



SOCIAL POLICY RESEARCH
ASSOCIATES

Evaluation of the Bellevue College Consortium's Health eWorkforce TAACCCT Grant Detailed Design Report

Revised December 30, 2013

Prepared for:

Bellevue College
Life Science Informatics Center
3000 Landerholm Circle SE
Bellevue, WA 98007

Project No.3432

Prepared by:

Deborah Kogan
Marian Negoita
Verenice Chavoya-Perez
Anne Paprocki
Miloney Thakrar

1330 Broadway, Suite 1426
Oakland, CA 94612
Tel: (510) 763-1499
Fax: (510) 763-1599
www.spra.com

CONTENTS

I. INTRODUCTION: PREPARING THE HEALTH INFORMATION TECHNOLOGY WORKFORCE	I-1
II. OVERVIEW OF THE EVALUATION.....	II-1
Conceptual Framework for the Evaluation	II-2
Evaluation Questions	II-4
Overview of Evaluation Components and Methods	II-7
III. EVALUATING THE EFFORTS OF THE COMMUNITY COLLEGES TO BUILD THEIR HEALTH IT TRAINING CAPACITIES.....	III-1
Developing and Managing a Consortium of Community Colleges	III-2
Infusing Health IT Content into Nursing and Allied Health Programs and Developing and Piloting New HIT Certificate and Degree Programs.....	III-4
IV. EVALUATING THE GRANT’S SPECIAL PROJECTS	IV-1
Overview of the Special Projects	IV-1
Overall Research Questions for Evaluation of the Special Grant-Funded Projects	IV-6
V. EVALUATING STUDENT EXPERIENCES AND STUDENT OUTCOMES.....	V-1
Evaluation Questions for the Study of Student Experiences and Outcomes.....	V-2
Data Elements and Data Collection Methods	V-3
Detailed Analysis Plan	V-13
VI. EVALUATION TIMELINE AND PRODUCTS.....	VI-1
Evaluation Timeline.....	VI-1
Reports and Briefings.....	VI-3
APPENDIX A: DATA COLLECTION PROTOCOL FOR GRANT ADMINISTRATIVE AND MANAGEMENT STAFF AT BELLEVUE COLLEGE	A-1
Project Context	A-1

Project Organization at the Consortium Level	A-1
Project Leadership.....	A-2
Supporting Curriculum Development and Piloting New Courses	A-3
Grant Management and Reporting	A-4
Disseminating Grant Products and Lessons Learned	A-5
APPENDIX B: DATA COLLECTION PROTOCOLS FOR COLLEGE- LEVEL SITE VISITS AND PHONE FOLLOW-UPS	B-1
Context of College Health IT and Nursing/Allied Health Programs	B-1
Organization and Staffing of Grant at College	B-3
Design of New HIT Certificate/Degree Programs	B-4
Design of HIT Infused Nursing or Allied Health Certificate/Degree Programs	B-6
Faculty Development Activities.....	B-8
Planned and Actual Student Enrollment by Program	B-9
Recruitment and Enrollment Procedures by Program	B-11
Providing Student Support by Program	B-13
Data Collection, Reporting, and Administration	B-14
Participation in Consortium Activities.....	B-15
Successes, Challenges, and Lessons Learned.....	B-16
APPENDIX C: DATA COLLECTION PROTOCOLS FOR THE GRANT’S SPECIAL PROJECTS.....	C-1
Center for Healthcare Information Research and Policy (CHIRP)	C-1
HIMSS (Health Information and Management Systems Society)National EMR Academic Library	C-3
National Veterans Health IT Apprenticeship	C-4
HIMSS (Health Information and Management Systems Society) National Veterans Career Services Initiative.....	C-6
Washington State Labor Council, AFL-CIO	C-7
Linda Reeder, Envision Consulting: Online Tool to Assess Readiness for Health IT Infusion.....	C-8
Washington Health Care Authority: Washington Health Information Industry – Education Council	C-9
APPENDIX D: TEMPLATE FOR LOG OF STUDENT SUPPORT ACTIVITIES PROVIDED TO INDIVIDUAL STUDENTS OR GROUPS.....	D-1

EXHIBITS

Exhibit II-1: Conceptual Framework for the Evaluation of the Health eWorkforce TAACCCT Grant.....	II-3
Exhibit III-1: Topics for the Consortium-Level Evaluation Activities	III-2
Exhibit III-2: Programs to be Developed or Expanded under the TAACCCT Grant	III-5
Exhibit III-3: Topics for Evaluation of College-Level Activities	III-6
Exhibit III-4: College-Level Respondents by Topic	III-9
Exhibit III-5: Schedule for a Typical Initial College-Level Site Visit	III-10
Exhibit IV-1: The Grant's Special Projects and Their Funding Allocations.....	IV-2
Exhibit IV-2: Topics for the Special Projects Evaluation	IV-6
Exhibit VI-1: Schedule of Project Tasks and Deliverables	VI-1

I. INTRODUCTION: PREPARING THE HEALTH INFORMATION TECHNOLOGY WORKFORCE

The emergence of health information technology (health IT) has begun to change the landscape of health care in the U.S. Electronic health records are increasingly being used to document patient care and monitor the costs and quality of healthcare services, technology tools are being applied to patient diagnosis and care, and large health information databases (“big data”) are being deployed in both healthcare management and research contexts. These developments have created a demand for workers with health IT skills and opened up new occupational fields with considerable growth potential.

Because the need for workers with health IT skills is growing and changing so rapidly, and because health IT includes tasks within a wide variety of work settings and for a broad range of employers, health IT jobs are not yet well defined, and the emerging health IT occupations and career pathways are still in flux.

Since 2003, Bellevue College has been at the forefront of identifying the knowledge and competencies needed by the health IT workforce and designing curricula to prepare workers to move into health IT jobs. In 2003, the U.S. Department of Labor chose Bellevue College to serve as the Life Science Informatics “Center of Expertise” for the National Center for the Biotechnology Workforce. The U.S. Department of Health and Human Services Office of the National Coordinator of Health Information Technology (ONC) subsequently funded Bellevue College to lead a 10-state Health Information Technology Consortium, the purpose of which was to expand the health IT field regionally through education and training so that healthcare providers would have the workforce necessary to implement electronic health records (EHRs) and achieve “meaningful use” of EHRs to qualify for incentive funding under the Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009.

Further, in 2010, the National Science Foundation funded Bellevue College and its partner—the Health Information and Management Systems Society (HIMSS)—to develop a national certification standard for workers entering the health IT field and to develop training curricula that can be used by community colleges and high schools to prepare learners to acquire that credential. As a result of the NSF grant, Bellevue College worked with HIMSS to develop the curriculum to prepare students for passing an exam for the Certified Associate in Health Information and Management Systems (CAHIMS) credential.

Under the current Health eWorkforce Consortium Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant, funded by the U.S. Department of Labor, Bellevue College is the lead college in a consortium of eight community colleges in Washington State and a ninth community college in Virginia funded to carry out a series of linked activities designed to build the capacity of community colleges to prepare students for a wide variety of health IT and nursing/allied health occupations. The TAACCCT grant emphasizes two distinct but complementary training goals: (1) preparing nursing and allied health workers to work in environments in which they are increasingly required to be competent in the use of electronic information systems for managing patient care and exchanging healthcare information with other users; and (2) preparing individuals to work in a variety of Health IT occupations. Specialists who can support the design, implementation, and maintenance of IT systems for a wide variety of healthcare-related functions, use information systems to manage healthcare quality and costs, and assess the effectiveness of different practices and services on patient outcomes.

Bellevue College has selected Social Policy Research Associates and its subcontractor, Washington State University's Social and Economic Sciences Research Center (SESRC), to conduct an evaluation to support the design and implementation of the Health eWorkforce Consortium Grant and to document its outcomes. The remainder of this design report describes the questions to be addressed by the evaluation and the methods that will be used to collect and analyze information as part of the evaluation.

Chapter II provides an overview of the evaluation's questions and methods. Chapter III describes the detailed data collection activities and protocols that will be used to address questions about the capacity-building activities of the project as carried out by the Health eWorkforce Consortium and the participating colleges. Chapter IV addresses how the evaluation will assess the grant-funded activities carried out by external contractors. Chapter V describes the data collection and analysis methods that will be used to address questions about the student experience and student outcomes. Chapter VI reviews the timeline for the study activities and written deliverables

II. OVERVIEW OF THE EVALUATION

The Health eWorkforce Consortium intends to break new ground by developing new online education and training resources and tools to prepare workers for entry into and advancement in nursing/allied health and health information technology occupations, both for consortium members and nationwide. The evaluation intends to document the design and implementation of the different activities of this initiative, to provide regular feedback to identify effective practices for sharing across the Consortium, and to provide support and guidance on strategies to address implementation challenges that are identified through the site visits and discussions with project staff. In addition, the evaluation will analyze administrative and survey data on student experiences and outcomes to identify what program designs and student characteristics are associated with desired outcomes, such as completion of educational programs, entry into employment and employment retention.

The evaluation described in this design report will assess project activities and accomplishments at both the system level and the individual student level. At the system level, the implementation study will focus how grant-funded activities build the capacity of the participating community colleges and other entities to prepare students for occupations that require knowledge and skills related to health information technology (health IT). The TAACCCT grant supports a multi-faceted set of capacity-building activities at the system level. For the participating community colleges, the grant supports (1) the development of new and enhanced course curricula to support the implementation of new health IT certificate and degree programs, (2) the infusion of HIT content into existing nursing and allied health programs, (3) the preparation and implementation of faculty development resources for HIT and nursing/allied health instructors, and (4) the delivery of student support services designed to enhance student success. Other grant-funded activities designed to build system-level capacity include the development of a federally registered veterans' health IT apprenticeship and a veterans career services initiative, as well as the establishment of a platform that allows students cloud-based access to health records software (EMR-STAR).

At the individual student level, the study of student experiences and outcomes will describe the outcomes achieved by individuals enrolled in the grant program, and analyze what program design factors and student characteristics are associated with desired outcomes (the completion

of educational certificates and degrees, obtaining employment (for program completers who were not employed at program entry) and increasing earnings (for program completers who were employed at enrollment).

Conceptual Framework for the Evaluation

Exhibit II-1 illustrates the context within which the Health eWorkforce Consortium grant is being implemented through activities carried out at the Consortium level as well as by staff and administrators at the participating colleges to support the development and implementation of new HIT courses and programs and HIT-infused nursing/allied health programs. This conceptual framework has guided the development of the evaluation questions and evaluation methods described in the remainder of this report.

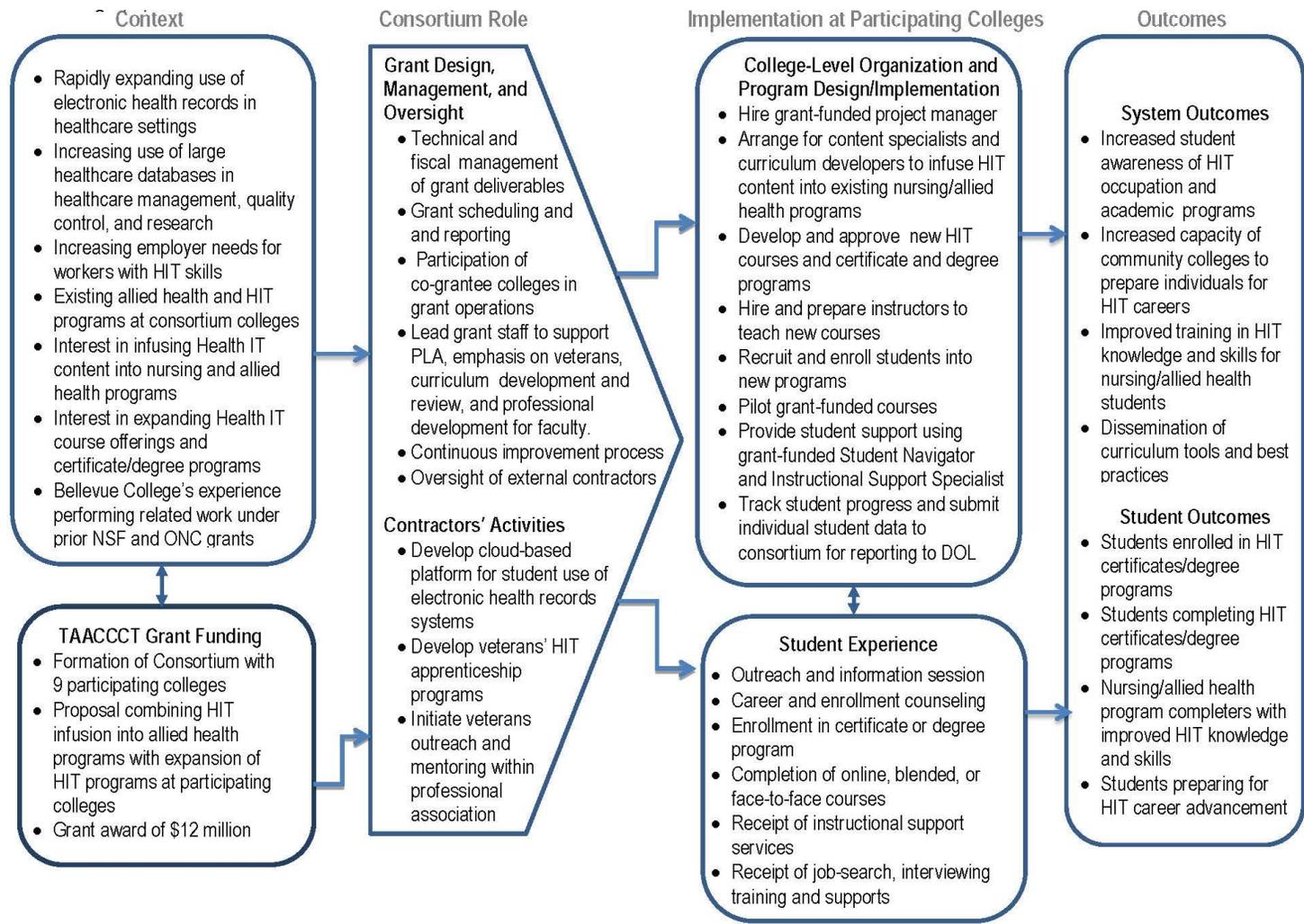
As shown in the column to the left in Exhibit II-1, the TAACCCT grant provided an opportunity for Bellevue College and its co-grantees to respond to the national context in which the use of electronic health records within hospitals and clinic settings is rapidly becoming the norm. In this context, designers of training programs for nursing and allied health practitioners need to prepare their students to work with electronic health records in varied work settings. In addition, most of the participating colleges were also interested in developing course offerings and certificate or degree programs in a variety of health information technology specializations. In designing its grant activities, Bellevue College was able to build on several of its previous grant-funded products, including the CAHIMS credential developed under a previous grant from the National Science foundation.

As shown in the left-center column in Exhibit II-1, the project is being shaped at the consortium level by the grant design, management, and oversight carried out by a team of lead grant staff members who provide fiscal and technical management and are responsible for overseeing the grant milestones and deliverables. The Bellevue College lead grant staff members also manage grant-funded activities being carried out by several outside contractors.

The upper right-center column in Exhibit II-1 shows the key implementation steps being carried out at the level of the individual colleges participating in the consortium, which result in the student experiences described in the lower right-center column of the exhibit. Among the key steps included in the evaluation are the infusion of health IT content into nursing and allied health courses and programs, the development of new courses and programs for the health IT occupations, the design of student support services, and the pilot testing of the new courses by the individual colleges.

The right-hand column in Exhibit II-1 describes the outcomes that the project intends to further at both the system level and student level.

Exhibit II-1: Conceptual Framework for Evaluation of the Health e-Workforce TAACCCT Grant



Evaluation Questions

As shown below, the Health eWorkforce TAACCCT evaluation addresses a number of overarching questions about the contextual factors that shaped the project design, the organizational features of the project, the capacity-building activities and their outcomes, and student experiences and student outcomes.

Contextual Factors that Shaped Project Design

- How has the consortium's understanding of the workforce skills needed by health IT and nursing/allied health professionals shaped the initiative?
- What existing strengths, including the partners' prior initiatives, can the partners leverage in building the new initiative? What gaps need to be addressed?
- How is the project influenced by information about the skills needed by workers in health IT occupations?

Organizational Features of Project

- How is the consortium organized in carrying out grant oversight and in designing and carrying out management functions? How does Bellevue College, as the lead college, guide the realization of grant goals? What are particularly effective organizational features or administrative practices? What challenges have been encountered that might be addressed through organizational changes?
- What challenges have individual colleges encountered in carrying out their assigned roles (e.g., in design, in curriculum development, in recruiting and training students, etc.)?
- What roles do outside contractors play in designing and implementing project activities? What challenges has Bellevue College encountered in managing the work of the outside contractors? What
- How effective are the procedures that have been developed for partners to communicate and coordinate their activities? How might these procedures be improved?

Grant-Funded Capacity Building Activities and Outcomes

- How well is the project meeting its goals for developing new HIT certificate and degree programs and getting them approved at the college level? What are practices worthy of note? What challenges have been encountered and how might they be addressed?
- How successful is the project in infusing HIT content into nursing and allied health curricula? What challenges were encountered and how have they been addressed?
- How did the consortium and the participating colleges go about revising their prior learning assessment procedures under the TAACCCT Grant and how were

these changes implemented? What new practices are particularly noteworthy? What challenges were encountered? What lessons were learned?

- How practices are being used to recruit students and enroll the targeted numbers of students in the new certificate and degree programs? What practices are noteworthy and could be shared across colleges? What challenges have been encountered and how have they been addressed? How might recruitment and enrollment practices be improved?
- How is the project designing and delivering professional development resources for faculty involved in teaching the health IT or health IT-infused course content or other interested faculty? What effective practices are worthy of sharing across colleges? What challenges have been encountered and how have they been addressed? How satisfied are instructors of the new courses with the support they received? How might professional development practices be improved?
- Across the Consortium, how are the colleges retaining and supporting students through program completion? What effective practices are worthy of sharing across colleges? What challenges have been encountered and how have they been addressed? How might student support services be improved?
- What has the project accomplished in developing a cloud-based resource for student access to electronic health records software programs in the classroom setting? What challenges were encountered and how have they been addressed? How satisfied are individual college instructors with these resources? To what extent are the EMR-STAR tools being used by the participating colleges? Do they plan to use them in the future? How could the EMR-STAR functionality or curriculum be improved?
- How successful is the project in developing and implementing a federally registered Veterans Health IT Apprenticeship program in two employer sites? What challenges were encountered and how have they been addressed? What challenges have been encountered and how have they been addressed? How could apprenticeship designs and implementation practices be improved? What lessons have been learned?
- How is the project recruiting veterans for enrollment in the new HIT and infused nursing/allied health programs? In supporting veterans so they can complete the programs successfully? What practices are noteworthy and could be shared across colleges: What challenges have been encountered and how have they been addressed? How could veteran recruitment and veteran support services be improved?
- What methods is the project developing for disseminating its resources for future use by others? How well developed are the dissemination strategies?
- What is the schedule for implementing the different grant-funded activities? How well has the project met its implementation targets?
- What are the opportunities for sustaining the grant-funded activities at the participating colleges after the end of the grant period?

Student Experiences and Outcomes

In recognition of the fact that the types and levels of grant-funded interventions are very different for students enrolled in new health IT programs and students enrolled in existing nursing/allied health that have been newly infused with HIT content, we have separated out the evaluation issues, below for these two groups.

Students Participating in New Health IT Programs

- What are the different ways students learn about the new health IT degree or certificate programs? What were the most frequently used ways students learned about their program?
- How satisfied are students with course content, instructional modes, and quality of instruction in the new HIT degree and certificate programs? Were there any trends in the type of instructional activities or modes of instruction that students across different programs found most helpful? Does there appear to be any association between instructional activities, mode of instruction and completion of program across the different program types?
- To what extent do enrolled students in the new health IT programs receive career information, career planning and development services, or job search/interviewing skills training? What types, levels, and models of support services do students perceive as most useful in promoting retention and successful completion?
- To what extent do students enrolled in the new health IT programs receive group or individualized instructional support services provided by project-funded staff members? How well do these support services meet the needs of students, according to the students?
- How does enrollment and completion in the new HIT programs influence the career and employment objectives of the enrolled students?
- What suggestions do students make for improving the quality of the new health IT programs?
- To what extent do enrolled students complete the new health IT programs?
- To what extent do students who complete their programs obtain employment?
- To what extent are students who complete health IT certificate or degree programs employed in health IT-related occupations?

Students Participating in Nursing/Allied Health Programs Infused with HIT Content

- Did the infusion of health IT content into the existing nursing/allied health programs make any difference in the programs' visibility or attractiveness to potential students?
- To what extent has the grant influenced the previous outreach and recruitment for students in the infused nursing and allied health programs?
- What different instructional modes are used in delivering the health IT-infused content?

- How satisfied are students with course content, instructional modes, and quality of instruction in the health IT-infused nursing and allied health programs? Were there any trends in the type of instructional activities or modes of instruction that students across different programs found most helpful? Does there appear to be any association between instructional activities, mode of instruction and completion of program across the different program types?
- How does enrollment and completion in the health IT-infused nursing/allied health programs influence the career and employment objectives of the enrolled students?
- To what extent do students enrolled in the grant-funded nursing/allied health programs receive career information, career planning and development services, or job search/interviewing skills training? What types, levels, and models of support services do students perceive as most useful in promoting retention and successful completion?
- How does enrollment and completion in the HIT-infused programs influence the career and employment objectives of the enrolled students?
- What suggestions do students make for improving the quality of the infusion of HIT content into nursing/allied health programs?
- To what extent do enrolled students complete their infused nursing/allied health programs?
- To what extent do students who complete their programs obtain employment? To what extent do they work in a setting that uses electronic health records?
- To what extent do employed students who completed nursing or allied health programs with infused health IT content use health IT knowledge and skills in their jobs?

Overview of Evaluation Components and Methods

In the remainder of this design report, we describe the detailed data collection and analysis procedures that will be used in each of the study components.

As described in Chapters III and IV of this report, the implementation study will document the design and implementation of the grant-funded activities at the consortium level, as well as the activities carried out by participating community colleges and outside contractors. In analyzing the implementation process, we will also focus on activities and accomplishments at the level of individual HIT and nursing/allied health programs that are being created or infused with TAACCCT grant funds. Data collection methods used as part of the implementation study will include reviews of relevant written materials; face-to-face and telephone interviews conducted with key respondents at the consortium, individual college, and contractor levels; and evaluator participation in monthly group online/phone conferences scheduled by different cross-college work groups (e.g. the Student Services group, the project's Continuous Improvement Cabinet,

and project managers at the participating colleges). Chapter III describes the site visits and ongoing telephone and e-mail contacts that will be used to document and assess the activities carried out by the centralized consortium staff members and participating community college project staff members. Chapter IV describes how the evaluation will track the progress and outcomes of activities carried out by external contractors.

The findings from the implementation study will be shared with the Consortium and college-level grant staff in one or two mid-project discussion sessions each year. To support these discussions, the evaluation study liaisons will compare notes with each other on what we are learning through our visits to and conversations with the different colleges, and develop cross-cutting observations and suggestions for improvement. The schedule for mid-project discussions will be developed at the convenience of the Consortium members. Discussions will be used to share the evaluation staff's observations and to facilitate sharing of best practices across the participating colleges. In addition, during briefings at the end of the second and third years of the study, the evaluators will present and discuss findings from the survey of current program participants. A formal briefing will also be provided towards the end of the project, on the findings in the *Final Study Report*.

As described in Chapter V of this design report, the student experiences and outcomes study will describe the experiences of enrolled students, the factors associated with program completion, and the factors associated with employment and employment retention achieved after program completion. Sources of data for this analysis will include

- data extracted from administrative records maintained by the consortium on individual students, student services, and educational and employment outcomes;
- information collected during online interviews with students currently enrolled in the grant-funded programs, conducted by the evaluation team during the spring of 2014 and the spring of 2015;
- information collected during telephone surveys with students who have completed health IT certificate or degree programs, conducted by the evaluation team in the spring of 2014, 2015, and 2016; and
- information about the services provided to enrolled students by grant-funded Student Navigators and Instructional Support Specialists, as reported on a log maintained by these staff members.

The analysis of the outcome data will be used to provide systematic description of student outcomes for each certificate/degree program and for each college, as well as for the overall project, and these outcomes will be compared to project milestones. In addition, we plan to conduct a multivariate analysis of the factors associated with student outcomes. The findings from the surveys of current participants will be summarized in briefings provided at the end of

the second and third grant years. The analysis of student outcomes will be summarized in the *Final Study Report*.

III. EVALUATING THE EFFORTS OF THE COMMUNITY COLLEGES TO BUILD THEIR HEALTH IT TRAINING CAPACITIES

The implementation study will document and assess the capacity-building activities funded by the TAACCCT grant in four areas: (1) developing and managing a consortium of community colleges, (2) developing and piloting new certificate and degree programs in health IT fields (3) infusing health IT content into nursing and allied health certificate and degree programs, and (4) carrying out special national projects conducted by external contractors. In this chapter, we describe the planned data collection and analysis activities to be followed in exploring the first three areas. Chapter IV describes how the evaluation will document the activities carried out by external contractors. Detailed data collection protocols for the implementation study are included in appendices to this design report.

To follow the progress of implementation and evaluate the accomplishments achieved under the TAACCCT grant, the evaluation team will review existing written materials (e.g. the grant proposal, MOUs with consortium members, curriculum materials and review comments, and statements of work for external contractors, as well as reports submitted to USDOL), visit sites annually to conduct face-to-face interviews (supplemented with quarterly telephone calls with key respondents at the consortium headquarters at Bellevue College), and observe the virtual and face-to-face inter-college meetings of grant-funded staff members on specific implementation topics. To explore program design issues from the student perspective, we will also invite two students participating in each certificate or degree program to participate in a face-to-face, online, or telephone interview or focus group with the member of the evaluation team who is the liaison to that college.¹ The topics covered in each site visit and call will evolve as the project evolves, and will update and build on the information collected during the previous data

¹ The voluntary student discussions carried out as part of the implementation study will be used to help describe the key features of the grant-funded programs. The students participating in these focus groups or individual discussions are not intended to provide a representative sample of all grant participants. Student identifying information will not be collected. As described in Chapter V, we will also conduct online and phone interviews with a larger group of enrolled students as part of the student experience and outcomes study.

collection activities. The data collection protocols included in Appendices A through C serve as master topic lists that will guide data collection throughout the evaluation period. Each topic will be covered at relevant points in the implementation of the projects.

Developing and Managing a Consortium of Community Colleges

The grant directly funds a management team at Bellevue College that oversees and administers the grant, directs a number of special grant-funded activities, coordinates the collaboration of the co-grantees through regular consortium-wide virtual and face-to-face meetings, and compiles quarterly reports for U.S. Department of Labor that summarize the accomplishments of the consortium. Among the lead grant staff members housed at Bellevue College are a team of technical experts who support the curriculum design and implementation of new health IT certificate and degree programs as well as the infusion of health IT knowledge and skills into existing nursing and allied health programs. Additional current and planned lead staff positions at the consortium level include a specialist in the design and implementation of prior learning assessments (PLA), a staff member who is responsible for faculty development activities, a Veterans Program Manager, and an Employment Specialist.

Exhibit III-1 identifies the topics that the evaluation will cover in documenting the organization and operation of the grant’s management and oversight functions. A detailed master protocol to guide the consortium-level data collection efforts is included in Appendix A. The key respondents for each topic include the grant director and key members of the project leadership and administration team at Bellevue College, including the curriculum development and review specialists, the employment specialist, the veterans specialist, and the reporting and data compliance manager.

Exhibit III-1: Topics for the Consortium-Level Evaluation Activities

Topics
Project Context
Increasing demand for workers with health IT knowledge and skills, both in health IT positions and for nursing and allied health professionals
Previous Bellevue College grants that provided a foundation for the TAACCCT grant; how the current grant is leveraging the capacity and products developed under previous grants
Organization at the Consortium Level
Grant leadership structure
Roles of lead staff members as experts and managers
Structures for communication and collaboration among co-grantees

Extent of cross-fertilization and exchange of curriculum design and implementation practices among participating colleges

Project Leadership Roles

Supporting colleges in developing new HIT certificate and degree programs,, designing new courses, and infusing HIT content into existing nursing/allied health programs

Supporting recruitment of students, particularly veterans, for enrollment in pilot courses/programs

Designing faculty development resources and providing training to prepare HIT and nursing/allied health instructors to teach new HIT course materials as well as other interested faculty

Supporting the design and delivery of student support services to increase student retention, successful program completion, and employment

Reviewing and planning for dissemination of grant products to a national audience

Supporting Curriculum Development and Piloting New Courses

Disseminating resources for colleges to use in developing course curricula

Guiding and reviewing curricula developed for health IT infusion and new health IT courses

Promoting information sharing and identification of effective practices among consortium colleges

Promoting use of CAHIMS curriculum by co-grantees developing new HIT programs

Assessment of the quality of the new curricula

Grant Management and Reporting

Monitoring grant deliverables and timelines

Overseeing progress on grant activities conducted by contractors

Data on enrolled students

Data analysis procedures and reporting formats

Disseminating Grant Products and Lessons Learned

Development of an expanded version of CAHIMS for dissemination through Open Learning Exchange

Health IT curricula and modules developed with grant funding

Opportunities to promote products developed by contractors with grant support

Conference presentations and other ways of disseminating lessons learned

An initial orientation site visit to Bellevue College occurred in early September 2013. Follow-up data collection, to document progress achieving grant milestones and deliverables, will occur during annual visits lasting one to one-and-one-half days in 2014 and 2015 as well as via quarterly telephone conference calls to key respondents during the second and third years of the grant. A detailed master protocol to guide the consortium-level data collection efforts is included

in Appendix A. Respondents will include the members of the project leadership and administration team at Bellevue College responsible for overall project planning and oversight, curriculum development and review, faculty development, and data collection and reporting.

Infusing Health IT Content into Nursing and Allied Health Programs and Developing and Piloting New HIT Certificate and Degree Programs

As described above, grant-funded staff members from each of the nine participating community colleges collaborate in the oversight and continuous improvement efforts of the consortium as a whole, under the leadership of Bellevue College as the grant manager. In addition, each of the participating colleges is responsible for developing and pilot testing one or more certificate or associate's degree programs in a health IT field and/or for infusing health IT content into an existing nursing or allied health certificate or degree program. In addition, each college is responsible for supporting enrolled students so that they will be successful in completing the program in which they are enrolled, and assisting them to find employment in the field in which they have been trained. Each of the participating colleges came to the consortium with different experiences and strengths in providing training in health IT content areas. The particular programs that will be expanded or developed using the TAACCCT grant funding build on these existing strengths. As summarized in Exhibit III-2, six of the nine participating colleges are developing health IT programs of study and eight participating colleges are expanding the course content for nursing or allied health programs to include health IT information and skills.

In each of the participating colleges, the TAACCCT grant is being used to support a full-time project manager and, in most sites, a part-time "student navigator" and an "instructional support specialist." Additional grant funds are available to each community college to provide compensation to the content specialists and curriculum specialists who work on developing the new courses or course modules that make up the new health IT programs and the new course content within the nursing and allied health programs that have been infused with health IT content.

**Exhibit III-2:
Programs to be Developed or Expanded under the TAACCCT Grant**

	Health IT	Nursing and Allied Health
Bellevue College	<ul style="list-style-type: none"> • CAHIMS Preparation (certificate) • Healthcare IT (Certificate) • Healthcare Data Analytics (certificate) 	<ul style="list-style-type: none"> • Nursing (Associates degree) • Radiologic Technology (Associates degree)
Bellingham Technical College	<ul style="list-style-type: none"> • Health Information Technology (certificate) 	<ul style="list-style-type: none"> • Nursing (Associates degree) • Radiologic Technology (Associates degree)
Clark College		<ul style="list-style-type: none"> • Pharmacy Technician (Associates degree) • Nursing (Associates degree)
Clover Park		<ul style="list-style-type: none"> • Hemodialysis Technician (certificate)
Northern Virginia Community College	<ul style="list-style-type: none"> • Health IT Career Studies (certificate) 	<ul style="list-style-type: none"> • Nursing (Associates degree) • Clinical Medical Assistant (certificate)
Pierce College	<ul style="list-style-type: none"> • Healthcare Data Base Management and Design 	<ul style="list-style-type: none"> • Medical Office Assistant
Renton Technical College		<ul style="list-style-type: none"> • Medical Assistant (certificate or Associates degree)
Spokane Community College	<ul style="list-style-type: none"> • Mobile Health Information Technology (certificate) • Mobile Health Software Development (certificate) • CAHIMS Preparation (Certificate) 	<ul style="list-style-type: none"> • Infusion of Health IT into existing Health Information Management Program (Associates degree)²

² Note: This program does not fit exactly into either category. It is an existing Health IT program that is receiving some additional infusion of Health IT content under the grant.

	Health IT	Nursing and Allied Health
Whatcom Community College	<ul style="list-style-type: none"> • Health Information Privacy and Security 	<ul style="list-style-type: none"> • Medical Assistant (certificate or Associates degree) • Physical Therapy Assistant (Associates degree) • Nursing (Associates degree)

Although a number of the evaluation topics apply across all the grant-funded programs, the evaluation issues are somewhat different for the “infused” nursing and allied health programs and the new health IT programs. For example, we will devote more attention to efforts made by the new health IT programs to publicize the new programs and recruit interested students, because the existing nursing and allied health programs are likely to already have established outreach and student recruitment practices that do not have to be dramatically transformed as a result of the infusion of health IT content into the curricula. As another example, in documenting the curriculum content, we will have a relatively narrow focus on the content of the health IT courses or course modules in the nursing and allied health programs, whereas we will review the entire program curricula for the new health IT programs.

Exhibit III-3 lists the summary topics that the evaluation will explore during annual site visits to each college during 2013, 2014, and 2015 and through follow-up telephone conversations between the scheduled site visits. The detailed interview protocol that will guide the college-level data collection is located in Appendix B. Where topics or questions apply only to one type of program (e.g. infused nursing/allied health programs or new HIT programs), we have indicated this in the detailed interview protocol in Appendix B.

**Exhibit III-3:
Topics for Evaluation of College-Level Activities**

Context of College Health IT and Nursing/Allied Health Programs

Extent of HIT content in programs and courses prior to grant

Participation by department or division heads/program head in supporting the implementation of the new health IT programs/courses and infused nursing/allied health programs/courses

Experience with online and/or blended courses prior to grant

Roles played by college and program administrators in program development and implementation

Organization and Staffing of Grant at College

Recruitment and selection of TAACCCT grant project manager, student navigator, and instructional support specialist

Roles of different grant-funded staff members over time

Staff members involved in curriculum design: curriculum developers and content experts

Design of New Health IT Certificate/Degree Programs

Developing program parameters: skills to be taught, length of program, certificate/degree

Students appropriate for new programs: prerequisite courses or skills/experience necessary for success

Occupations/jobs students will be qualified to hold after completing program

Process of development and review of program and curriculum plans

Instructional modes (online, blended, classroom-based) and evidence-based instructional features

Assessment of the quality of the new curricula by Consortium curriculum specialists: strengths and weaknesses

Design of Health IT-Infused Nursing and Allied Health Certificate/Degree Programs

Identification of core health IT competencies to be infused into program

How health IT content is being inserted into existing curriculum (separate course, separate module, how integrated with existing instruction)

Process of development and review of infused content

Instructional modes and use of evidence-based instructional features

Faculty Development Activities

Identification of instructors for piloting courses and for ongoing instruction

Participation of faculty in professional development activities

Assessment of how well available resources meet faculty development needs

Student Enrollment in New Programs

For each program, planned and actual enrollments, by entry cohort

For each program, expected and actual program completions, by entry cohort

Recruitment and Enrollment Procedures by Program

Partners in recruiting and referring potential students to the program

Recruitment practices for nursing/allied health and health IT programs at participating colleges

Special efforts to reach veterans, TAA-eligible individuals, and incumbent workers

Screening for prerequisites and developing prior learning assessments for existing knowledge and skills

Counseling students on whether program is a good match for their skills and experience

Recruitment successes and challenges
Providing Student Support, by Program
Range of student support services provided by grant-funded staff members and by staff members elsewhere in college
Variation in delivery of supportive services (health IT versus nursing/allied health, and online versus class-room based instruction)
Examples of the challenges faced by enrolled students and how they are addressed
Recommendations for improving student support services
Data Collection, Reporting, and Administration
Methods used by project manager to track college progress and deliverables
How data on enrolled students are collected and recorded at the college level
Timing and content of progress reports to consortium
Participation in Collaborative Activities
Description of monthly inter-college telephone conference calls on various topics
Issues addressed at calls and decisions made
Suggestions for improving collaboration among colleges
Successes, Challenges, and Lessons Learned
Challenges and lessons learned re: design of new health IT certificate and degree programs
Challenges and lessons learned re: infusion of health IT content into nursing and allied health programs
Challenges and lessons learned re: recruitment and student support services
Assessment of success of new programs by college faculty and administration; opportunities for improvement
Sustainability issues by program

As discussed previously, the particular implementation of study topics that will be emphasized during each year of the project will evolve, depending on the phase of project implementation. Thus, for example, the development of new course curricula will be emphasized during the first study year, while the provision of job search support and placement assistance to students who complete the programs will be emphasized during later data collection activities.

Exhibit III-4 shows which topics will be emphasized by respondent type. Exhibit III-5 presents a typical schedule for a one- to two-day college-level implementation study site visit. Prior to a site visit, the evaluator will provide advance notice of the topics to be covered, and may request materials to review in advance, if these have not already been obtained from Bellevue College. Prior to the visit, the site visitor will review all materials relevant to grant activities at that

college, including program outlines, curriculum designs and review comments, and quarterly reports to the consortium submitted by the time of the site visit. The site visit schedule will be developed in collaboration with the college project manager.

**Exhibit III-4:
College-Level Respondents by Topic**

Topic	College Administrators*	Project Manager	Curriculum Developers*	Recruitment Partners	Instructors for New or Infused Courses	Student Support Staff	Several Participating Students
Context of College Health IT and Nursing/Allied Health Programs	X	X					
Organization and Staffing of Grant at College		X	X			X	
Design of New Health IT Certificate/Degree Programs	X	X	X				
Design of Health IT-Infused Nursing and Allied Health Certificate/Degree Programs	X	X	X				
Faculty Development Activities	X	X			X		
Student Enrollment in New Programs		X				X	
Recruitment and Enrollment Procedures		X		X		X	X
Providing Student Support		X			X	X	X
Data Collection, Reporting, and Administration		X			X	X	
Participation in Collaborative Activities		X				X	
Successes, Challenges, and Lessons Learned	X	X		X	X	X	X

* It may not be possible to interview college administrators or curriculum developers who are no longer working at the college at the time of the implementation study data collection. To the extent possible, we will obtain this information from other respondents.

**Exhibit III-5:
Schedule for a Typical Initial College-Level Site Visit**

Day 1

	Activity	Respondents
9:00 – 9:30	Group orientation to goals of visit	Project manager, student navigator, instructional support specialist; college administrator, as available
9:30 – 10:30	Discussion of role of project manager in guiding grant-funded activities, collecting required data, and participating in consortium-level activities	Project manager and data manager, if appropriate Ask for copies of any additional materials relevant to courses or student support services developed under grant
10:30 – 12:00	During any single sit visit, we may not have time to participate in a detailed discussion of curriculum development and approval process for all of the courses developed or infused during the grant. (During multiple site visits and follow-up calls, we will cover all the grant-funded curricula.)	Content specialist/curriculum development staff
Lunch		
1:00 – 1:45	Discussion of role of college administrators in supporting and overseeing new programs and grant-funded activities	Division or department head and/or program manager sponsoring the new certificate or degree programs
1:45 – 2:30	Discussion of student recruitment activities	Project manager, student navigator, and other entities participating in recruitment
2:30 – 3:30	Discussion of student support services	Student navigator, instructional support specialist
3:45 – 4:30	Focus group with two participating students	Student volunteers
4:30 – 5:00	Review and planning for second day	Project manager

Day 2

	Activity	Respondents
9:00 – 10:00	Observation of class session, if feasible	Instructor
10:00 – 11:00	Meeting with instructor, Course 1	Instructor, Course 1
11:00 – 12:00	Meeting with instructor, Course 2	Instructor, Course 2
Lunch		
1:00 – 2:30	Discussion of data collection and reporting	Project manager
2:30 – 3:00	Exit interview and discussion of next steps	Program manager, student navigator, instructional support specialist

IV. EVALUATING THE GRANT'S SPECIAL PROJECTS

In addition to developing the capacity of individual community colleges to train health IT workers, the grant also funds a number of special projects designed to enhance the field at a systems level. The projects aim to fill gaps in health IT education that curricula alone could not address, such as the current inaccessibility of EMR (electronic medical records) software for educational use. The implementation study will describe and evaluate these special projects. Carried out by contractors, the special projects can be grouped into three major areas:

- Promoting student access to EMR software for academic use
- Conducting targeted outreach to veterans and TAA-eligible individuals and providing special opportunities to recruit and train them for jobs in the health IT sector
- Increasing the capacity of colleges to provide strong health IT education through self-assessment and shared feedback between employer and education stakeholders

All of the special projects support the grant's overall goal of developing resources to prepare individuals to use health IT knowledge and skills in nursing/allied health and health IT occupations.

This chapter describes the special projects and then details the data collection methods that will be used to track the progress and outcomes of each of these contractor-led activities. The evaluation team will read all special project contracts, attend webinars designed to introduce and train faculty on the projects, and conduct interviews with key stakeholders. These interviews, which will take place during the quarterly telephone calls and implementation site visits described in Chapter 3, will involve grant administrators and task leads at Bellevue College, the contractors themselves, and involved students, faculty, and employers.

Overview of the Special Projects

Exhibit IV-1 lists the grant's special projects and the funds allocated for contracts with outside entities for completion of these projects. Detailed protocols for documentation of each of the special projects are located in Appendix C to this report.

**Exhibit IV-1:
The Grant's Special Projects and their Funding Allocations**

Contractor	Project	Funding Allocation
Center for Healthcare Information Research and Policy (CHIRP)	Development of cloud-based academic EMR software resource	\$1,294,172
Health Information and Management Systems Society (HIMSS)	National EMR Academic Library	\$244,839
Lynn Wilson, Consultant	National Veterans Health IT Apprenticeship	\$108,182
Health Information and Management Systems Society (HIMSS)	National Veterans Career Services Initiative	\$300,639
Washington State Labor Council, AFL/CIO	Help conduct outreach to TAA-eligible individuals and veterans	\$13,394
Linda Reeder, Consultant	Self-study tool to assess readiness for health IT Infusion into nursing and allied health instructional programs	\$12,600
Washington Health Care Authority – WA Health Information Industry Council	Council to create continuous loop feedback for employers and educators	\$229,476

Making EMR Software Tools Available to Students

Contract with Center for Healthcare Information Research and Policy (CHIRP). Bellevue College has contracted with the Center for Healthcare Information Research and Policy (CHIRP) to design EMR-STAR, a cloud-based national academic resource for electronic medical records. Currently, the lack of academic access to EMR systems holds students back from entering the health IT sector, as many employers will only hire applicants who have had experience using such systems. Because access to proprietary EMR systems is expensive, few students have hands-on experience in using this software prior to seeking employment in the field. Bellevue College believes that by creating academic access to EMR systems through their cloud-based resource they will enable students to become familiar with the software, thus making them stronger candidates for health IT positions. CHIRP is tasked with designing EMR-STAR to enable students to work with proprietary and open-source EMR systems software during their

student training. During the grant period, CHIRP will develop an initial open-source platform for use by students, develop curricula that educational programs can use to provide their students with hands-on experience using EMR systems, assist participating colleges using EMR-STAR systems for academic use, and provide support for student and faculty use of the system.

As part of the evaluation's implementation study, members of the study team will conduct discussions with Bellevue College grant administrators, the CHIRP project director, and faculty and students who have had the option of using EMR-STAR as part of their coursework. Among the issues to be addressed are how availability of a cloud-based EMR platform assists instructors in giving students access to EMR software applications; whether the current version of EMR-STAR meets the needs of students, faculty, and employers and what about the system could be improved.

Contract with Health Information and Management Systems Society (HIMSS) for a “National EMR Academic Library.” In addition to arranging for the development of EMR-STAR, the cloud-based platform for academic use of EMR software, Bellevue College, as the TAACCCT grant administrator, has contracted with the Health Information and Management Systems Society (HIMSS)—the largest professional association in the health IT field—to develop a library of proprietary and open-source EMR systems to be used with the new platform. The goal is so ensure that students and faculty can gain exposure to as many of the different EMR software packages as possible.

The plan is that HIMSS will serve as a neutral broker to create the academic library. The hope is that proprietary EMR software companies will allow EMR-STAR to offer academic access to their products. Bellevue College believes that HIMSS can be successful in negotiating access to proprietary EMR systems because of its status as a professional association representing a large number of health IT industry employers.

To document the progress of the HIMSS National EMR Academic Library project, evaluation staff members will hold discussions with the HIMSS Program Manager for the EMR-STAR Academic Library, as well as with the Bellevue College grant administrators. Among the issues to be addressed are how the EMR Academic Library will supplement the open-source software programs currently being included in the EMR-STAR platform; how to overcome challenges Bellevue College and the Program Manager may encounter in getting proprietary EMR software providers involved; how the project ultimately benefits students and faculty; and whether and how it can be sustained as a low-cost resource for academic use beyond the period of the grant.

Recruiting Veterans to Careers in Health Information Technology

Develop a National Veterans Health IT Apprenticeship, with support from an outside contractor. As part of its goal to recruit veterans to careers in health information technology,

Bellevue College plans to use grant funds to develop two federally registered apprenticeship programs in health IT for veterans. To support the development of these programs, Bellevue College is working with an outside consultant who is an expert on federally registered apprenticeships. Among other tasks, the consultant will help interested employers design the apprenticeship programs (including both work- and classroom-based training content), develop the apprenticeship standards required for approval from the USDOL Office of Apprenticeship, support employers in apprenticeship implementation, monitor progress, and craft a career pathways lattice document. The grant will also fund an administrative apprenticeship coordinator to assist with the job search/placement process once apprentices have completed their one-year training. Although the initial cohort of veteran apprentices will be small, the goal is that the apprenticeship models developed during the grant will be disseminated for use in other locations throughout the nation in the future.

To document progress in developing the veterans apprenticeship project, members of the evaluation team will conduct discussions with grant administrators at Bellevue College and with the outside consultant working on this project; they will also reach out to USDOL's Office of Apprenticeship for comment. Once employers and apprentices are on board, the evaluators will also contact these stakeholders. Among the issues to be addressed are the specific goals for both employers and trainees in each apprenticeship program, the challenges experienced in finding worksite sponsors and getting federal certification, and how well students and employers believe the program prepares veterans for careers in health IT.

Contract with the Health Information and Management Systems Society (HIMSS) for the National Veterans Career Services Initiative. In addition to developing a national veterans apprenticeship in health IT, the consortium will contract with HIMSS to promote opportunities for veterans in the field of health IT. The aim of the National Veterans Career Services Initiative is to support veterans transitioning to the field through a combination of mentoring and professional development (including webinars and a blog), as well as through the creation of a "Heroes Welcome to Health IT" at the national HIMSS conference, among other activities. These tasks will be carried out by a project manager hired exclusively for this project by HIMSS.

To evaluate the National Veterans Career Services Initiative, the evaluation team will interview the HIMSS project manager as well as the grant administrators at Bellevue College. If possible, the evaluators will talk to veterans recruited by the HIMSS initiative for involvement as mentors or mentees. The evaluation will focus on questions such as how the initiative's activities, such as mentoring, webinars, and conference participation, have encouraged veterans to enter the health IT workforce and what types of professional development support they receive once they enter the field.

Contract with the Washington State Labor Council, AFL-CIO, to assist with outreach to veterans and others. Washington State Labor Council, AFL-CIO, will promote the grant’s health IT educational programs to veterans, eligible spouses, and TAA-eligible individuals in Washington State. The goal is that this will be accomplished through informational sessions on TAA eligibility and services for student navigators at the participating colleges and at outreach sessions at local WorkSource providers during each of the first two grant years.

To assess the effectiveness of the role played by the staff members from the Washington State Labor Council, the evaluators will hold discussions with Bellevue College grant administrators, student navigators, and involved Washington State Labor Council staff members about the outreach activities that have been carried out with grant funding and how these activities have succeeded in generating interest in the health IT field among TAA-eligible individuals and veterans and eligible spouses. The evaluation will attempt to document recruitment challenges as well as effective outreach strategies.

Increasing Colleges’ Capacity to Provide Health IT Education through Self-Assessment and Shared Feedback

Contract with an individual consultant for development of a self-assessment tool. Through a small consulting contract with an individual with expertise in helping nursing programs infuse health IT content into their curricula, the grant is supporting the development of an online self-assessment tool that college departments can use to determine whether their current nursing and allied health curricula properly address health IT industry knowledge and skills. The consultant retained under this contract will also consult with colleges to assist them in their implementation of curriculum infusion plans.

As part of the evaluation, the evaluators will confer with the grant administrators at Bellevue College as well as with some of the participating college departments that were given the option to take the online self-assessment tool. The purpose of these interviews will be to assess how well the tool worked to determine “readiness” for infusing health IT content into nursing or allied health programs. In addition, the evaluation team will obtain and review a copy of the self-assessment tool developed under this contract.

An Interagency Agreement with the Washington Health Care Authority: Washington Health Information Industry-Education Council. TAACCCT Grant funds are supporting a half-time program manager for the Washington Health Information Industry-Education Council, which will be a body with high-level representation from health IT employers and a continuum of education stakeholders in Washington state from K-12 schools through post-secondary institutions. The objective of this council is to promote dialogue and information exchange

between the industry and education stakeholders so as to better align the state’s health IT education offerings with the skills and competencies valued by employers.

To evaluate this special project, the members of the evaluation team will hold discussions with the council project manager, review the activities of council staff members and representatives, and assess the reports produced under the sponsorship of the council. In addition, the evaluators will ask about the value of the council activities in interviews with the Bellevue College grant administrators. The evaluation will address the following topics: the effectiveness of the council in creating a continuous feedback loop among industry and education stakeholders and the influence of the council on improving the responsiveness of the education system to employer priorities.

Overall Research Questions for Evaluation of the Special Grant-Funded Projects

Because each of the special projects involves a host of participants, including staff members hired by the contractor organization, grant administrators and task leads at Bellevue College, faculty, students, and in some cases employers, the evaluators will conduct discussions with representatives of the contractors as well as with Bellevue College administrative staff members who are overseeing and working with these contractors to complete the projects. Exhibit IV-2 lists the general questions that we will explore for each of the special projects. As noted previously, Appendix B contains a more detailed list of probes broken out by special project.

Exhibit IV-2: Topics for the Special Projects Evaluation

Background and Goals
What is the need for the project? Why is it an essential part of the grant?
How was the contractor selected? What does the contractor bring to the project?
Who was involved in selecting each approach (industry, grant administrators, faculty, contractor, etc.)? What is the context in which the project was designed?
What are the goals for the project? What would need to happen for it to be considered a success?
Planned Activities
What tasks will be completed as part of the grant? What is the overall timeline for the project?
Who is responsible for completing each task?
What kind of communication and feedback exists between the grant administrators and the contract staff?
Are there plans to sustain the grant-funded activities beyond the period of the grant? If so, how will this occur? Who is involved in making it happen?

Progress to Date

How is the project unfolding?

How are students/faculty/employers responding to the project?

What have been the challenges and roadblocks in implementing the project?

What aspects of the project have been successful so far?

What are the next steps for the project?

Faculty, Student, and Employer Opinions, as Relevant

How is the project affecting the way faculty members teach?

Which departments are using the project and which are not? Why?

Has the project been built into faculty courses? Why or why not?

What could be improved about the project (in the opinion of students, faculty, and employers)?

How is the project benefitting students?

What challenges were encountered in implementing or using the project?

For students: How is your participation in the project changing how you think about your career path? Has it had an impact on your career progression?

Lessons Learned

What would you do differently in implementing or using the project, knowing what you do now?

Have any adjustments in project processes, goals, or outcomes been made? If so, why?

V. EVALUATING STUDENT EXPERIENCES AND STUDENT OUTCOMES

As documented in the previous chapters, the Health eWorkforce Consortium is developing a multi-layered effort featuring interventions at the consortium, college, program and individual student levels. Ultimately, however, the objectives of the interventions— training faculty, developing curricula, and expanding student support services, for example—are to increase the capacity of the participating colleges to prepare individual students for employment in the nursing/allied health and Health IT fields. The quantitative study component will document the experiences of enrolled students as they advance through their programs, study the educational and labor market outcomes enrollees obtain after graduating from these programs, and identify factors associated with successful outcomes.

One of the most important goals of the student outcomes study is to identify what features of the TAACCCT-funded initiative, at the level of both the system and the individual student, are associated with positive outcomes such as program completion, post-graduation employment, and post-graduation earnings. Identifying these features will offer evidence about “what works,” and this information will in turn enable the consortium to fine-tune its future strategies. In addition, this evidence will be potentially useful to other colleges seeking to establish similar sector-focused initiatives, particularly those in the health IT field.

In keeping with the wishes of the Health-eWorkforce Consortium, our proposed research design does not include a net impact study. A net impact study would have assessed the impact of the grant-funded activities by comparing outcomes of a treatment group of TAACCCT grant participants with a control group of individuals who did not receive any TAACCCT grant-funded services. To undertake this type of study, the evaluation team would have had to randomly assign individuals to either the treatment or the comparison group before program participation. In this case, however, random assignment was not feasible, in part because participation in the program began before SPR was awarded the evaluation contract.

A quasi-experimental impact study using a matched comparison group could have provided another way to assess program impacts. This kind of study would have identified a comparison sample of individuals who are similar to the students participating in the grant-funded courses of

study but who receive only education and other services that were in place prior to the TAACCCT grant. After a detailed discussion with the Health eWorkforce Consortium about the possibility of using this kind of study design, we determined that it would be difficult to identify an appropriate comparison group or groups to which the grant participants' outcomes could be compared. The grant is supporting the development of 9 new HIT certificate and degree programs in 6 different community colleges in two states, none of which have a precursor that is being "improved" under the grant. For the remaining students, who will be enrolled in 13 ongoing nursing and allied health programs in 8 different community colleges, because the infusion of Health IT content is only a small portion of the overall academic content of the program, it would be difficult to identify the separate effect of the infused content from a number of other factors that may influence observed student outcomes. Further, we recognized that a quasi-experimental impact study would be unlikely to add value to the understanding of the individual programs, because the interventions created with grant funding are so diverse (these programs have different curriculum content, are targeted to potential students with different educational backgrounds, and are preparing students for a wide variety of occupations in the healthcare field).

Thus, the outcome evaluation described below is limited to a description of student outcomes and an analysis of factors associated with successful and less-successful outcomes. Although it is less rigorous than other approaches, this evaluation will nevertheless allow us to make some inferences about the possible impacts of the project's interventions.

Evaluation Questions for the Study of Student Experiences and Outcomes

The conceptual framework described in Chapter II gives rise to the following key questions for the analysis of student experiences and outcomes:

- How many students were enrolled in each of the new HIT programs developed under the Health eWorkforce Consortium grant?
 - How many different cohorts entered each certificate or degree program? When was each cohort scheduled to complete its program?
 - How many individuals actually completed their program during the study period?
 - How many individuals discontinued their studies before program completion?
What are the reasons that students dropped out before completion?
- How many students were enrolled in each of the nursing and allied health programs that were infused with HIT content under the grant?
- For the new HIT programs, how well prepared were students for the programs in which they were enrolled?

- How does program completion vary by available measures of a student’s prior education and work experience?
- How does post-program employment vary by available measures of a student’s prior education and work experience?
- For the new HIT programs, how satisfied were students with various components of the program, including program content, quality of instruction, and interaction with Student Navigators and instructional support specialists? Did any patterns emerge across programs on what types of instruction students identified as useful?
- For the nursing and allied health programs, how satisfied were students with support received from grant-funded Student Navigators and instructional support specialists (if relevant). Does there appear to be any association between instructional activities, mode of instruction and successful completion of program across the different programs?
- What were the outcomes of participation in the program, including average program completion rate, average post-program employment status, and average quarterly earnings after program completion?
- What features of the intervention were positively associated with students’ outcomes, controlling for other variables? Were these factors different for students enrolled in health IT certificate programs compared to students enrolled in nursing and allied health IT-infused programs?

Data Elements and Data Collection Methods

The data for the study of student experiences and outcomes will come from the following sources: the intake form completed at program registration; college records; earnings records maintained by the state agency that administers unemployment benefits; student support notes developed by Student Navigators; and student surveys to be conducted by SPR. We briefly describe each of these sources, together with data transmittal methods, below. These data sources will be available both for those in health IT certificate/degree programs as well as for those in nursing and allied health programs infused with health IT content.

SPR will prepare a detailed protocol for review by the Bellevue College Institutional Review Board that details how the rights of students will be protected during the proposed data collection, and how data security and confidentiality of personal data will be ensured. As the evaluation contractor hired by Bellevue College to complete the Health eWorkforce TAACCCT Grant evaluation, we anticipate that the IRB will approve our access to personal identifiers and contact information for the narrow purposes of conducting the student surveys described in this evaluation design report, as long as the necessary confidentiality and data security precautions are undertaken.

Our preferred procedure for obtaining the data from project administration records described below—including student application data, data on program entry and completion dates, data on student support services received, and post-program quarterly employment and earnings data—will be to have Bellevue College merge the data from the multiple sources described below for individual students enrolled in the program and to strip all personal identifiers (name, address, and contact information) before providing the student-level data to SPR.

The one exception to the procedure described above is that SESRC will need to receive the contact information (names, e-mails, and telephone numbers) for enrollees in order to administer the student surveys described below.

Student Intake Form

Students complete this form after they enroll in the grant, but only after the add/drop period has passed (to avoid enrolling students as TAACCCT grant participants who drop during this period). The intake form collects the following data items:

- Personal information: name, date of birth, student ID, address, email, phone³
- Demographic information: gender, race, student status (full-time vs. part-time)
- Employment status at grant enrollment
- Veteran status
- Disability
- Pell Grant eligibility
- Trade Adjustment Assistance (TAA) eligibility
- Highest level of education completed

The Consortium has agreed to add the following data items to its intake form for use in the evaluation:

- Prior completion of post-secondary degree or certificate in the following fields:
 - Healthcare (nursing or allied health field)
 - Information technology (not in the healthcare field)
 - Healthcare information technology
- Number of months of previous work experience in the following areas:
 - Delivery of healthcare services in nursing or an allied health field

³ We plan to secure data from the consortium's administrative records for the evaluation after the data from different sources have been merged and after the personally identifiable information (name, date of birth, street address, and e-mail address) has been stripped from the records and replaced by a study ID. The only exception is the need of SESRC to obtain access to identities and contact information for the students that will be invited to participate in surveys of program participants and program graduates.

- Information technology (not in the healthcare field)
- Healthcare information technology

College Records

All the participating colleges send the consortium a quarterly spreadsheet containing student-level information required to calculate the performance outcomes requested by the U.S. Department of Labor (DOL). Together with the information contained in the intake form (described above), the spreadsheet contains the following data items:

- Completed at least one certificate or degree (Yes/No)
- Exited or withdrawn from the program (Yes/No)
- Moved on to other non-grant education (Yes/No)
- Credit Hours Completed
- Degree title
- Earned or completion date
- Length of certificate program (one year or less, more than a year)
- First certificate (Yes/No)
- First degree (Yes/No)

We have requested that the consortium provide us with the following data elements to its administrative data collection system, if these data are not already collected on the student outcome spreadsheet:

- Certificate or degree program entered
- Academic quarter of entry into program
- Quarter of program completion

State Wage and Unemployment Compensation Records

The Health eWorkforce Consortium's Reporting and Data Compliance Program Manager has been granted permission to access Employment Security Department (ESD) records to retrieve employment and wage data on the TAACCCT grant participants. As we understand it, this data will be extracted once a year. At the end of the data collection period, we would like to receive a file containing the following data items for each program graduate, from the quarter of program completion through the 4th calendar quarter of 2015.

- Employment status by quarter
- Industry/occupation of employment
- Earnings by quarter

Student Support Services Data

SPR has requested that Student Navigators to use to collect information on the reasons individuals drop out before completion of their certificate or degree programs. (Possible reasons might include: change in career interest, pressing financial needs precluded program completion, personal issues, academic difficulties, other.) In addition, SPR has requested that each college participating in the grant arrange for the staff that provide student support services to maintain a support services contact log” in which Student Navigators or Instructional Support Specialists would make entries after each individual contact with a student. This log will include the student identifying information, the date of the contact, and the category of support provided in each student contact (academic coaching/support; career coaching/job search skills training and placement support; assistance with life issues and/or personal challenges). The Excel Spreadsheet in Appendix D is one example of how a college might want to structure this data collection. Each college will develop its own data collection instrument.

Student Surveys

As part of the evaluation, SPR’s subcontractor, the Social and Economic Science Research Center (SESRC) at Washington State University, will conduct two surveys: an online survey of current students, and a telephone survey of program graduates. All program graduates will additionally be invited to participate in a post-graduation survey scheduled six to nine months after program completion that will ask about employment history and plans for further education and career advancement, as well as provide an opportunity for students to make additional recommendations about improving their program of study. ⁴

Survey Methods

Survey of Current Students. The survey of current students will provide information about the experiences of students in both the infused nursing and allied health programs and the students enrolled in the new grant-funded HIT certificate and degree programs. Survey topics, outlined below, include reasons for enrolling in the program, educational and work background, career interests and goals at the time of enrollment and at program completion, satisfaction with the course of study and the supports available from the program, and suggestions for improving program content, instructional methods, and support services. Surveys will not ask students to

⁴ To complement the online and telephone surveys, we also plan to conduct open-ended individual telephone, online, or face-to-face discussions with two or three students enrolled in each certificate and degree program (both health IT and IT-infused nursing and allied health programs), as part of the evaluation’s process study. No personally identifying information will be collected during these brief process study discussions.

assess individual courses or course instructors. The survey focus will be on the student experience in the program as a whole.

SESRC will develop a detailed survey protocol and conduct the online survey of current students. Different versions of the survey will be developed for students in the nursing and allied health programs and students in the new HIT programs. The detailed survey instruments will be reviewed and approved by Bellevue College before being submitted to the Bellevue College Institutional Review Board (IRB).

The survey of participating students will be conducted in two rounds. The first round will take place during the middle of the spring term of the 2013-2014 academic year and the second round will take place during the middle of the spring term of the 2014-2015 academic year. After each of the participating colleges has provided information about enrolled students to the Consortium administrators for the spring term 2014 and the spring term 2015, SPR will work with the grant's reporting and data compliance manager at Bellevue College to generate the list of students eligible to participate in each year's survey of current students.

Survey of Program Graduates. Additionally, SESRC will develop and conduct a survey to be conducted with students who have completed the new Health IT certificate and degree programs funded under the grant. We will continue to explore whether it is permissible and/or feasible to offer a gift certificate to a national online retailer as an incentive to increase the response rate to the follow-up survey. The detailed survey instruments will be reviewed and approved by Bellevue College before being submitted to the Bellevue College IRB for review and approval.

The survey of program graduates will be conducted quarterly, beginning in the spring of 2014 and continuing through the spring of 2016. Each quarter, SPR will work with the grant's reporting at data compliance manager at Bellevue College to generate the list of students eligible to participate in that quarter's survey. (Potential respondents for a given quarter will include students who completed their certificate or degree program during the quarter that ended six to nine months previously.)

Survey Topics for Program Participants

The surveys of participating students will collect information about the reasons for enrolling in the program, educational and work background, career interests and goals at the time of enrollment, satisfaction with the course of study and the supports available from the program, and suggestions for improving HIT program content, instructional methods, and support services. We provide below an initial list of possible survey topics. We expect that the final list will contain fewer topics.

- **Student Characteristics**
 - Student age and gender
 - Related education/work prior to enrollment in certificate/degree program
 - Highest degree completed and field of study prior to enrollment
- **Status at Enrollment in Certificate or Degree Program**
 - Certificate or degree program enrolled in
 - Dates of enrollment
 - How did you hear about certificate/degree program?
 - What were your reasons for deciding to enroll?
 - Employment status at time of enrollment (employed/not employed; incumbent worker in health IT field, new to health IT field)
 - Employment interests/objectives at time of enrollment
 - Work experience relevant to certificate/degree program [job title(s) or job description(s); years of experience at each type of job]
 - Were you able to satisfy course prerequisites or get credit for work or schooling completed before enrollment? (details)
- **Student Satisfaction with Program Content and Quality of Instruction** (For students participating in the new HIT programs, this will address all aspects of the HIT curriculum. For students participating in infused nursing/allied health programs, this section of the survey will focus on the content that relates to the infused health IT information and skills.)
 - Overall satisfaction with different aspects of HIT coursework and instruction
 - Balance of online and face-to-face classroom instruction, or blended modes; satisfaction with mode(s) of instruction
 - Satisfaction with quality of HIT instruction
 - ~ Was the HIT content presented in a clear and interesting way?
 - ~ Were instructors generally well-informed about the HIT topics they were covering?
 - ~ Were there opportunities for student interaction/engagement with the material (e.g. problems to solve, contextualized learning)?
 - ~ Was the instructor available for questions or discussion?
 - ~ Did the student use the cloud-based EMR-STAR? If so, was it useful as a learning tool?

- ~ Did the program offer opportunities for hands-on practice with an EMR?
- **Student Use of and Satisfaction with Services Available to Support Student Success**
 - How did you support yourself while enrolled in program (employment, spouse earnings, financial aid, etc.)?
 - ~ Assistance in exploring availability of student financial aid or other financial supports available in community
 - Types of information and support offered by program/received by student (in group or individual setting)
 - ~ Career information/counseling
 - ~ Job search instruction, support
 - ~ Culture of the workplace
 - ~ Help finding internship/work experience
 - ~ Help with job search after completion of program
 - ~ Assistance finding other needed services; assistance with personal challenges encountered while in program
 - Most important source(s) of advice or support with academic, employment, or other issues while you were in program (other students, Student Navigator, instructors, program director, academic support specialist)
 - Level of satisfaction with types of support available from program
 - Unmet needs or challenges for which you did not receive support
- **Satisfaction with Health IT Knowledge and Skills Gained**

For Nursing and Allied Health Certificates/Programs with Health IT Content Infused

- Do you remember learning about health information systems during your program? (Please indicate what topics you remember learning about.)
- How would you rate the quality of the health IT instruction provided in your program?
 - ~ How long ago did you receive instruction on health IT topics? To what extent have you retained this information?
 - ~ How confident are you about your ability to work in a setting that uses online health information systems? (choices)

For Health IT Certificate or Degree Programs

- How would you rate the quality of the health IT instruction provided in your program?
- What topics or courses did you find most interesting and useful?
- Were there any specific health IT skills that you would have liked more emphasis on as part of your program?
- How confident are you about your ability to work in a health IT field?
- What specific jobs or job responsibilities do you feel most prepared to carry out?
- **Employment, Education, and Career Goals After Completing Program**
 - Now that you have completed the program, what are your employment goals (checklist of occupation, employer type, work setting)?
 - How have your employment and career goals changed since you began the program? What is the reason for any changes?
 - What are your immediate plans (as many as apply: further education, job search, continue working at same job)?
 - Do you have any interest in working in health IT occupations in the future?
 - If yes, what specific occupations or job responsibilities interest you?
- **Overall Suggestions for Program Improvement (For Students in new HIT programs only)**
 - Overall, what do you think are the strongest features of the program?
 - Overall, what do you think are the weakest features of the program?
 - Overall, what changes would you suggest to improve the quality of the program?

Follow-Up Survey Topics

For program graduates of HIT programs:

- **Employment History Since Leaving Program**
 - Current employment status (employed-full time, employed part-time, unemployed, looking for work, not looking for work) Same job as held before or during program of study?
 - Current educational status (full-time student, part-time student; program/educational institution)

- Number of jobs held since completing program (how many of these jobs related to Health IT or drew on skills learned during certificate or degree program?)
- Current or most recent job since completing program
 - ~ Job title, job functions, wage or earnings level
 - ~ If health IT-related employment, information about employer type, specific job responsibilities
- Satisfaction with current or most recent job

For program graduates of Nursing or Allied Health Infusion Programs:

- **Employment History Since Leaving Program**

- Current employment status (employed-full time, employed part-time, unemployed, looking for work, not looking for work) Same job as held before or during program of study?
- Current educational status (full-time student, part-time student; program/educational institution)
- Number of jobs held since completing program
 - ~ How many of these jobs related to the topic of your completed nursing/allied health program?
 - ~ In how many of these jobs were you working in a setting that used electronic health records?
 - ~ In how many of these jobs did you perform tasks that required you to be able to use electronic health records or any other health IT skills
- Current or most recent job since completing program
 - ~ Job title, job functions, wage or earnings level
 - ~ If nursing/allied health related, whether job required skills or knowledge of HIT systems and tools
 - ~ If health IT-related employment, information about employer type, specific job responsibilities
- Satisfaction with current or most recent job

For program graduates of both HIT programs and nursing/allied health programs

- **Education or Training Completed or Planned After Leaving Program**

- Description of trainings completed
- Additional schooling planned (certificate or degree, topic, timing)
- Does any of your planned training involve further training in health information systems?

- **Current Employment and Career Goals**

- Current career goals (What kind of job would you like to have in five years? Would it be related to IT or health IT?)
 - ~ Preferred occupation
 - ~ Preferred employer type/industry
 - ~ Preferred job responsibilities
- How have your employment and career goals changed since you began the program? What is the reason for any changes?
- To further your career goals, do you think you will need to learn more about Health IT knowledge or skills?

For program graduates of HIT programs only:

- **Overall Suggestions for Program Improvement**

- Looking back, what suggestions do you have for improving the certificate/degree program to better prepare you for the demands of your job?
- What advice do you have for other students interested in employment and career advancement in the health IT field about how they should prepare for employment in the field, in terms of training programs, specializations, internships, or work history.

IRB Process

After finalizing the design report and developing the final student survey protocols, SPR will secure approval from the Bellevue College's Institutional Review Board (IRB) prior to commencing any data collection. IRB review will ensure that the research procedures comply with the highest ethical standards, provide potential participants with a full and clear description of what their participation will entail, and do no harm to individuals through their participation in the study. If IRB approval has to be periodically renewed, we will comply with this requirement for as long as the study is ongoing to ensure follow-up data collection efforts are consistent with and covered by the IRB approval.

As the contracted agent of the Bellevue College Consortium conducting the required evaluation of the Health eWorkforce TAACCCT grant, we expect that the SPR/SESRC evaluation team will get permission from the Bellevue College IRB to access the contact information provided by these students on their program application form. If necessary, we will work with the IRB at each of the other participating colleges to secure their permission. (All students enrolled in the grant have already provided a signed informed consent form agreeing to the release of their confidential information for evaluation and reporting activities required by USDOL under the grant.)

Detailed Analysis Plan

To address the research questions described above, we will conduct two types of data analysis: descriptive (univariate) analyses and multivariate regression models. We offer a description of each of these components below.

Descriptive (Univariate) Analyses

We will conduct descriptive analysis based on administrative data and student survey data.

Administrative Data

One of the main topics of interest for the descriptive analysis is program enrollment and program exit. Based on the data provided by the participating colleges, we will create descriptive tables summarizing enrollment and graduation statistics by year, by type of program (health IT certificate versus IT-infused nursing or allied health program), and by participating college.

Together with describing the programs of study, we also plan to summarize the main characteristics of participants, including demographics such as age, ethnicity, and gender, previous educational and employment history, reasons for enrolling in the TAACCCT-funded program of study, employment and career goals, and outcomes upon graduating the program.

Survey Data

Based on an analysis of the student survey data, we will also describe students' perceptions of the grant initiative and their experiences while enrolled in their programs of study. We believe that a description of students' perception of the programs will be a useful tool for continuous improvement by the consortium and the participating colleges as the initiative is underway. For all students enrolled in the grant-funded programs, it will be important to learn whether the students thought the student support services made available by the consortium were useful. For students participating in the new health IT programs, it will be especially important to document students' satisfaction with the curriculum and with the different modes of instruction. We would also like to summarize participants' suggestions for program improvements that would address challenges they experienced as students and make it more likely that future students would complete the program successfully.

We expect a survey response rate ranging from 15% to 40%, depending on the chosen survey method (web-based versus telephone-based) and the procedures that will be used to encourage responses. Because of this anticipated response rate, nonresponse bias is potentially a threat to the validity of the survey responses. Non-response bias can occur when the non-respondents to a survey differ in some significant way from the respondents. We will perform a series of comparisons between the sample and population (i.e. the totality of participants whose administrative records are available) to detect whether non-response bias is likely to be a

concern. If such bias is suspected, we will consider using weighting to reduce the biasing effects correlated with the survey variables.

Multivariate Modeling of Student Outcomes

To assess the relation between various program components and program outcomes, we will develop a series of multiple regression models where the dependent variable is an outcome of interest, measured at the individual level. We focus on individual-level outcomes because the alternative—to develop program-level or college-level aggregate measures—is clearly unfeasible due to expected small sample size. We will focus on three Health eWorkforce participation outcomes: program completion; post-program employment; and post-program earnings.

The advantage of using regression modeling is statistical control, i.e. the ability to calculate the association between the dependent variable and each independent variable while holding all the other independent variables constant. Statistical control is important because previous research has shown that the student outcomes mentioned above are associated with a host of individual and group-level characteristics, including previous education history, previous income, local labor market dynamics, and others. Using multivariate regression allows us to calculate the association between various program features and the outcomes while controlling for covariates, thus improving the precision of our regression estimates.

Another important feature of the planned multivariate analysis is that it will be conducted using data collected at at least two levels (the student level and the program level and possibly the college level). The dependent variables, all of which are measured at the individual level, will be regressed on a set of independent variables measured at all levels. In other words, we will conduct a series of multilevel models where individual-level characteristics are labeled as level-1 variables, program-level characteristics are labeled as level-2 variables, and college characteristics are considered level-3.

We believe multilevel models are necessary for two reasons—methodological and analytical. Methodologically, one of the basic requirements of multivariate regression is that the individual observations be independent of each other⁵. However, since students are clustered into programs which differ in length, extensiveness of health IT infusion, and other factors, it is reasonable to assume that student-level outcomes will be influenced by these program-level factors, thus potentially violating the principle of independent observations. In addition, colleges, into which programs are nested, differ in their organizational cultures, governance, and educational focus, and may differ in regional economic conditions. (For example, technical colleges in Washington State tend to allow enrollment in their programs of study by any interested student, while other

⁵ Hox (1998).

community colleges require specific course prerequisites or completion of previous levels of education for program enrollment). Multilevel modeling can account for this hierarchical structure of the data by adjusting the standard error of estimates. Analytically, we are also interested in estimating the association between both levels of intervention (individual level and program level) and student outcomes. Multilevel modeling makes this possible, as well.

Estimation Issues

As stated above, our design involves students nested within programs, which are in turn nested into colleges. The level-1 model specifies how student-level predictors relate to student-level outcomes. At level 2, each of the regression coefficients defined in the level-1 model, including the intercept, may be predicted by program-level predictors, and each may additionally have a random component of variation.

Mathematically, at level 1, the outcome Y_{ij} for student i in program j ($i = 1, \dots, n; j = 1, \dots, J$), varies as a function of student characteristics, X_{ij} , and a random error r_{ij} according to the linear regression model

$$Y_{ij} = \beta_{0j} + \beta_{1j}X_{ij} + r_{ij} \quad (1),$$

where β_{0j} is the intercept and β_{1j} is a regression coefficient indicating the strength of the association between each student-level predictor and the student outcome within program j . For the sake of simplicity, we restrict the model to just one predictor, although for the actual modeling we will use several.

At level 2 (the program level), the regression coefficients defined by the level-1 model become outcome variables to be predicted by a program-level characteristic Z_j , according to the regression models

$$\beta_{0j} = \gamma_{00} + \gamma_{01}Z_j + u_{0j} \quad (2)$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}Z_j + u_{1j} \quad (3)$$

where γ_{00} and γ_{10} are intercepts, γ_{01} and γ_{11} are regression coefficients, and u_{0j} and u_{1j} are program-level random error terms⁶.

Substitution of (2) and (3) in (1) gives:

$$Y_{ij} = \gamma_{00} + \gamma_{10}X_{ij} + \gamma_{01}Z_j + \gamma_{11}Z_jX_{ij} + u_{1j}X_{ij} + u_{0j} + \varepsilon_{ij} \quad (4)$$

⁶ Bryk and Raudenbush (1992).

Aside from the fact that only one predictor per equation was used, the two-equation model presented above is the most complete type of multilevel model. More restricted models are possible, based on certain data-based assumptions made by the researcher.

Another notable aspect of multilevel modeling is its ability to detect the interaction between variables measured at different levels. In equation (4), for example, γ_{11} measures the effect of the interaction between X (individual-level predictor) and Z (a program-level predictor). We believe that knowing how Health eWorkforce components at several levels interact with one another would be an important finding.

In addition to these two levels (individual and program), we are considering including a third level (college) to the multivariate analysis. However, we defer the decision to include this third level to a later time, after further inspection of the data. An analysis of variance will allow us to compute the intraclass correlation coefficient (ICC) for each of the three levels of analysis. A large ICC indicates strong association between the members of the same group, suggesting that that particular level should be included in the model.

Dependent Variables

As stated above, our three chosen dependent variables are program completion for all students who could be expected to complete their programs during the evaluation period (yes/no), post-program employment during the study period (yes/no) and post-program earnings (quantitative). An alternative to measuring program completion is to include the number of credits earned in the program, which would make it easier to distinguish between students who drop earlier and later in the program, respectively.

Intervention-related Variables

At the student level:

- Types of student support services received
 - Academic coaching/support
 - Career coaching/job search skills training and placement support
 - Assistance with life issues and/or personal challenges
- Frequency of the receipt of one-on-one student support services from Student Navigator or Instructional Support Specialist
- Type of student support interaction
 - E-mail
 - Social media (Facebook, Twitter)
 - Face-to-face individual meeting

- Group session

At the program level:

- Recruitment method (choices to be developed later)
- Length of program
- Type of program (health IT vs. infusion program)
- Extent of health IT infusion⁷
- Mode of instruction
 - Online
 - Classroom
 - Blended

At the college level:

- Previous exposure to health IT
- Number of faculty who received training in Health IT

Control Variables

At the student level:

- Demographics: age, gender, race/ethnicity
- Employment status at registration
- Veteran status
- Disability
- Pell Grant eligibility
- Trade Adjustment Assistance (TAA) eligibility
- Highest level of education completed.

At the program level:

- Cohort size

At the college level:

- Size of student body

⁷ Only applicable to IT-infused nursing and allied health programs. This variable will be created at a later date based on conversations with the consortium's curriculum development specialists. **We are interested in assessing the range and intensity of HIT topics covered in each certificate/degree program that has infused health IT content into its existing program.**

- Number of nursing/allied health certificate or degree programs offered prior to the grant
- Number of IT or health IT certificate or degree programs offered prior to grant
- Proportion of full-time students among total number of students
- Setting
 - Urban
 - Rural

VI. EVALUATION TIMELINE AND PRODUCTS

This chapter reviews the evaluation timeline and project deliverables, including planned written reports and briefings.

Evaluation Timeline

Exhibit VI-1 summarizes the periods of performance for the planned evaluation activities and deliverables that will be completed during the study period.

**Exhibit VI-1:
Schedule of Project Tasks and Deliverables**

Project Tasks	Activity Dates	Summary of Deliverables
Task 1. Detailed Study Design	July 2013 – October 2013	
Develop Draft Detailed Study Design	July 2013 – October 2013	<i>Detailed Study Design and briefing</i>
Revised Detailed Study Design	November 2013	<i>Revised Detailed Study Design</i>
Task 2. Implementation Study		
Conduct Round 1 Site Visits and Data Collection	September 2013 – February 2014	Completion of round 1 data collection
Conduct Round 2 Site Visits and Data Collection	March 2014 – September 2014	Completion of round 2 data collection
Conduct Round 3 Site Visits and Data Collection	October 2014 – June 2015	Completion of round 3 data collection
Complete Data Collection	July 2015 – September 2016	Completion of Implementation Study data collection
Task 3. Survey of Participating Students		

Project Tasks	Activity Dates	Summary of Deliverables
Conduct Round 1 Survey of Participating Students (Spring 2014)	October 2013 – June 2014	Complete round 1 survey of participating students
Conduct Round 2 Survey of Participating Students (Spring 2015)	October 2014 – June 2015	Complete round 2 survey of participating students
Task 4. Survey of Students Who Completed Programs		
Conduct Survey of Students who Completed Programs During 2013 and 2014	March 2014 – February 2015	Complete first round of student completers survey
Conduct Survey of Students who Completed Programs during 2015	March 2015 – February 2016	Complete second round of student completers survey
Task 5. Quantitative Outcome Study	September 2013 – May 2016	Complete collection of administrative data on student outcomes
Task 6. Reports and Briefings		
Participate in Monthly Calls and Identify Issues for Improvement	September 2013 – April 2014	Identify issues and facilitate discussion
First Interim Report	May 2014	<i>First Interim Report</i> and briefing
Participate in Monthly Calls and Identify Issues for Improvement	May 2014 – October 2014	Identify issues and facilitate discussion
Second Interim Report/Briefing	October 2014	
Participate in Monthly Calls and Identify Issues for Improvement	November 2014 – September 2015	Identify issues and facilitate discussion
Third Interim Report/Briefing	July 2015	<i>Third Interim Report</i> and briefing
Participate in Monthly Calls and Identify Emerging Findings for Final Report	October 2015 - April 2016	Briefing and discussion of emerging findings
Draft Final Report	July 2016	<i>Draft Final Report</i> and briefing
Revised Final Report	September 2016	<i>Revised Final Report</i>

Reports and Briefings

The planned written products for this project include three interim reports, one to be completed in May 2014, one in October 2014 and one to be completed in July 2015. Each report will be accompanied by a briefing, delivered either face-to-face or via an online teleconference. The *Final Report*, in draft and revised forms, will be submitted in July 2016 and September 2016, respectively.

Briefings

To encourage continuous improvement of the TAACCCT-grant supported efforts, the evaluators will facilitate group discussions and provide periodic briefings on issues that are identified—either by the Consortium members or by the evaluation liaisons—as potential or actual challenges to successful grant completion. As described in the schedule above, we have outlined two different types of briefings, scheduled periodically for the remainder of the project.

The first type of activity, labeled in Exhibit VI-1 as “identify issues for improvement” will be scheduled at the convenience of the college project managers and staff and Consortium leadership team, at approximately six-month intervals. The topics for these discussions will be selected in consultation with Bellevue College and the co-grantees. To prepare for facilitating these sessions SPR site liaisons will use existing notes from our completed site visits and contact participating colleges to collect recent information on identified topics. We will then structure an hour-long interactive session that documents the challenge, summarizes how different colleges or programs have addressed the challenge, and discuss how promising practices can be shared across co-grantees and programs.

As examples of the types of topics that might be fruitful topics for the discussions of opportunities for improvement, we offer the following suggestions:

- Providing career counseling and helping participants developing an individual services plan that draws on students’ pre-existing skills/experience, concurrent or subsequent training programs, and plans for continuing education, to ensure that the project enrollees will have the skills they will need to work in the health IT field. These plans may look very different for students with a health care background but without previous IT-related training or experience and students with a strong health IT background, but limited knowledge of health IT systems or procedures.
- Screening and counseling interested students about their readiness for a particular program. We have identified several sub-issues:
 - How to systematically screen and counsel individuals interested in HIT certificate or degree programs about their readiness for a particular program. (There are very different environments in the

different co-grantees: some colleges can establish course prerequisites; others must let every interested student enroll.)

- How to identify whether veterans have transferrable skills relevant to Health IT, and how to screen veterans to find out if they have other health or mental health issues that should be addressed before or at the same time they enroll in a training program.

The second type of briefing activity will be the provision of an online or face-to-face presentation summarizing the findings at the conclusion of each round of site visits. These findings will be summarized in the Interim and Final Project reports, as described below. The briefings will provide an opportunity for the Consortium staff and co-grantees to ask questions, make comments, and suggest new topics to explore in subsequent data collection rounds.

Interim Reports

The *First Interim Report*, scheduled for completion in May of 2014, will include findings from the first round of data collection for the implementation study. In reporting findings from the implementation study, the first Interim Report will focus on the challenges encountered and accomplishments achieved during the early stages of grant design and implementation, including those related to the organization of the consortium and the relationships among the participating colleges, the design and completion of the curricula for the new programs, and the progress made in recruiting and enrolling students and launching the pilot courses.

The *Second Interim Report*, scheduled for completion in October of 2014, will focus on the progress made in implementing subsequent phases of the initiative, including the revision of the curricula in response to the piloting experience, the provision of student support services, and progress in implementing the special projects, such as the Veterans Apprenticeship Program and National Veterans Career Services Initiative.

The *Third Interim Report*, scheduled for completion in July of 2015, will focus on the findings from the two waves of participant surveys, which will be conducted in the spring of 2014 and the spring of 2015, respectively. These surveys of current program participants will provide information about the reasons that students enrolled in their programs, student educational and work background, career interests and goals at the time of enrollment, satisfaction with the course of study and the supports available from the program, anticipated career goals after completing the program, and suggestions for improving program content, instructional methods, and support services. The findings from the surveys of current participants will present tabulations by college, by program of study, and by type of program (health IT programs versus IT-infused nursing and allied health programs).

Final Report

The *Final Report* will draw on all the data collected during the evaluation, including qualitative data from site visits and interviews and quantitative data from student surveys (both initial and post-graduation) and administrative records. Separate sections of the Final Report will present findings from the implementation study, the surveys of current student participants, and the analysis of student outcomes.

In reporting the implementation study findings, the *Final Report* will focus on accomplishments of the grant and lessons learned about best practices in designing and operating a multi-college consortium and about how to teach health IT skills to students who are interested in pursuing health IT occupations and those enrolled in nursing and allied health programs.

In describing and analyzing the quantitative data on student experiences and outcomes, the *Final Report* will begin with a descriptive analysis of students, services provided, and outcomes. It will then summarize enrollment and graduation statistics by year, by type of program (health IT certificate versus IT-infused nursing or allied health program), and by participating college. The report will also tabulate the main characteristics of participants, including demographics (age, ethnicity and gender), previous educational and employment history, reasons for enrolling in the TAACCCT-funded program of study, employment and career goals, and outcomes upon graduating the program.

The *Final Report* will also use both the survey data and administrative data to describe post-program outcomes for program completers, including employment history after leaving the program. Administrative data will cover all program completers, both those who completed nursing or allied health programs and those who completed health IT programs. The post-program surveys will focus in more detail on the employment outcomes achieved by individuals who completed the health IT certificate and degree programs.

The *Final Report* will also include a multivariate analysis of student outcomes. As described in Chapter V of this *Detailed Design Report*, three types of student outcomes—program completion, post-program employment, and post-program earnings—will be regressed on a set of individual-level and program-level characteristics, including characteristics associated with the TAACCCT grant. The findings from the multivariate analyses will identify individual factors and combinations of factors that are associated with more and less successful student outcomes.

APPENDIX A: DATA COLLECTION PROTOCOL FOR GRANT ADMINISTRATIVE AND MANAGEMENT STAFF AT BELLEVUE COLLEGE

Project Context

1. How has the TAACCCT project design been influenced by contextual factors?
 - National and regional developments in the use of electronic health records and the resulting integration of health IT tools into a wide range of health industry occupations, including direct healthcare delivery, healthcare research, information management, and information technology occupations within the healthcare field
 - The demand for health IT industry workers in different types of occupations and the types of employers seeing workers with health IT skills within the participating regions
 - The extent of health IT course offerings and certificate/degree programs in each of the participating community colleges at the time the grant application was written
 - The related products developed under recent NSF and ONC grants

Project Organization at the Consortium Level

2. What is the organizational framework for the Health eWorkforce project? Which of the organizational features of the project are particularly effective in promoting communication and sharing of best practices among partners, and oversight to ensure high quality procedures and outcomes?
 - Roles are played by Bellevue College, the participating community colleges, and contractors in carrying out the planned project activities
 - How the members of the leadership team and the administrative and subject matter experts located at Bellevue College provide leadership, monitor, and oversee all grant activities
 - What activities and procedures are scheduled to ensure ongoing communication among Consortium members
 - Role of the Continuous Improvement Cabinet in assessing progress toward goals, identifying challenges and lessons learned, and promoting opportunities for continuous improvement

Project Leadership

3. How have the Leadership Team and co-grantees shared information to support effective outreach and recruitment at the individual college level?
 - Information sharing opportunities
 - Suggested practices
4. What progress has been made under the grant in developing new policies and procedures for Prior Learning Assessment?
 - For all students with previous education or work history
 - For veterans
 - Roles and responsibilities of Consortium staff and individual community college staff in working on PLA plans and models.
 - Timeline for development of PLA plans
 - Procedures for approving/adopting new PLA procedures within participating colleges
 - Sharing of information across participating colleges about best PLA practices
 - Experience using new PLA designs/procedures in recruiting and screening individuals for TAACCCT grant-funded programs
5. How have the grant leadership team members and co-grantees shared information to support effective recruitment and services to veterans and TAA-eligible individuals?
 - Role of the Veterans Project Manager
 - Role of the Student Support and Employment Specialist
 - Sharing of information among co-grantees
 - Lessons learned and practices shared
6. What activities have the grant leadership team and subject experts developed to provide faculty training opportunities to prepare instructors to teach new curricula? Which of the faculty development activities are perceived as having been most successful and why? How could faculty development activities be improved?
 - Role of consortium faculty development specialist and others in planning and overseeing faculty development efforts
 - Identified target groups and content for faculty development
 - Identifiable sub-groups and content goals for training
 - Interactive webinars versus use of self-training modules
 - Training on use of EMR-STAR as tool in the classroom
7. How have the Leadership Team and co-grantees shared information to support effective design and delivery of student support services? Which of these activities have been most successful in promoting collaboration and sharing of best practices?

- Design and implementation of Student Navigators positions
- Design and implementation of Instructional Support Specialist positions
- Services provided to students enrolled in health IT programs as compared to nursing or allied health (infusion) programs

Supporting Curriculum Development and Piloting New Courses

8. What colleges are infusing health IT content into nursing or allied health certificate and degree programs? What progress has been made in approving the course changes, developing the new curriculum content, and initiating the new infused courses? In the opinion of the project's curriculum design specialists, what are the strengths and weaknesses of the infused courses? How could the infused courses be improved?
 - Challenges experienced and how addressed
 - Role of Bellevue College specialists in guiding the curriculum development process and reviewing infused content
 - Course improvements made before and after piloting
9. What topics/competencies are most frequently covered in the infused health IT content in the different programs? What competencies are least frequently covered? Looking across the new health IT programs, what are the key similarities and differences in the content and scope of the different Health IT programs?
 - Bellevue College curriculum development experts' assessments of the breadth and depth of the HIT content in the curricula developed
 - Issues to keep in mind when planning to infuse health IT content into nursing and allied health programs
10. What colleges are developing new health IT certificate/degree programs under the grant? What progress has been made in approving the new certificate/degree programs, developing the new course curricula, and initiating the new programs?
 - Using the competencies identified by Bellevue College for core IT and core health IT curricula as a point of reference, what competencies are covered by the different health IT certificate and degree programs; what competencies are students expected to already have mastered at the time of enrollment
 - Curriculum development experts' assessments of the strengths and weaknesses in the curricula and programs developed
 - Challenges in realizing fully-featured curricula and steps taken to address challenges
 - Lessons learned about how to develop high quality health IT courses and certificate/degree programs
 - Recommendations for supporting future design and implementation of health IT courses and programs
 - Plans for disseminating curricula developed under the grant

11. How have the participating colleges built on the curriculum modules and materials developed under previous projects, including the ONC- and NSF-funded projects
 - Use of the existing resources in effective or creative ways
 - Lessons that can be learned about how to draw on these previous resources
12. How has Bellevue College, as the lead college for the TAACCCT grant, encouraged the co-grantees to offer or build on the CAHIMS curriculum developed under Bellevue College's the recent NSF grant?
 - What are the different ways that the participating colleges have used the CAHIMS curriculum either independently in combination with other course offerings?
13. How has Bellevue College, as the lead college for the TAACCCT grant, developed and implemented professional development resources to support the instructors who will be teaching the health IT content/ health IT courses developed under the grant?
 - What do the participating faculty appreciate the most about the professional development resources?
 - What are their suggestions for improving these resources?
 - What does Bellevue College think are the strongest and weakest features of the professional development resources? How could they be improved?
14. All co-grantees agreed to explore the feasibility of formally articulating their new programs with Bellevue College's Applied Baccalaureate Program in Health IT? What lessons have been learned about effective practices in articulation? What challenges have been encountered?
 - Potential benefits of articulation
 - Potential for transitioning students from grant-funded programs into Health IT Applied Baccalaureate Program

Grant Management and Reporting

15. What data collection and reporting procedures have been established the grant? How and when is the project collecting information from the participating colleges and contractors on accomplishments and outcomes?
 - Design of project-level database or MIS system
 - Data elements submitted by participating entities
 - Data items being collected on participants (on student characteristics, services received, and outcomes)
 - Mode of reporting (e.g. narrative and/or template/chart of outcomes)
16. How are the grant administrators collecting data to submit to the Consortium to monitor grant progress and develop reports for USDOL?
 - Specific sources of data used to generate outcomes required by grant
 - Analysis of student-level outcomes versus aggregate outcomes

- Outcomes by subgroups (e.g. nursing and allied health students versus Health IT students; outcomes by certificate/degree program)

17. To what extent can the data collected by the project administrators support the evaluation questions and evaluation's data collection needs?

Disseminating Grant Products and Lessons Learned

18. What products has the project identified as worthy of dissemination and what are the strategies and procedures for dissemination?

- Dissemination of curriculum for new courses
- Promotion of State Health IT Industry-Education Councils
- Other dissemination strategies and vehicles based on grant activities and lessons learned
- Development of a self-paced version of CAHIMS curriculum in collaboration with Carnegie Open Learning Initiative (OLI) and CAST

19. What dissemination activities were completed and how could future dissemination efforts be improved?

20. Looking back at the end of the grant period, what would Bellevue College do differently in its role as the lead grantee to strengthen the grant process and products? How would these changes have improved the project?

APPENDIX B: DATA COLLECTION PROTOCOLS FOR COLLEGE-LEVEL SITE VISITS AND PHONE FOLLOW-UPS

Context of College Health IT and Nursing/Allied Health Programs

For colleges that are developing one or more Health IT certificate or degree programs under the TAACCCT grant

1. What health information management or health information technology certificate or degree programs did the college offer before the TAACCCT grant?
2. For each program, please provide:
 - Name of program, number of quarters/credits required to complete the program
 - Degree or certificate earned by successful completers
 - Division or department within which the prior Health IT program was housed (e.g. IT, nursing or allied health, Health IT, other)
 - When the program was established
 - Total number of students who enrolled in this program during academic year 2012-2013
 - Total number of students who completed this program during academic year 2012-2013
3. How were college division, department, and/or program heads involved in supporting and planning the TAACCCT proposal? In supporting the implementation and piloting of the grant-supported courses?

For each Health IT program developed under the TAACCCT grant, please describe:

- Were there specific “champions” of the new programs within the existing college administration?
- How involved were existing program administrators in developing and reviewing plans for the new programs?
- How were the departments with potentially related courses (e.g. IT, computer science, business programs) involved in developing and reviewing plans for the new programs?

4. To what extent did the departments and programs sponsoring the new TAACCCT-funded program and courses have previous experience with online and/or blended programs or courses prior to the TAACCCT grant?

For colleges that are infusing one or more nursing or allied health certificate or degree programs with health IT content under the TAACCCT grant:

5. What nursing and allied health programs (certificate and degree programs) did the college offer before the TAACCCT grant?
6. For each program, please provide the
 - Name of program, number of quarters/credits required to complete the program
 - Degree or certificate earned by successful completers
 - Name of the division or department within which the program was housed (e.g. nursing, allied health, other)
 - When the program was established
 - Total number of students who enrolled in this program during academic year 2012-2013
 - Total number of students who completed this program during academic year 2012-2013
7. How were nursing and allied health college division, department, and/or program heads involved in supporting and planning the TAACCCT proposal?
 - Were there specific “champions” of the Health IT infusion proposal within the existing college administration?
 - How did the program administrators decide which nursing or allied health courses they would like to infuse Health IT content into?
 - How were the departments with potentially related courses (e.g. IT, computer science, business programs) involved in developing and reviewing plans for the Health IT infusion programs?
8. To what extent did the departments and programs sponsoring the new TAACCCT-funded program and courses have previous experience with online and/or blended programs or courses prior to the TAACCCT grant?

For both colleges that are developing new Health IT programs or infusing health IT content into existing nursing and allied health programs under the TAACCCT grant:

9. What roles did the division, department, or program administrators play in developing the curricula and implementing the new programs?
 - Identifying content experts or curriculum development staff to participate in the grant
 - Encouraging faculty to attend professional development activities developed by the Consortium
 - Reviewing the curriculum
 - Helping to promote the courses and recruit participants

- Identifying faculty to teach the pilot courses
- Planning to infuse Health IT content into additional nursing or allied health courses in the future
- Planning to expand Health IT programs and course offerings in the future

Organization and Staffing of Grant at College

10. How was the TAACCCT project manager recruited and selected at this college?
- Please describe her/his previous jobs and relevant experience and skills
 - What particular expertise or experience does he/she have in the areas of curriculum development, program administration, student support, data collection and reporting, or Health IT content?
 - What are the defined job responsibilities of the project manager?
 - How does the project manager interact with the administrators of the divisions, departments, or programs within which the new programs will be housed? (frequency of contact, issues discussed, quality of communication)
 - How does the project manager interact with the Consortium project specialists and administrative staff? (frequency of contact, issues discussed, quality of communication)
 - How does the project manager interact with the content expert and curriculum development staff? (frequency of contact, issues discussed, quality of communication)
 - How does the project manager interact with the student navigator and instructional support specialist (from the project manager perspective: frequency of contact, issues discussed, quality of communication)
11. How were the student navigator and instructional support specialist recruited and selected at this college?
- What challenges, if any, were experienced in filling these positions?
 - What particular expertise or experience do the staff in these positions have in the areas of student recruitment, student support services, employment skills training/placement services, career counseling, or the content of the programs being developed at this college?
 - If part-time, what other duties do these staff members have within the college? How do these other duties relate to their grant-funded positions, if at all?
 - How does the student navigator interact with the course instructors? (frequency of contact, issues discussed, quality of communication)
 - How does the student navigator interact with the project manager? (from the student navigator perspective: frequency of contact, issues discussed, quality of communication)

- How does the student navigator interact with the instructional support specialist on the grant (if different person)? How do are these two roles differentiated? How do they overlap?
12. What faculty and staff were involved in curriculum design and review for each of the programs funded under the TAACCCT grant? What role did they play? How were they selected for this role?
 13. How have the grant-funded staff positions and the individuals holding those positions changed over the course of the grant?
 14. How well is the project organization working at the level of the individual college? Have any specific challenges arisen in staffing or organization at this college? Do project staff have any suggestions for how to improve the skills and experience or job functions of the different grant-funded staff positions?

Design of New HIT Certificate/Degree Programs

For each new Health IT certificate or degree program developed under the grant, collect the following information:

15. How did the college identify the focus of the Health IT certificate or degree program to be developments under the grant?
 - How does the new certificate/degree program relate to existing IT and Health IT courses and programs offered at the college?
 - To what extent does the new program draw on already existing course offerings at the college?
 - To what extent does the new program require already existing course offerings as prerequisites?
16. How does the new program relate to the skills needed for specific Health IT jobs?
 - How did employers shape the development of this program and its content and scope? From what employer(s) was this input obtained? What was the role of the program's employer advisory committee in shaping and approving the program?
 - What particular set of occupations is the program intended to prepare students to fill?
17. What are the parameters of the new program and how were they developed?
 - How long is the program and how many credits/how many courses are included?
 - What courses are required; what courses are optional?
 - Are there opportunities for specializing in particular sub-areas within the program curriculum?
 - What modes of instruction are offered (classroom, online, or blended)?
 - What are the specific competencies that students are expected to gain?
 - If the program leads to a certificate, are students encouraged to continue beyond the completion of the certificate to complete an Associate's degree?

- Is this program considered an entry-level program into Health IT knowledge and skills, or does it presuppose mastery of core IT skills and concepts or core Health IT skills and concepts?

18. For what groups of students was the program designed?

- What are the basic skills pre-requisites for enrollment in the college or program?
- What previous educational or work paths would prepare a student for the new program? Explain how these would prepare a student for successful completion of the program.
- What are the academic pre-requisites for entry into the program?
- What are the work experience pre-requisites (if any) for entry into the program?
- To what extent can PLA exams or portfolios be used to meet course prerequisites or qualify incoming students for credit for some of the program requirements?
- Has the college developed new prior learning or skills assessments for students with prior IT training or experience or students with prior healthcare training or experience.
- Is the program open to part-time as well as full-time students?
- Does the program anticipate that it will serve incumbent workers? (Are they expected to continue to work part-time or full-time while in the program? Do they expect to stay with the same employer after completing the program)
- How well are students prepared for the courses/programs in which they are enrolled? How well is student preparation specified and assessed, and how well are students “advised” regarding their readiness?

19. What was the process for development and approval of the overall curriculum outline for the program?

- When was the curriculum outline completed?
- What was the review process for approval of the new program within the college?
- What was the review process for review of the curriculum outline by the Bellevue College team of curriculum specialists under the grant
- When did the employer advisory committee review the overall curriculum outline?
- What kinds of changes or refinements were made in the curriculum as a result of suggestions made by various groups of reviewers?
- How were new courses developed for the new certificate or degree program?
- How many new courses were developed for the program?
- What was the timeline for developing new curricula?
- Who provided expert content advice on the new courses? How much time was spent on this for each of the new courses?

- Who provided curriculum development support for the new courses? How much time was spent on this for each of the new courses?
 - What existing curriculum resources were available for the curriculum development team to draw on? Which of these curriculum resources were most useful? (ONC curriculum components, CAHIMS courses/curriculum modules, other Health IT courses or course materials)
 - What suggestions do grant-funded staff at the college-level have about how the curriculum development process for the new HIT programs could have been improved?
20. How did Bellevue College guide the content, instructional methods, and formatting of the courses developed under the grant?
- What types of review comments were provided by the Bellevue College curriculum specialists? How did you refine the curriculum in response to their comments?
 - What review comments did you receive about the content of the program courses, and how did you revise the curricula in response to those comments?
 - What review comments did you receive about the types of pedagogy designed for the course? How did you revise instructor roles or student activities in response to that feedback?
 - What review comments did you receive about the assessments of student learning you developed for the source? How did this feedback influence your revisions to the course curriculum?
 - What review comments did you receive about the formatting of the course curricula and how did you respond?
 - What was the timeline for curriculum development and revisions for each course?
 - When did/will you complete the initial curriculum for each course?
 - When are you scheduled to pilot the curriculum?
 - What is the process and timeline for refining the curriculum in response to lessons learned from piloting the course? What improvements have you made/do you expect to make?

Design of HIT Infused Nursing or Allied Health Certificate/Degree Programs

For each nursing or allied health certificate or degree program infused with Health IT content under the grant, collect the following information:

21. How did the college identify the Health IT content to be infused into the existing nursing or allied health certificate or degree program under the grant?
- How does the new program content relate to the Health IT knowledge and skills needed for specific jobs in the nursing or allied health field?

- How did employers shape the development of the content to be infused into the program? From what employer(s) was this input obtained? What was the role of the program's employer advisory committee in shaping and approving the addition of Health IT content into the program ?
 - What particular set of occupations is the program intended to prepare students to fill? What new job tasks will the added health IT content enable them to carry out?
 - What is the scope and format of the new IT skills instruction developed under the grant?
 - What are the specific core Health IT competencies that students are intended to gain from the new course material?
 - How broad is the student's exposure to Health IT content? What topics are covered?
 - How deep is the student's exposure to Health IT content? How much time is spent covering this material? How much opportunity is there for applied or hands-on practice with the Health IT content and Health IT tools?
 - To what extent is the Health IT content integrated into the rest of the program courses? Contextualized to fit the specific work settings that students will encounter in their nursing or allied health field?
22. How was the Health IT curriculum developed for infusion into the existing nursing or allied health certificate or degree program?
- What faculty and curriculum develop staff participated in developing the Health IT content for infusion into the program?
 - How did curriculum developers make time and space for the Health IT content? What was eliminated from the existing program curriculum, if anything?
 - What resources did the curriculum developers draw on for the Health IT content?
 - Which of these curriculum resources were most useful? (ONC curriculum components, CAHIMS courses/curriculum modules, other Health IT courses or course materials)
23. What was the process for development and review of the Health IT course material?
- What types of review comments were provided by the Bellevue College curriculum specialists? How did you refine the curriculum in response to their comments?
 - What review comments did you receive about the content of the Health IT content, the types of pedagogy designed for the Health IT content, and the assessments of student learning you developed?
 - How did you revise the curricula in response to those comments?
24. How many new courses or workshops have been developed and/or how many existing courses have been infused with Health IT content under the grant?
- What are the names of these different courses?

- Will the format of the infused Health IT content within the overall program evolve over time? For example, is it a separate workshop now, but will be integrated into a course over time?
25. What was the timeline for curriculum development and revisions for the Health IT infusion?
- When did/will you complete the initial curriculum for each course?
 - When are you scheduled to pilot the curriculum?
 - What is the process and timeline for refining the curriculum in response to lessons learned from piloting the course? What changes have you made/will you make?

Faculty Development Activities

For each new course developed as part of a new Health IT certificate or degree program and each Health IT infused course offered as part of a nursing or allied health program, collect the following information:

26. What individuals have been selected to be the instructor(s) for piloting new course(s) and how prepared are these individuals to teach the new course(s)?
- Were these individuals involved in developing the curricula for the course(s)?
 - What is their level of familiarity or expertise regarding the content of the new course(s)?
 - To what extent have they had workplace experience in the Health IT field?
 - To what extent do they have experience teaching using the modes of instruction called for in the new course(s), such as online or blended instruction, if relevant?
27. What types of support and professional development have the instructors of the pilot courses received in preparation for teaching the new course(s) (e.g., information on course content, workplace applications, developing engaging student activities, assessing student performance)?
- To what extent have the instructors of the pilot courses participated in the professional development opportunities offered by Bellevue College under the grant? (self-paced online modules; live or recorded webinars)
 - How helpful was this professional development?
 - What additional professional development opportunities, if any, would they like?
28. What types of support and professional development have the faculty associated with the new Health IT programs participated in and how useful have they found the faculty development offerings?
- To what extent have the HIT program faculty participated in the professional development opportunities offered by Bellevue College under the grant? (self-paced online modules; live or recorded webinars)
 - How helpful was this professional development?
 - What additional professional development opportunities, if any, would they like?

29. What are the ongoing professional development needs for faculty who will offer courses in the new programs on an ongoing basis?
- What faculty members have been designated as the department or program “super users” to attend the live webinars developed by Bellevue College?
 - Did these faculty members use any of the self-paced online training modules developed by Bellevue College?
 - How helpful were these professional development activities?
 - What is the expectation that these “super-users” faculty members will teach the new courses on an ongoing basis? Are these the same individuals who have or will pilot the new courses under the grant?
 - What ongoing professional development resources would be valuable for faculty associated with the new program?
30. If relevant, how do the professional development needs of faculty teaching infused courses in a nursing or allied health program differ from the professional development needs of faculty teaching courses in new Health IT certificate or degree programs?

Planned and Actual Student Enrollment by Program

For each new health IT certificate or degree program developed under the grant, collect the following information:

31. What cohorts of students will be considered grant participants? What are the targeted (or actual) numbers of students who will be enrolled in the grant from each cohort? When are enrollees expected to complete the program?

HEALTH IT PROGRAM 1:

Number of Students in Each Entry Cohort	Academic Quarter of Enrollment in Grant	Actual Enrollees to Date or Expected Enrollees?	Academic Quarter of Program Entry (if different)	Expected Program Completion Date
Cohort 1				
Cohort 2				
Cohort 3				
Cohort 4				
TOTAL all entry cohorts				

HEALTH IT PROGRAM 2:

Number of Students in Each Entry Cohort	Academic Quarter of Enrollment in Grant	Actual Enrollees to Date or Expected Enrollees?	Academic Quarter of Program Entry (if different)	Expected Program Completion Date
Cohort 1				
Cohort 2				
Cohort 3				
Cohort 4				
TOTAL all entry cohorts				

For each nursing or allied health certificate or degree program infused with Health IT content under the grant, collect the following information:

NURSING/ALLIED HEALTH PROGRAM 1:

Number of Students in Each Entry Cohort	Academic Quarter of Enrollment in Grant	Actual Enrollees to Date or Expected Enrollees?	Academic Quarter of Program Entry (if different)	Expected Program Completion Date
Cohort 1				
Cohort 2				
Cohort 3				
Cohort 4				
TOTAL all entry cohorts				

NURSING/ALLIED HEALTH PROGRAM 2:

Number of Students in Each Entry Cohort	Academic Quarter of Enrollment in Grant	Actual Enrollees to Date or Expected Enrollees?	Academic Quarter of Program Entry (if different)	Expected Program Completion Date
Cohort 1				
Cohort 2				
Cohort 3				
Cohort 4				
TOTAL all entry cohorts				

NURSING/ALLIED HEALTH PROGRAM 3:

Number of Students in Each Entry Cohort	Academic Quarter of Enrollment in Grant	Actual Enrollees to Date or Expected Enrollees?	Academic Quarter of Program Entry (if different)	Expected Program Completion Date
Cohort 1				
Cohort 2				
Cohort 3				
Cohort 4				
TOTAL all entry cohorts				

Recruitment and Enrollment Procedures by Program

For each new Health IT certificate or degree program developed under the grant, collect the following information:

32. What are the characteristics of the students that the program is trying to reach?
 - How would you describe the students who are appropriate for this program in terms of career interests and prior training/work experiences?
 - What would an “ideal” student for this program look like in terms of skills and experience?
 - What do you anticipate the demand will be for this program?
33. What recruitment strategies have been/are being used to recruit interested students?
 - Who is participating in recruiting students for the program (e.g. college career center, outside recruitment partners such as employers or workforce development programs, program staff)?
 - How do most students hear about the program?
 - What outreach methods are you using?
 - From what geographic areas are you considering recruiting students for this program (if online)?
 - To what special target groups are you conducting outreach, such as veterans, TAA-eligible workers, incumbent workers, graduates of other programs at the college?
34. What challenges and successes have you experienced to date with your recruitment activities?
 - What strategies have you used to address recruitment challenges? Have you been able to fill the programs to capacity?
 - What ideas do you have for improving outreach and recruitment?

35. Once a student has indicated interest in the program, what are the steps in screening and enrollment?
- What are the requirements/prerequisites for program application/enrollment?
 - What are the skills, degrees, and/or work experience that make an applicant a good match for this program?
 - Please describe the content of any information/orientation sessions you offer to students who are interested in the program
 - To what extent do you counsel applicants about whether they have the background skills to succeed in the program?
 - What are warning signs that might suggest to you that a student might not be able to complete the program successfully?
36. Please describe your experience under the TAACCCT grant developing or implementing new prior learning assessments or performance tests to screen for pre-existing knowledge and skills and/or give credit for or waive prerequisites or recommended courses
- For all students with previous education or work history
 - For veterans
 - Roles and responsibilities of Consortium staff and individual community college staff in working on PLA plans and models.
 - Timeline for development of PLA plans
 - Procedures for approving/adopting new PLA procedures within your college
 - Sharing of information across participating colleges about best PLA practices
 - Experience using new PLA designs/procedures in recruiting and screening individuals for TAACCCT grant-funded programs

For each nursing or allied health certificate or degree program infused with Health IT content under the grant, collect the following information:

37. What outreach methods do you use?
- Have you had any challenges recruiting students to your program prior to the TAACCCT grant? Since the grant started?
 - How do many or most students hear about the program?
38. Have student outreach or recruitment strategies and activities changed at all as a result of the infusion of Health IT content into the program? If so, how and why?
- Are you increasing your outreach efforts to veterans, TAA-eligible, or incumbent workers as a result of the TAACCCT grant? If so, how?
 - Are you increasing your outreach efforts to students interested in Health IT skills as a result of the TAACCCT grant? How much do you advertise the infused Health IT content in the program to interested students?
 - Have the students attracted to your program changed as a result of the infusion of Health IT content into your program?

39. Once a student has indicated interest in the program, what are the steps in screening and enrollment?
- What are the requirements/prerequisites for program application/enrollment?
 - Please describe the content of any information/orientation sessions you offer to students who are interested in the program
 - What are the skills, degrees, and/or work experience that make an applicant a good match for this program?
 - Please describe any prior learning assessments or performance tests you have developed to screen for pre-existing knowledge and skills and/or give credit for or waive prerequisites or recommended courses
 - To what extent do you counsel applicants about whether they have the background skills to succeed in the program?
40. What are your program's recruitment successes and challenges? Are you considering any changes to improve your recruitment and enrollment procedures?

Providing Student Support by Program

For each of the following types of student support, please describe the details of the information and services available to enrolled students. Which grant-funded staff members provide student services, and how do they differ in the types of services they offer? What other sources of student support services are available within the college to enrolled students or program graduates?

41. What types of academic counseling or support do grant-funded staff provide to students?
42. What types of pre-enrollment or post-enrollment career counseling and goal setting support do grant-funded staff provide to students?
43. What types of professional development, job search skills information/training and placement assistance do grant-funded staff provide to students?
44. To what extent do grant-funded staff assist students with counseling or referral regarding personal life issues?
45. For each types of student support, how do the project manager, student navigator, and instructional support specialist communicate with enrolled students?
- Use of "broadcast" e-mail or online messages to all students
 - Individualized messages via e-mail or online or face-to-face meetings
 - Optional training sessions or workshops
 - Required classroom presentations
 - How can students reach the project staff if they want to ask for a meeting (regular office hours? make appointment? open-door?)
46. For each grant-funded staff position (project manager, student navigator, instructional support staff) what are the most common topics discussed with students?
- What percentage of all students ask for/receive one-on-one support sessions during a given quarter?

- Are services targeted to students who appear to be having trouble with their academic coursework?
- Do you have examples of how you have supported a student who might otherwise have dropped out of the program?
- What are the variations in the intensity and types of support request by students in different programs covered by the grant?

If the college has both Health IT and nursing/allied health programs covered by the grant:

47. How does the content and intensity of the services provided by the student navigator and instructional support specialist differ for students enrolled in Health IT and nursing/allied health programs?
- What are the differences?
 - Why do these differences exist (e.g. staff capacity constraints, different level of student needs, online versus face-to-face contact with students in different programs, college policy)?
48. How do you think student support services could be improved?
- What percentage of enrolled students do you generally retain until program completion?
 - Could improved student support services help increase your retention rate under the grant? If so, how would you go about doing this?

Data Collection, Reporting, and Administration

49. What are the different data collection systems used by the project manager, student navigator and instructional support specialist to document the progress of students in their program and what services have been provided to them?
- Does the college use the Access database developed by Bellevue College for use by colleges that want to use it?
 - What other program-wide or grant-wide databases are used to collect information about enrolled students: Databases or spreadsheets used by individual grant-funded staff
 - What record keeping system do student navigators and instructional support specialists use to document the services they provide to students?
 - What data items are collected in these databases? Who records the information and when is it recorded?
 - How are these data items used by program staff to support the delivery of services to students?
 - How are these data items used to track college progress in meeting its grant milestones?
50. How does the college generate its reports to the Consortium administrators?

- Who generates the quarterly reports submitted to the Consortium administrators. What internal database is used to generate these reports?
- Who prepares the quarterly report narrative submitted to the Consortium?

51. How well has the college met its milestones under the grant?

- How well has it met its requirement to approve the new certificate and degree programs?
- How well has it met its schedule for developing and piloting the courses for the different programs?
- How well has it met its targeted enrollment numbers for the different programs?
- How well has it met its targeted student completion numbers for the different programs?

Participation in Consortium Activities

52. How effective is the Bellevue College leadership and administrative team in providing leadership and support to the grant-funded staff at the participating colleges?

- How do the participating colleges assess the leadership provided by Bellevue College as the lead grantee?
- How clearly does the Bellevue College grant management team communicate what it expects from the participating colleges?
- Have these expectations shifted from what colleges anticipated when they agreed to participate in the grant?
- What suggestions, if any, do the participating colleges have about how to improve grant decision-making or communication with the grant management team?

53. What happens during the monthly inter-college telephone and face to face meetings on various aspects of grant rollout?

- How are the agendas set for the different meetings: project managers meeting, student support services meeting, curriculum development meeting
- Who participates in the different calls? How useful is the content discussed at these meetings?
- How could the consortium meetings be improved?

54. What is the function of the project's Continuous Improvement Council (CIC) and how well does it realize this function?

- How are the agendas set for the CIC meetings?
- Who participates in these calls? How useful is the content discussed at these meetings?
- How could the CIC meetings be improved?

Successes, Challenges, and Lessons Learned

55. How did the co-grantees approach the development and operation of a multi-college consortium?
- What challenges were experienced? How successfully were they addressed?
 - What lessons have been learned?
 - How could the design and operation of future consortia be improved?
56. What challenges and successes occurred in developing and implementing new Health IT certificate and degree program(s)?
- What can be learned from the experiences across all the co-grantees?
 - What can be learned from the experiences of this college?
 - What improvements could be made in efforts to develop and implement new Health IT programs?
 - How sustainable are the grant accomplishments at this college?
57. What challenges and successes occurred in infusing Health IT content into nursing or allied health certificate and degree program(s)?
- What can be learned from the experiences across all the co-grantees?
 - What can be learned from the experiences of this college?
 - What improvements could be made in efforts to infuse Health IT content into additional programs?
 - How sustainable are the grant accomplishments at this college?
58. What did the co-grantees learn about how to recruit veterans to new Health IT programs or existing nursing/allied health care programs?
- How did the different co-grantees go about recruiting veterans who were interested in and well-prepared for the Health IT programs? How many veterans were ultimately enrolled, by program?
 - What outreach strategies were particularly effective in recruiting veterans? How could these efforts be sustained after the end of the grant period?
 - How successful were the veterans enrolled in the programs, compared to other students?
 - What did the Consortium learn about how provide student support services in a variety of instructional programs and settings?
 - What are effective practices in providing student support in an online or blended program environment, as compared to a physical classroom-based program?
 - What services appeared to be particularly helpful in promoting student retention and successful program completion?
 - How sustainable are the student support services at the colleges after the grant ends?

APPENDIX C: DATA COLLECTION PROTOCOLS FOR THE GRANT'S SPECIAL PROJECTS

Center for Healthcare Information Research and Policy (CHIRP)

Background and Goals (questions for Bellevue College grant administrators)

- Why is creating a cloud-based EMR software resource an essential component of the grant?
- How did you select this approach?
- What, if any, was industry involvement in the development of this idea?
- What, if any, was faculty and student involvement in the development of this idea?
- How did you select the contractor?
- What would have to happen for this project to be a success?

Planned Activities (questions for Bellevue College grant administrators and contractor)

- How is it determined which EMR software packages (both open-source and proprietary) should be included in EMR-STAR?
- What curriculum development is included in this project and who is responsible for developing it?
- How are students in infused nursing or allied health programs expect to interact with the resource differently than those in health IT programs?
- What kind of communication/feedback sharing is happening between Dr. Elliot Sloane, faculty, and students?
- What has been feedback to Dr. Sloane on EMR-STAR?
- How will EMR-STAR remain sustainable after the grant?

Progress to Date (Questions for Bellevue College grant administrators)

- How do you feel the EMR-STAR project is unfolding?
- EMR-STAR has been referred to as one of the higher risk activities in the grant—why?
- How are faculty and students responding to EMR-STAR?

- What are the next steps for this project?

Faculty and Student Opinion (questions for Bellevue College grant administrators, faculty, and students)

- What has been faculty and department response to EMR-STAR thus far?
- Which departments and programs are using EMR-STAR and which are not?
- Has EMR-STAR been built into your courses? Why or why not?
- Do you think it is an important resource? Why or why not?
- Are you using something else with similar functionality? If so, why did you pick that resource over EMR-STAR?
- How is EMR-STAR relevant and to which students/programs?
- What could be improved about the system so far?
- What are the challenges in using the system?
- What are the benefits in using the system?
- Is EMR-STAR benefiting your college? Your students? If so, how?
- Do students feel having access to EMR-STAR is affecting their career interests or opportunities? Why or why not?

Lessons Learned (questions for Bellevue College grant administrators)

- What have been the major challenges in implementing EMR-STAR?
- What would you do differently about the process, given what you know now?

HIMSS (Health Information and Management Systems Society) National EMR Academic Library

Background and Goals (questions for Bellevue College grant administrators)

- How does this project connect with the CHIRP grant and EMR-STAR?
- Why did you decide an outside contractor was needed to procure access to proprietary EMR software?
- Why was HIMSS selected as the contractor? What do they offer the library?
- How many versions of EMR software would you hope to see in the library? By when?
- What would have to happen for this contract to be considered a success?

Planned Activities (questions for Bellevue College grant administrators and HIMSS Initiative 2 Program Manager)

- What is the timeline for developing the EMR library?
- How will outreach to EMR software companies be conducted?
- Which companies will be contacted and why?
- How will pricing be determined?
- Will this library be maintained after the grant? If so, by whom? With what funding?

Progress to Date

- With what has the Program Manager been involved so far?
- Are there proprietary EMR software companies already on board?
- If so, how was this accomplished?
- If not, what has kept this from happening?
- What are the interim goals for the contract? How successfully have they been met thus far?
- What have been the major challenges in carrying out the contract to date?
- What has been industry opinion on the project?

Lessons Learned

- What will happen if no EMR software companies decide to participate?
- Have any adjustments in project processes, goals, or outcomes been made? If so, why?

National Veterans Health IT Apprenticeship

Background and Goals (questions for Bellevue College grant administrators)

- What are the overall goals of veterans apprenticeship as part of the grant?
 - What are your required “deliverables” under this part of the grant?
 - Are there any other measurable outcomes you would like to achieve?
- What does it mean to be a federally approved apprenticeship program? Why did you decide to go this route? Are there other federally approved apprenticeships targeting either to veterans or health IT?
- What information or support did the Consortium receive from the USDOL Office of Apprenticeship?

Planned Activities (questions for Bellevue College grant administrators and contractor)

- What is the plan for recruiting veterans for each apprenticeship site?
- Is there a classroom component to the apprenticeship? If so, who oversees it?
- Who is developing the course material for the apprenticeship program?
- How many apprenticeships will occur? How will veterans be chosen for the program?
- How many employers will be involved? How will they be chosen?
- What sort of support will be offered to involved veterans?

Progress to Date (questions for Bellevue College and contractor)

- What is the status of the program, given employer back down?
- What employers are currently being targeted? Why?
- What is the current timeline for the project? When will apprentices begin?

Employer Perspective

- Why did the employer(s) decide to participate in the apprenticeship process?
- What supports did they receive from the Health IT Veterans Apprenticeship Consultant? From the Bellevue College leadership team?
- How successful has the apprenticeship program been from the employer sponsor perspective?

Apprentice Perspective

- How were participants in the apprenticeship program recruited? Why did they decide to participate?

- How satisfied are participants with the worksite training? With the classroom training?
- What career plans for further training or career pathways are apprentices planning after they complete the apprenticeship?
- **Lessons Learned**
- What suggestions would the different respondents (consultant, grantee, employers, participants) they make for improving the design or implementation of the apprenticeship program?
- What are the opportunities for replicating or disseminating this apprenticeship model to other employers or other worksites?

HIMSS (Health Information and Management Systems Society) National Veterans Career Services Initiative

Background and Goals (questions for Bellevue College grant administrators)

- What is the goal of this special project?
- How does it interact with the other supports the grant provides veterans?
- Why was HIMSS selected as the contractor? What do they bring to the initiative?
- What would have to happen for this project to be considered a success?

Planned Activities (questions for Bellevue College grant administrator and contractor)

- What are your deliverables under this part of the grant?
- How will Bellevue College be interacting with the Initiative's Program Manager?
- How do the various activities included in this project (blog, webinar series, mentoring, conference participation) interact?

Progress to Date (questions for Bellevue College grant administrator and contractor)

- What is the timeline for this project, and where are you now?
- What have been attendance at webinars/page views of blog? What have been the topics? Any feedback from participants?
- What is planned for the "Hero's Welcome" at HIMSS 14?
- How will you know if project efforts have recruited veterans to the sector or increased their comfort in it?

Lessons Learned

- Have any adjustments in project processes, goals, or outcomes been made? If so, why?
- What challenges have been faced in implementing the grant?

Washington State Labor Council, AFL-CIO

Background and Goals (questions for Bellevue College grant administrators)

- What are the goals of the contract with the Washington State Labor Council, AFL-CIO?
- What strategies are being used to further these goals?

Planned Activities (questions for Bellevue College grant administrators and contractor)

- How is the Labor Council project staff drawing on its experience with the TAA program to support outreach of TAA-eligible individuals under the Bellevue Consortium TAACCCT grant?
- How is the Labor Council working with the local WorkSource agency partners to encourage recruitment and referral of TAA-eligible individuals to the colleges participating in the TAACCCT grant?
- How is the Labor Council educating Consortium staff about how to recruit TAA-eligible individuals for participation in the grant?

Progress to Date (Questions for Bellevue College grant administrators and co-grantees)

- How useful have the Labor Council activities been in recruiting TAA-eligible individuals for participation in the participating college's grant-funded programs?
- What activities are planned for the second and third years of the grant?

Lessons Learned (questions for Bellevue College grant administrators)

- Are TAA-eligible students a good match for the training and occupations targeted by the Health eWorkforce TAACCCT grant?
- How could the project improve its outreach to TAA-eligible students who are suitable for Health IT occupations?

Linda Reeder, Envision Consulting: Online Tool to Assess Readiness for Health IT Infusion

Background and Goals (questions for Bellevue College grant administrators)

- Why is such a self-assessment necessary for nursing or allied health programs?
- How was the contractor selected? What does she bring to the project?
- Did colleges and departments express interest in such a tool?
- Are there goals for how many colleges and programs you hope use the tool?
- Once a department uses the tool, what is the next step?
- What constitutes successful use of the tool for an individual department or college?
- What constitutes success for the tool as part of the overall grant?

Planned Activities (questions for Bellevue College grant administrators and contractor)

- What is involved with the creation of the tool?
- What is involved with post-assessment consulting?
- Will the tool be maintained after the grant period ends? If so, how?
- How will you collect data on the tool's usefulness?

Progress to Date

- What is the status of the tool's development?
- How many departments have used the assessment tool? How many have received consulting?

Faculty and Department Opinion (questions for nursing/allied health departments who had/have access to the tool)

- Why did you choose to use or not use the tool?
- How do you perceive your department's readiness for IT infusion?
- What barriers prevented you (or might prevent another department) from using such a tool?
- What is beneficial about the tool?
- What was your opinion on the tool?
- Did taking the assessment change or clarify your department's direction?

Lessons Learned (questions for Bellevue College grant administrators)

- Why do you think the tool has not been more widely used?
- Is there anything you would do differently about the process, given what you know now?

Washington Health Care Authority: Washington Health Information Industry – Education Council

Background and Goals (questions for Bellevue College grant administrators and contractor)

- Who are the members of the Washington Health Information Industry-Education Council? What stakeholder groups do they represent?
- What are the goals of the Washington Health Information Industry-Education Council?
- What are the specific objectives of the Council's grant-funded activities?

Progress to Date (grant administrators and contractor)

- How successful was the development of the list of state Health IT training opportunities by the Council?
- Who are the potential users of this list? How is the Council promoting use of this resource?

Planned Activities (questions for Bellevue College grant administrators and contractor)

- What has been learned from the recently completed survey of Health IT employers?
- What needs or gaps were identified by the survey?
- What follow-up activities or policies are being suggested in response to the survey findings?

Lessons Learned (questions for Bellevue College grant administrators)

- How might other states benefit from developing a Health IT Industry-Education Council?
- How has the grant supported the development of similar Councils in other states?

APPENDIX D: TEMPLATE FOR LOG OF STUDENT SUPPORT ACTIVITIES PROVIDED TO INDIVIDUAL STUDENTS OR GROUPS⁸

College: _____

Student Support Staff Member: _____

Date	Name of Program	Name of Individual Student/Group	Study ID	Brief Description	Pre-enrollment Support	Career Counseling/ Job Search Skills or Assistance	Academic Support/ Study Skills	Other
<i>3/1/14</i>	<i>Rad Tech</i>	<i>Sally Smith</i>	<i>1324</i>	<i>Assisted with resume</i>		<i>X</i>		
<i>5/2/14</i>	<i>Medical Assistant</i>	<i>Applicant</i>	<i>n/a</i>	<i>Counseled about whether program was a good match</i>	<i>X</i>			
<i>5/15/14</i>	<i>CAHIMS</i>	<i>GROUP</i>	<i>n/a</i>	<i>E-mailed class members with information about study skills</i>			<i>X</i>	

⁸ Note: This is provided as an example of the type of data collection log individual colleges may choose to develop.

