The Computerworld Honors Program

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Final Copy of Case Study

Status:
Laureate

Year:
2013

Organization Name:
PRHI- Pittsburgh Regional Health Initiative

Organization URL:
www.prhi.org

Project Name:
Tomorrow's HealthCare

Please select the category in which you are submitting your entry:
Innovation

Please provide an overview of the nominated project. Describe the problem it was intended to solve, the technology or approach used, how it was innovative and any technical or other challenges that had to be overcome for successful implementation and adoption. (In 300 words or less.)

Technology continues to profoundly affect the way people work, collaborate, communicate, and succeed. Increasingly it is becoming a means for empowering people who not only want to learn, but to share innovation and accomplishments with colleagues. Tomorrow's HealthCareTM is a web-based quality improvement tool, based on the Pittsburgh Regional Health Initiative's (PRHI) proven Perfecting Patient CareSM methodology for healthcare quality improvement and efficiency. Recognizing that available management and education tools were not up to the task of helping healthcare leaders transform their organizations and system, PRHI developed a comprehensive management, education, and quality improvement (QI) tool that will allow the rapid creation and spread of discovery.

This disruptive innovation is intended to serve simultaneously as the "best QI friend" of the CEO and executive team, managers, supervisors, and frontline workers. THC supports transformational leadership in these ways: +Whole organizations are introduced to the basics of PPC. +Every frontline worker is enabled with core learning and tools to become a scientist working as part of a discovery team. +Daily problem solving becomes a standard and widespread practice. +Breakthroughs are shared in real time and retested in other units. +Staff is recognized for their QI education and work. Tomorrow's HealthCare is designed to enable healthcare teams, from frontline staff to executives responsible for monitoring outcomes, to lead rapid and sustained corrective improvements. Tomorrow's HealthCare's web-based service includes all the mapping tools necessary for quality improvement and a unique online community feature to enhance peer learning and easily disseminate learning. This structure allows busy healthcare workers to access the tools and education they need to improve patient care. Combined with the expertise of PRHI's onsite trainers and coaches, Tomorrow's HealthCare serves to spread and sustain continuous quality improvement throughout the healthcare industry.

When was this project implemented or last updated? (Please specify month and year.) Has it incorporated new technologies and/or other innovations since its initial deployment? (In 300 words or less.)

In 2007, the vision for THC was not to create a traditional, stand-alone website to view QI materials and watch videos. It was to make maximal advantage of available and evolving technologies to bring just in time learning, support, access to data and management tracking tools to healthcare. THC Launched in Beta in 2008 with a Go-Live date of 2010. The Data Tracker feature launched in March 2011. (The Data Tracker is a cloud based dashboard and data collection tool integrated with Tomorrow's HealthCare. Users can design their own personal dashboards with data visualizations that show the latest available data. Users can collaborate with the ability to share widgets.) Originally designed as a tool for hospital (acute care) settings, it has been rapidly expanded to accommodate the differences and needs of a range of healthcare settings from primary care doctors' offices, to stand alone healthcare clinics, to long term care and emergency settings. The original education material followed traditional continuing education guidelines (PowerPoint lessons with video). Recent modules have been focused on a range of adult and inter-generational learning styles incorporating animation, gaming, practice modules. In the months and years ahead, THC will learn from its customers to reveal further ways to use technology to take key learnings to scale.

Is implementation of the project complete? If no, please describe the project's phases and which phase the project is now in. (In 300 words or less.)

Implementation will never be complete. By design, THC grows with every user interface and addition of new projects, areas of content interest, communities formed and best practices shared. Tomorrow's HealthCare is deployed in many settings in the U.S. and Israel and used by all types of organizations (long-term care, hospitals, primary care). THC is well past the implementation phase but it is always improving, refining and enhancing based on user feedback and improving technologies. While the tool's parameters are defined, its reach and utility are infinite, with new user, product feature requests and functionality evolving as rapidly as customers can identify their needs and as technology evolves (e.g., adaptations for tablets, for smartphones, greater use of liberated data resources, etc.) Immediate goals include: +Refining its Data Tracker: The Data Tracker uses cloud computing to help healthcare professionals engage in strategic data analysis and research and to participate in learning communities within their institutions and across systems. It will include support for data analysis and visualization to help hospitals and practices take advantage of the promise of the cloud's extensive resources for computation, research, and collaboration. +Enhancing content aligned with critical and emerging healthcare issues, including: -Reducing infections and other never events -Reducing avoidable hospital admissions and readmissions -Improving access to palliative care -Integrating electronic health records into community and physician practices -Supporting new models of care, including integration of behavioral and physical health in primary care +Adopting well-established technologies such as game-based learning and mobile technology tools. Both games and mobiles have clearly entered the mainstream of popular culture; both have been demonstrated as effective tools for learning in business, K12, and higher education. Both are expected to see much broader use by adult learners over the next few years across sectors.

Please provide at least one example of how the technology project has benefited a specific individual or organization. Feel free to include personal quotes from individuals who have directly benefited from the work. (In 300 words or less.)

Sharing knowledge and spreading best practices within a health system is not without challenges. Systems are often characterized by communication barriers due, in part, to the tendency of health professions and units to function in silos. Healthcare workers are also bombarded with information about each patient on a daily basis, making it difficult to focus on that which is most relevant and meaningful to their work. Add to that the constantly competing demands with which healthcare workers are faced, and creating and sharing new knowledge

become quite difficult. Absorbing new information, let alone integrating it into practice, becomes onerous. All of these elements must be in place and aligned around the same vision and goals. This requires the coordination of many moving parts and the improvement work being done every day at all levels of an organization from the front line of care to the executive level leadership toward goals derived in part from the current and anticipated healthcare policy and payment environment. A user (name withheld) from a clinic in Oregon described the usefulness of the THC-based Quality Improvement tool as follows: "All is well and I visited one of our far away pilot clinics last week. They have their improvement projects, the current state map, visually displayed in a very prominent location in their staff area. Not only are they displayed but all staff are encouraged to move the post its around and make notes on the current state map to make sure they all agree on what is currently happening. It is a relatively small practice so this process works well for them. Lots of fun to see this process improvement in action and that they are adopting it as a cultural change for everyone, not just the improvement team."

Would this project be considered an innovation, a best practice or other notable advancement that could be adopted by or tailored for other organizations and uses? If yes, please describe that here. (In 300 words or less.)

THC is an innovation that promotes the dissemination of best practices. Currently, most quality improvement interventions, even for "spot repair" work, require expensive and extensive training and coaching in quality improvement methods via face-to-face learning and coaching. While providing powerful support for improvement, this approach can never provide sufficient breadth and depth of quality improvement education and support necessary for transformation. PRHI's web-based, comprehensive management and training solution, Tomorrow's HealthCareTM, delivers precisely the learning and improvement tools needed for different teams in different venues, and enables healthcare leaders to support and sustain transformation. THC provides the tools and the techniques for collective learning and discovery, accommodating the way different people and even different generations learn. It is easily updated, augmented, adapted, and customized. In short, it represents the new age of learning, sharing and management.

If there are any other details that the judges should know about this project, please note them here. (In 300 words or less.)

In industries other than health care, leading national firms and international competitors have developed knowledge networks, connecting their employees from Brazil to Mongolia, to keep them informed about new developments in QI, share organizational challenges and successes, and encourage team-based

learning and innovation. Knowledge building is now recognized as an organizational imperative in engineering firms, service industries, and manufacturing. The chief knowledge officer is increasingly a part of the executive team and focuses on the core notion that high-performance organizations constantly and relentlessly work to achieve their missions (e.g., in health care, providing perfect patient care). In health care this had simply not happened. Too often there are stories of improvements in one institution that don't spread to another or even within one unit of an institution that don't spread to other units. THC has designed learning and sharing communities to facilitate professional networks. Communities of learners and change agents within organizations have access to relevant information and a "space" where they can gain insight into process improvement strategies and share results of demonstrations, case studies, breaking news, and data relevant to their areas of interest, both within their organization and outside of it. Tomorrow's HealthCareTM encompasses a vision of transformation from the unit level to the systems level. It was PRHI's ideal when it began in 1997: healthcare systems working across boundaries to perfect performance. It scales and accelerates change the way an army of face-to-face, on-site experts cannot do. It is the least expensive and most effective means to achieve the end: patient care that is as perfect as possible.