

National Children's Study: Customizing Open Source SugarCRM for Longitudinal Participant Relationship Management.

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Introduction: Due to the decentralization of informatics for the alternate recruitment pilot, we explored informatics options and met and/or corresponded with several groups on potential solutions. After much time and effort, the Orange County Vanguard Center (OCVC) identified SugarCRM as a possible open source case management informatics platform. OCVC along side South Dakota State University formed the NCS SugarCRM Consortium and has provided leadership and technical support to all locations that are interested in its use for any aspect of NCS. The SugarCRM consortium has worked to develop this informatics platform into one of the top candidates for the main study case management system.

Results: The OCVC set out to solve the problems identified in informatics implementations demonstrated by other study centers. The OCVC conceptualized the use of an adapted Customer Relationship Application for research, an informatics idea new to the NCS and new to research studies.

The OCVC chose SugarCRM (a fully open source, off-the-shelf customer relationship management application) to modify and deploy in order to track study operations and events in a usable and efficient way. SugarCRM was chosen for the following reasons: It is a platform that is built to be extended. Open development process means continual feedback from users resulting in real time process improvements. Unlimited and unrestricted changes can be made. OCVC will own the data while other systems would have the ability take away the ability to extract proprietary data. It is one of the world's most used Customer Relationship Management systems with more than 250,000 community members, 25,000 developers, and over 850 extension projects. Very little programming changes are necessary. It is built to work with and manage tens of thousands to hundreds of thousands of records and contacts; and it is built with interoperability in mind, and comes with SOAP and REST APIs built right in to the application.

From June 2010 to February 2011, the OCVC inaugurated and recruited members into the NCS SugarCRM Consortium. The OCVC and South Dakota State University serve as the consortium as co-leaders. The SugarCRM consortium has implemented the NCS PO's Master Data Elements Specifications and has worked with the PO and its contractors to interconnect this platform to data collection applications like DCAS. The consortium has also made available all customizations to the NCS and the public, so that other locations and other research studies might benefit from the work of the NCS SugarCRM Consortium. The consortium has had the opportunity to present SugarCRM to the PO and its contractors (S-3 and BAH) for consideration as a component of the IMS for the Main Study.

Conclusions: The NCS SugarCRM Consortium has come so far since the first prototype, and the current NCS modules can be downloaded installed and put into use in little time at no cost. We have successfully shown that the MDES tables, including data elements, can be implemented by mostly non-technical staff at significantly less cost. SugarCRM is an open source technology that will be utilized and available for years to come. With each release SugarCRM puts out we can implement new tools to better keep track of all of our participants at no cost.