do you feel about the quality of the students graduating from this program?

What improvements would you recommend to improve the program in the future?

Are there any changes you feel absolutely must be made to the program?

Is there anything that would prevent you from participating as a preceptor in the future?

**Central and Eastern Oregon Nursing Education Project
Preceptor Focus Group/Interview Questions - November 2005, continued**

How has the college faculty been supportive of you as a preceptor?

How has feedback from the college faculty been?

What would you ask college faculty to do differently in the future?

How has the AHEC staff been supportive of you as a preceptor?

How has feedback from the AHEC Staff been?

What would you ask AHEC staff to do differently in the future?

How has your hospital been supportive of you as a preceptor?

How has feedback from the hospital administration been?

What would you ask your hospital administration to do differently in the future?

Are there other comments you have about the program?

Assign a final grade to the program.

**Central and Eastern Oregon Nursing Education Project
Hospital/Employer Project Evaluation Survey –June 2005**

Please use this written questionnaire as a way to prepare for your scheduled interview. The fiscal questions may require some research within your organization to complete before scheduled interviews. Thank you for participating in assessing and providing valuable feedback regarding our pilot distance nursing education project.

1. Prior to the start of this project, you provided project sponsors with numbers and opinions on the significance and severity of the nursing shortage and it's impact (either presently on in the future) on your hospital. Over the course of the project to date, have those views changed and if so, how? _____

Would you say the nursing shortage appears to be of greater or less concern now than before this program began? _____

How does this program impact your view of how your hospital is meeting RN staffing needs during a national nursing shortage? _____

- Please provide current data on those specific areas that were researched in 2002 related to RN staffing?

<u>Item</u>	<u>Total</u>
budgeted positions (fte)	_____
vacancies (fte as of 6-1-05)	_____
traveler (temp) costs/mo (jan-mar 05)	\$ _____
overtime costs/mo (jan-mar 05)	\$ _____

- Comments

2. Prior to the start of the project, hospital partners identified and discussed potential internal “barriers” to participating in this type of training program. Though none of the hospitals thought those barriers would be significant, most thought one or more could be problematic. Were there problems and if so, how serious were they? Did they impact desired outcomes? _____

As part of the model, your hospital selected students to be in the program. How valuable/how important is it to you to be able to be involved in selecting employees for nursing education? What do you see as the benefits to you of this model?

**Central and Eastern Oregon Nursing Education Project
Hospital/Employer Project Evaluation Survey - June 2005, continued**

Do you plan to employ all students from your facility in this program as RNs?

Yes _____ No (Why not?) _____

Only if and when we have vacancies _____ Immediately after they are licensed _____

Other comments

3. During the fact finding phase of this project, hospital partners reported having few, if any, opportunities to “grow-their-own” nursing workforce. Since that time, have you become aware of other opportunities in which you might be able to support some of your own workforce in pursuing a career in nursing while keeping them in your organization?

Specifically, are there any other LPN or Associates Degree RN programs your employees can access? _____

4. From the employer’s perspective, did the program go the way you thought it would? Did it require more/less staff support? Was the impact on staffing what you thought it would be? Did the students require more or less personal, academic, financial support?

5. The educational provider, Central Oregon Community College, obviously played a significant role in the project. Did the level and quality of training meet your expectations? Was college staff on-site enough? And when not on-site, were they accessible for problem solving?

- Specifically, how would you rate the performance of the college clinical instructor (connected to your site) involved in the project?

Excellent Very Good Average Below Average Poor

- Specifically, how would you rate the performance of the college classroom instructors involved in the project?

Excellent Very Good Average Below Average Poor

**Central and Eastern Oregon Nursing Education Project
Hospital/Employer Project Evaluation Survey - June 2005, continued**

- Did your preceptors receive adequate training from the college prior to the project start up date? Did they feel supported by the college during the course of their preceptorship? _____

6. CEAHEC provided key student support and project management services. How useful were those services? Were they as accessible as needed? How effective were they in addressing and resolving problems that arose? How effective were they in establishing and maintaining lines of communication to the key players in your organization? _____

- Specifically, rate the performance of AHEC Project Manager (Lyn Bogie)
Excellent Very Good Average Below Average Poor

- Specifically, rate the performance of the AHEC Case Manager (Ellen Howe)
Excellent Very Good Average Below Average Poor

Did your preceptors feel supported by CEAHEC staff? Did your students feel supported? Did your hospital feel supported?

As hospital leadership, did you receive enough information from the CEAHEC Team? Are there any recommendations you would make for the future?

7. As an employer, what things would you change about this project if it were done again? What were some of the key aspects that made the program strong and effective? What things worked, but could be improved and how?

- Would you be interested in participating in this project if it were to be repeated?
Yes No Yes, if

**Central and Eastern Oregon Nursing Education Project
Hospital/Employer Project Evaluation Survey - June 2005, continued**

- Much of the cost of this project was supported by grants and other outside funding. Would you be willing/able to participate if some or all of that funding were not available?

Yes No Yes, if

Did you provide fiscal support to students in the program? _____

If yes, please describe _____

Are you willing to provide these types of supports in the future to additional students from your facility? _____

Do you have a tuition reimbursement program for employees participating in educational training toward a degree or license? _____

If not, would you want AHEC assistance to learn how other hospitals set up such programs? _____

The preceptor differential at your hospital was one of the critical hospital financial contributions to this program? If another cohort was started, are you willing to commit to paying the preceptor differential for your nurses chosen as clinical preceptors? _____

- What were the direct costs that your hospital incurred by participating in this project to date? Were these costs close to what you expected to invest?

<u>Activity</u>	<u>Amount</u>
employee paid release time (incl: benefits)	_____
preceptorship time	_____
employee mentor time	_____
other staff support time	_____
other admin support time	_____
total	\$ _____

8. Currently COCC offers a nursing ladder program that provides students with the opportunity to take LPN certification exam mid-way through the program. How valuable/important is it to your hospital to have students be able to work as LPNs during the last nine months of training? Please note, if students would drop out after three or more terms in a non-ladder program they would not be eligible to sit for the LPN state exam.

**Central and Eastern Oregon Nursing Education Project
Hospital/Employer Project Evaluation Survey - June 2005, continued**

Do you have any interest in a stand-alone LPN training program –i.e. would it serve a need for your hospitals to train LPNs? (additional needs beyond RN training?)

What are your current training needs for C.N.A. ? Do you train in-house? Do you have an adequate supply of locally trained C.N.A.s? What do you predict as the outlook for needing C.N.A. training? _____

Do you have other shortage areas you want AHEC to be involved in working on?

9. How important is it to your hospital and it's involvement in this project that the students complete their RN training in 18 months instead of the more traditional 24 months?

Very important

Important, but not crucial

Makes no difference

10. Distance learning was used in ways not previously used in the region for nursing education. How did you feel the technology worked for students and your facility? (specifically blackboard access, videoconferenced classes, site coordinators meetings).

What recommendations would you have about a) using technology for future cohorts and b) willingness to commit resources for a future cohort to participate in distance nursing education?

11. Other comments or areas not addressed by the above questions:

Central and Eastern Oregon Nursing Education Project COCC Faculty/Staff Interview Questions - November 2005

1. Describe your role (or roles) related to the Nursing Education Project
 - Convert curriculum to distance format
 - Provide instruction (in nursing theory or nursing skills lab)
 - Supervise clinical practice
 - Provide preceptor training
 - Coordinate student–preceptor clinical scheduling with hospitals
 - Involved in ongoing planning and problem-solving related to project implementation
 - Other—what?
2. How would you describe your level of involvement in the initial planning and design of this project?
 - At what point did you become involved?
 - How much/what kind of input did you have into this project?
3. How would you describe the Nursing Education Project (as a model for distance delivery of nursing instruction)—purpose, unique features, etc.—to someone who is unfamiliar with it?
 - How does the model differ from the traditional nursing program?
 - Do you believe the model has been implemented as it was originally planned?
 - If not, why not? Where does reality differ from the original design?
4. How many terms have you been actively involved in the NEP?
 - Typically, how much of your load each term involved instruction or supervision of cohort students?
 - Has your role changed over time?

Based on your experience with the project, what worked well/didn't work well in each of the following areas? (Q5-Q12)

- **What problems were encountered and how were they resolved during the course of the project?**
- **What needs to be done to improve things that still don't work as well as they should?**

Note: Italicized bullets are essentially prompts—to make sure faculty feedback (depending on their roles in the project) covers as many aspects of the model as possible.

5. Curriculum/Nursing theory instruction
 - *Use of distance format for didactic instruction: Any content issues? Anything that didn't translate well to distance format?*
 - *Video conference classes and on-line modules reflect structure and content of nursing program curriculum?*
 - *On-line modules clearly identify required competencies/skill levels for students?*

**Central and Eastern Oregon Nursing Education Project
COCC Faculty/Staff Interview Questions - November 2005, continued**

- *Faculty-student interactions—in-class participation, student access to faculty outside of class*
 - *Are mechanisms in place to support student-faculty contact?*
 - *What kind of interactions do you typically have with students during the term? Is there enough opportunity for meaningful contact w/students?*
 - *Student access to course materials, on-site resources, etc.*
 - *Scheduling at multiple remote sites*
 - *Access to student assignments, other information needed to evaluate performance and assign grades*
 - *Adequacy of turnaround time for reviewing assignments, grading tests, etc.*
 - *Timeliness of feedback to students*
6. Weekend nursing skills labs at COCC/SCMC
- *Scheduling during term—was adequate time scheduled for labs?*
 - *Need for make ups, additional lab time*
 - *Faculty available to teach—general, specialty areas*
 - *Students getting thru the curriculum and demonstrating skills/competencies*
 - *How did students benefit from coming together regularly on campus?*
7. Use of preceptor model for site-based clinical training
- *Preceptor selection*
 - *Training for preceptors*
 - *How well did the initial training workshop prepare preceptors for their responsibilities? Would you recommend any changes for the future? What do you recommend?*
 - *How was training provided to preceptors not in the original group? Adequate coverage for all sites? Recommendations for change?*
 - *Course materials available for preceptors*
 - *Ease of access to on-line materials*
 - *Clear guidelines re: learning objectives, specific competencies and skill levels for student clinical performance (skills checklist, etc.)*
 - *Regular visits by faculty to observe students and preceptors in the clinical teaching environment (patient rooms)*
 - *Frequency of observations? Any barriers to making these visits? What kind of barriers?*
 - *Mechanisms for feedback re: student-preceptor interactions*
 - *What is the role of COCC clinical nursing faculty related to preceptors and students?*
 - *Scheduling/matching clinical hours for students and preceptors*
 - *Types of problems encountered? Did the process improve over time?*
 - *Frequency/type of faculty communication with preceptors for conferencing, problem solving, etc.*
 - *Barriers to communication? Did communication change over time? If so, how?*

**Central and Eastern Oregon Nursing Education Project
COCC Faculty/Staff Interview Questions - November 2005, continued**

- *Access to feedback/input from preceptors re: student performance needed to evaluate and assign grades?*
 - *Guidance/tools provided to assist preceptors in their role—provide instruction, assess and document student performance, etc*
 - *What kinds of additional tools or guidance would be valuable to preceptors in the future?*
 - *Timeliness of communication between preceptors and COCC faculty members*
 - *Consistency of clinical training at all sites—Any factors you can identify that helped/hindered success at remote sites?*
 - *How does variety of clinical nursing experiences at rural hospitals compare with St Charles-Bend?*
8. Case management (included in this model based on research into other distance delivery programs for nursing)
- *Range of services, including tutoring, appropriate to facilitate student success?*
 - *Mechanisms for communication between case manager, faculty, preceptors and students--frequency of communication, etc.*
 - *Perceptions of contribution to student success*
 - *What should this function/role look like in the future? Any specific recommendations?*
9. Use of technology/Technology support
- *Resources/training for faculty to be successful as distance instructors*
 - *How comfortable were you/are you (now) with distance video conference delivery equipment?*
 - *Did you try anything new?--examples of new aspects of instructional technology introduced into the model*
 - *Reliability of delivery systems—clarity of transmission, downtime, etc.*
 - *Support for video conferencing at hub and remote sites*
 - *Support for use of Blackboard course management tools*
 - *How comfortable were you/are you (now) with use of on-line blackboard tools?*
 - *Student access to technology and support for student use*
 - *Other technology needs*
10. Students
- *Student preparation for nursing coursework*
 - *Student attendance and 'engagement' in distance format*
 - *Feedback provided directly to students re: their progress and performance*
 - *Type of feedback, frequency, consistency, how documented*
 - *How did students typically receive/acknowledge feedback from faculty?*
 - *Any difficulties encountered in giving feedback? How were those resolved?*
 - *Any additional thoughts or comparisons of this student group to the regular COCC student groups?*

**Central and Eastern Oregon Nursing Education Project
COCC Faculty/Staff Interview Questions - November 2005, continued**

11. Program support/logistics

- *Adequate space, equipment, etc. to meet with students and conduct business at remote sites*

12. Program management

- *Support from COCC admin/CEAHEC staff to help faculty do their jobs—did you have everything you needed to be successful?*
 - *Clear understanding of roles/responsibilities—and who is accountable for what. Did this change over time?*
 - *Documentation re: policies and procedures*
 - *Access to key project staff*
 - *Timely communication and access to essential information*
 - *Regular team meetings—Did you feel part of an interagency team w/CEAHEC and area hospitals? If not, why not?*
 - *Did you utilize AHEC staff as resources for working effectively with hospital sites? If not, why not? If yes, what did sort of assistance did they provide?*
 - *What do you see as the AHEC role in this project?*

13. As a faculty member engaged in this project, what was/is your biggest challenge?

- How have your perceptions of this project changed since it was originally implemented?

14. What do you see as the greatest strength of the project? Greatest weakness?

15. Bottom line: In your opinion, does the Distance NEP model provide a comparable learning experience for students in terms of access to instruction and course materials, labs and clinical experience? In terms of student success?

- If not, what (else—that hasn't already been mentioned) needs to be changed/improved to make that happen?

16. Is there anything we haven't covered? Anything more you would like to add?

**Central and Eastern Oregon Nursing Education Project
CEAHEC Staff Survey Questions – March 2006**

1. To what extent were you involved in the planning and design of this project?
2. Describe your role(s) and responsibilities related to this project?
3. How would you describe the Nursing Education Project (as a model for distance delivery of nursing instruction)—purpose, unique features, etc.—to someone who is unfamiliar with it?
 - How does the model differ from a traditional nursing program?
 - Do you believe the model has been implemented as it was originally planned?
 - If not, why not? Where does reality differ from the original design?
4. How effective was the distance delivery format utilized by this project (video conference + web-based tools) in terms of each of the following:
 - Providing content/didactic instruction in nursing theory?
 - Providing opportunities for student-faculty interaction?
 - Providing student access to course materials and on-line resources that supported instruction?
 - Engaging students in the learning process?
- 4a. What suggestions do you have for changing/improving this component of the model?
5. How did weekend sessions on the COCC campus or at SCMC contribute to skills attainment for students?
 - Did these sessions provide adequate opportunities for students to practice and demonstrate nursing skills?
 - In what other ways did students benefit from coming together regularly on campus?
- 5a. What suggestions do you have for changing/improving this component of the model?
6. How effective was the use of preceptors for site-based clinical training? What worked well/didn't work well in terms of each of the following:
 - Preceptor selection process?
 - Training for preceptors?
 - Availability of course materials, guidelines, and evaluation tools for preceptors?
 - On-going support for preceptors—site visits (by both AHEC and COCC staff), conferences, feedback, frequency of communication, etc.
 - Compensation or accommodation for preceptors by hospitals/employers?
- 6a. What is your general assessment regarding the consistency of clinical training/clinical experiences for students across all sites?

**Central and Eastern Oregon Nursing Education Project
CEAHEC Staff Survey Questions – March 2006, continued**

- 6b. What suggestions do you have for changing/improving this component of the model?
7. How well did the distance delivery technology utilized for this project support instruction and student learning at all sites?
- How reliable was the CONet delivery system—in terms of clarity of transmission, downtime, etc?
 - Was adequate technical support available for videoconferencing at SCMC and at remote sites?
 - Were training and technical support available for faculty to be successful as distance instructors?
 - How effectively were technology tools—Blackboard, chat rooms, etc.—utilized by project staff and students?
- 7a. What suggestions do you have for changing/improving technical support for delivering instruction via distance in the future?
8. Was the range of case management/support services provided by this project appropriate to facilitate student success?
- How frequent and how effective were communications between case manager, faculty and preceptors concerning student learning and student progress?
- 8a. Describe any problems/challenges encountered in the delivery of case management services. How were these resolved?
- 8b. In your opinion, to what extent did case management services contribute to student success?
- 8c. What should the case management function/role look like in the future? What suggestions do you have for changing/improving this component of the model?
9. How would you gauge the effectiveness of each of the following aspects related to students enrolled in this project:
- Selection process for incumbent worker students?
 - Student preparation for nursing coursework?
 - Student preparation to be distance learners?
 - Mechanisms for tracking student progress and identify/resolving problems that could hinder student success?
- 9a. What suggestions do you have for changing/improving these processes for future student cohorts?
- 9b. Do you have any additional thoughts regarding the NEP student cohort compared to students enrolled in a traditional Nursing program?

**Central and Eastern Oregon Nursing Education Project
CEAHEC Staff Survey Questions – March 2006, continued**

10. Regarding program logistics at hospital sites:
 - Did you have access to adequate space and equipment to conduct NEP business at remote sites—meet with students and staff, etc.?
 - Describe any problems related to scheduling classes and/or clinicals at hospital sites.
 - What else is needed at remote sites to support program delivery?

11. To what extent were the following elements in place for this project:
 - Stakeholder commitment to project success
 - Clear understanding of all partner roles/responsibilities
 - Clear reporting structure and lines of responsibility and accountability
 - Access to key staff at other partners—hospitals/employers, COCC
 - Timely communication and access to essential information among the partners
 - Regular meetings to coordinate implementation, review progress
 - Effective mechanisms to identify/resolve problems
 - Documentation of operating policies and procedures—for staff and students

- 11a. What recommendations do you have for managing a complex, multi-partner project like this in the future?

12. What do you see as the greatest strength(s) of the project? Biggest weakness(es)?

13. Bottom line: In your opinion, does the NEP model provide a learning experience for distance students that is comparable to traditional nursing programs—in terms of didactic instruction, labs and clinical training?
 - Is the model comparable in terms of student success?
 - If not, what (else—that hasn't already been mentioned) needs to be changed/improved to make that happen?

14. How would you describe the contribution of Cascades East AHEC to the success of this project?
 - What role do you see for CEAHEC in the future—in terms of meeting training needs for rural/frontier communities in your service area?

15. Is there anything we haven't covered? Anything more you would like to add?