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Final Copy of Case Study

Status:
Laureate

Year:
2013

Organization Name:
ORTEC Consulting Group/ORTEC BV

Organization URL:
http://www.ortec-consulting.com/

Project Name:
North Star Alliance Corridor Medical Transfer System (COMETS)

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

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.)

The core objective of this project is to prevent and treat both general and mobility-related health issues for some of Africa's most hard-to-reach populations. We do this by supporting the work of North Star Alliance (North Star), which builds and maintains a network of roadside health clinics (Roadside Wellness Centres, or RWCs) that provide focused health services along major transport corridors across Africa. ORTEC has contributed significantly to this initiative by developing a client health registration system called COMETS (Corridor Medical Transfer System) that enables the exchange of patient-specific data between each RWC, as well as the monitoring and evaluation of health trends on the local, national, and regional level. By networking the RWCs, ORTEC provides drivers the opportunity to continue working while being treated for HIV and other illnesses, safeguarding their income, and the well being of their families. Further, ORTEC's COMETS system facilitates the collection of site-specific health and demographic data fundamental to the success of any health intervention. COMETS is a Windows Forms application (.Net 3.5) using Microsoft Synchronization framework to

synchronize data between RWCs. Data is gathered on a centralized SQL Server 2008 R2 database and each RWC uses a local SQL CE 3.5 database. An online licensing server is used to manage access for each installed COMETS. Daily, a scheduled ETL (Extract, Transform & Load routine) is performed using Microsoft SSIS technology to fill a Data Warehouse (DWH) for reporting. Management can access online reports hosted on a SQL Reporting Server.

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 early 2009, we released the first version of COMETS, or the Corridor Medical Transfer System. In early 2009, we released the first version of COMETS, or the Corridor Medical Transfer System. Since then, together with North Star Alliance, we've worked to further develop the system, addressing key issues related to poor connectivity in its implementation region, as well as a programme to train and support nurses and clinicians accessing COMETS. Further, a version launched in December 2012 (COMETS GUI) includes substantive upgrades and additional functionality, such as multi-language support. In addition to these upgrades, we are currently working on implementing new functionality to improve the quality of data, user friendliness, and the methods used for patient identification, including biometric indications such as fingerprint scanners and touchscreen-based applications. As part of these improvements, we are currently introducing WPF MVVM to allow for a more enhanced user interface experience. To ensure that COMETS users, many of whom have limited computer literacy, accept these developments, we've chosen to roll out new features in phases, allowing for sufficient training and adoption to take place during each step.

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.)

Plans exist to continue to develop COMETS, which include a move toward a touch-enabled tablet version, which would improve user experience and increase the overall intuitiveness of the system amongst users (nurses and clinicians). In addition to this, we will be working to integrate COMETS with other core data collection and analysis mechanisms such as those used to help monitor, evaluate, and optimize operational elements of the clinical network, including optimal geographic placement, financial performance etc. We will also be working to enhance data sharing within North Star's network, and externally with other partners.

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.)

As of year-end 2012, 29 RWCs were operational in Botswana, The Democratic Republic of Congo, The Gambia, Kenya, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Uganda, Zambia, and Zimbabwe. Within these countries, over 200,000 members of the target population received counselling, testing and treatment, in 2012 year alone. In addition to these centres, over the coming 18 months, 21 new centres will open in cooperation with the Southern African Development Community (SADC), as the

result of a grant from the Global Fund to Fight AIDS, Tuberculosis and Malaria. Each of these centres will be linked using our COMETS system, which played a core role in the success of North Star's recent partnership with SADC. National Governments have also recognised the significance of COMETS, and its roll in monitoring health trends among some of Africa's most hard-to-reach populations. As an example of this, the Ministry of Health and Sanitation for the Government of Kenya is currently in the process of linking COMETS with its own health data systems.

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.)

Yes. Beyond working to integrate COMETS with the Government of Kenya national health data systems, we have been working with North Star to facilitate the adoption of COMETS by other regional health interventions. As part of this initiative, a partnership has been established with the Abidjan-Lagos Corridor Organisation (ALCO) to implement COMETS in their own network of HIV education, testing, and treatment facilities, located across West Africa. Beyond making COMETS available to other key health interventions, we have explored the use of COMETS as a functional early warning system that could be used to analyze, identify, and track disease and disease outbreaks at the local, national, and regional level. Thanks to our ability to collect data on highly mobile, and disproportionately affected, populations across Africa, and our plans to make COMETS more widely available among health care providers in the region, we foresee this as a plausible and legitimate future step for COMETS.