



Teaching Health Care Professionals to Use Health IT in Data Analytics

Health IT Workforce Training Program: Bright Spot

In 2015, the Office of the National Coordinator for Health Information Technology (ONC) awarded a total of \$6.7 million to seven academic institutions to help build a workforce skilled in using health information technology (IT). This two-year cooperative agreement was designed not only to update curricula developed through ONC's 2010 workforce training program but also to create new training content for five emerging topic areas: data analytics, care coordination, patient-centered care, population health, and value-based care. The 2015 cooperative agreement aimed to train 6,000 incumbent health care workers across the United States.

Bellevue College, Normandale Community College, and Oregon Health and Science University (OHSU) are three awardees that elected to implement programs to support health care workers in using health IT to advance data analytics. These awardees used creative approaches to design and implement their programs, some of which are highlighted below.

Bellevue College partners with the Department of Veterans Affairs to train professionals

Some awardees designed their programs to meet the needs of a broad audience of professionals, but Bellevue College leveraged an existing relationship with the Department of Veterans Affairs (VA) to design a health IT and data analytics course that targeted both clinical and nonclinical health care staff employed by the VA. Building on their earlier partnership under the 2010 workforce training program, Bellevue and the VA recognized the value of an educational program to help VA health professionals better understand and effectively use the large volume of health IT data generated on a daily basis. To ensure the relevance of the course content and focus, the VA conducted two workforce development surveys that identified data analytics as a top training need.

"Anytime you can customize a course to a particular university of willing learners, you will get the highest level of return on investment."

—Bellevue College



Bellevue worked closely with the VA to tailor program content to address the specific needs of VA health professionals; it developed program lectures, hands-on exercises, a case study, and assessment questions for health care workers with varying degrees of experience in data analytics. As a result, Bellevue produced program content appropriate for professionals new to data analytics; individuals with limited data analytics experience but, given evolving job responsibilities, in need of greater proficiency in the area; and health care staff with extensive



experience in using data analytics, such as a chief health informatics officer. The program emphasized a comprehensive understanding of data analytics, including mechanical skills such as the creation and interpretation of a run chart as well as a more in-depth understanding of the importance of data validation.

After the program was fully designed, the VA marketed the program to its employees through its professional development system, email, and webinars. Bellevue and the VA conducted two rounds of the program during the workforce training program period, the first round in the fall semester and the second round in the winter semester. Given the strong interest in data analytics among VA health care workers, along with the VA's marketing activities, Bellevue quickly reached its 1,000-participant limit on both its first and second rounds of the program and had to develop waiting lists. For example, for its first round, Bellevue had to place 700 people on a waiting list for the second round.

At the program's inception, Bellevue and the VA recognized that health professionals enrolling in the program would have to balance the course with competing priorities as full-time employees. In addition, given the absence of any financial incentive, they acknowledged the importance of motivating VA staff to participate in and complete the training. For this reason, Bellevue and the VA worked together to make the program available to participants during nonbusiness hours and outside the closed VA network. This arrangement allowed participants to complete the program at a time and location most convenient for them. Bellevue also extended the close date of the first round of the program by a few weeks to give participants extra time over the winter holidays to complete the course. To encourage enrollees to complete the course, Bellevue and the VA offered qualifying program participants continuing education credits. Bellevue believes that the credits were an effective incentive for encouraging enrolled professionals to complete the course. The program's success is apparent: the Bellevue data analytics course's completion rate was 70 percent versus the average completion rate of 50 percent for comparable VA educational programs.

"We had a broad distribution of students from clinical, technical, and administrative [roles]. They all valued the course across the board. It really has been one of the most successful programs that we've ever done."

—Department of Veterans Affairs

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Normandale Community College aligns program content with quality improvement goals

In contrast to Bellevue, Normandale Community College designed its program content for a broader range of health care professionals in various health care settings. However, this awardee focused its recruitment and enrollment efforts on two major groups of health care workers. The narrowed focus on particular audiences allowed Normandale to ensure that the program enrolled professionals in need of data analytics training.

First, Normandale recruited and enrolled professionals at Federally Qualified Health Centers (FQHC) and found that FQHCs often lack resources devoted to staff training, though they can frequently benefit from the use of health IT and data analytics to risk-stratify patients, track care management, and conduct patient follow-up. Normandale, therefore, worked

"I work with a good deal of health care data but have struggled to prepare it in a meaningful way. This program has equipped me with insight that I need to do my job better. I feel more informed."

—Participant in Normandale Community College's program



closely with FQHCs to recruit and enroll their staff to participate in the program at no charge. Normandale's program offered FQHC professionals the opportunity to learn more about how health IT and data analytics play a role in patient engagement, quality improvement, and interoperability of health IT systems.

Second, Normandale recruited and enrolled professionals from organizations participating in the [Transforming Clinical Practice Initiative](#) (TCPI), a Centers for Medicare & Medicaid Services initiative supporting practices in practice transformation. Normandale found that the organizations were already working toward quality improvement goals that could be supported by its program. For example, TCPI organizations were working to improve quality in their practices and looking at related pay-for-value approaches as part of their work. Normandale's program built on the TCPI organizations' work by including program content in applications and contracts for value-based care.



Normandale chose to employ the curriculum materials that ONC provided to all awardees to help them shape their training programs. However, Normandale modified the content to align with the needs of its target audience. For example, Normandale revised the curriculum to include applied learning activities and supplemented it with content from subject matter experts. To incentivize and encourage enrollees to complete the program, Normandale shortened its program to make it more manageable for busy, working professionals. It also

offered qualifying professionals continuing education credits for a fee. To market its program, Normandale worked with other organizations such as the Institute for Clinical Systems Improvement, Stratis Health, and Minnesota eHealth Advisory group.

Oregon Health and Science University targets professionals across the United States

Building on its experience in conducting online education in health IT for professionals across the United States, Oregon Health and Science University (OHSU) recruited and enrolled health care workers from across the country. To increase public awareness, OHSU marketed its health IT program through social media. In addition, it partnered with the American Medical Informatics Association to market the program to its members.

Despite its expansive recruitment strategy, OHSU took a more deliberate approach in identifying topic areas for its program focus. OHSU conducted a needs assessment with a sample of health care workers to identify training gaps. The assessment revealed health care professionals' deep interest in learning more about data analytics. To ensure the quality and comprehensiveness of its program content, OHSU formed an advisory board of professionals engaged in data analytics. The board's input allowed OHSU to develop a curriculum that provided a detailed understanding of both the role of data analytics and the importance of health IT in supporting data

"Although I'm pretty experienced in the health IT world (15+ years of experience), I learned a lot of new things. . . . I feel this course should have the status of 'Must Complete' for health IT workers."

—Participant in Oregon Health and Science University's program



analytics activities. Similar to Bellevue and Normandale, OHSU offered continuing education credits to qualifying program participants as an incentive for professionals to complete the program.

Looking ahead

All three awardees expect to continue their programs after the conclusion of the workforce training program in 2017. Normandale plans to operate its program, or components of it, through ongoing partnerships with several stakeholder groups, including the Uniformed Services University of the Health Sciences, Minnesota e-Health Initiative, and TCPI. The VA has committed to continuing Bellevue's program as a permanent component of its professional development system. The VA has also initiated discussions with the Department of Defense (DoD) to make the program content available to DoD health care workers. In addition, Bellevue has begun working with the Healthcare Information and Management Systems Society (HIMSS) to create and launch a version of its program not only for HIMSS members but also for nonmembers. Bellevue plans to work with HIMSS to tailor the program content to meet the needs of members and interested stakeholders. For example, Bellevue and HIMSS plan to include content on the Medicare Access and Children's Health Insurance Plan Reauthorization Act of 2015 (MACRA). Even though MACRA does not play a role in data analytics for VA health care workers, it will play an important role for health care workers in the private sector. OHSU is incorporating its new program content into the portfolio of health informatics courses already offered online and is planning to cultivate the new program content to expand its other educational programs. OHSU is hoping to secure funding to support these activities and continue development of its curriculum.

"The work that the VA did so beautifully with Bellevue will be sustained in the broadest sense. That's one of the most gratifying parts of this project."

—Department of Veterans Affairs

Bellevue, Normandale, and OHSU approached the design and implementation of their respective programs differently, but their works has contributed and will continue contributing to the building of a highly skilled health IT workforce in data analytics. Stakeholders interested in training health care workers in emerging topic areas such as data analytics can benefit from the three awardees' experiences and lessons learned in program design and implementation.