



The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

Final Copy of Case Study

YEAR:
2012

STATUS:
Laureate

Organization:
Beaumont Hospital

Organization URL:
www.beaumont.ie

Project Name:
Cystic Fibrosis IT system : CF-IT

What social/humanitarian issue was the project designed to address? What specific metrics did you use to measure the project's success?

Beaumont Hospital is designated as the regional centre for adult patients with Cystic Fibrosis (PWCF) in Ireland. We currently have 100 PWCF attending the Cystic Fibrosis service. PWCF have frequent investigations and frequent visits as part of their ongoing management. Best care practice has shown that attention to detail by careful monitoring of investigation parameters is essential in improving mortality and morbidity of PWCF. We developed a CF-IT system to capture and monitor all this information, allowing for improved patient care. Core clinical information is stored on this system, which is linked to the main hospital server and has resulted in less time spent searching for investigation reports, charts, etc. The CF team has also devised a number of policies in the management of PWCF, and the implementation of these policies on an individual patient basis is entirely dependent on the ability to monitor specific clinical parameters on each patient in an efficient manner. This system is unique in that it is the only in-house-developed IT system specifically for PWCF in Ireland. The end result is a more effective and efficient service for those patients who suffer from this debilitating disease attending Beaumont Hospital. We went live in 2011 with the IT system and achieved our goal of a paperless record, with full multidisciplinary support.

Please describe the technologies used and how those technologies were deployed in an innovative way. Also, please include any technical or other challenges that were overcome for the successful implementation of the project.

We used an internal private cloud environment to build our server, and we created an Oracle database to sit on it. We have successfully virtualised the desktop now and can publish the CF-IT system through an iPad or other tablet, making it a truly mobile application.

Please list the specific humanitarian benefits the project has yielded so far.

The management of patients with Cystic Fibrosis (PWCF) is truly multidisciplinary. The Cystic Fibrosis team in Beaumont Hospital is made up of doctors, clinical nurse specialists, ward nurses, dieticians, physiotherapists, social workers, psychologists, pharmacists and pulmonary function technicians. In addition, there is significant clinical input from other medical disciplines, such as endocrinology, gastroenterology, vascular surgery, E.N.T. surgery, interventional radiology and psychiatry. Communication and continuity is essential between these various disciplines in order to provide optimum care for PWCF. Prior to this, all patient encounters and management plans were recorded in the patient's chart/medical notes. Each patient has only one chart/medical notes. It is not always possible to access these notes due to practical limitations. The patient's chart may also be required by a number of disciplines at any one time. The Cystic Fibrosis database and I.T. system we have created allows each health professional to record the patient encounter on the system. The encounters and management plans are saved/filed according to date and discipline of the healthcare professional. These records are accessible to any of the various healthcare professionals involved in the care of PWCF in Beaumont and can be accessed from any computer terminal in the hospital. This has dramatically improved communication within the CF team and also between the CF team and the other stakeholder healthcare professionals. Risk management has vastly improved because the CF-IT system functions as an electronic patient record that is accessible 24/7.

Please provide the best example of how the project has benefited a specific individual, enterprise or organization. Feel free to include personal quotes from individuals who have directly benefited from the work.

The Cystic Fibrosis I.T. system we have created allows each health professional to record the patient encounter on the system. The encounters and management plans are saved/filed according to date and discipline of the healthcare professional. These records are accessible to any of the various healthcare professionals involved in the care of PWCF in Beaumont and can be accessed from any computer terminal in the hospital. This has dramatically improved communication within the CF team and also between the CF team and the other stakeholder healthcare professionals. Risk management has vastly improved because the CF-IT system functions as an electronic patient record that is accessible 24/7.