Caisis 4.0: An Open Source Web-based Clinical Data Management System Structured for Collaboration and Research

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We are developing and extending the Caisis system to facilitate multi-institutional collaboration. The benefits of Caisis include 1) a data model that is extensible across diseases; 2) a rich web-based (cross-browser compatible) user interface; 3) metadata-driven forms that can be easily customized; 4) tools to integrate and facilitate patient care and research; and 5) a thriving user community of over 20 centers in the US, Europe and Asia. The system is intuitively structured around simple patient stories rather than hospital operations, and it allows investigators to easily extract and process data for analysis. Caisis 4.0 is built using the Microsoft SQL Server, ASP.NET and C# platform and is distributed freely under the GPL open source license on a public web site (http://caisis.org/). We have used data supply chain concepts to capture research quality data during clinical practice workflows, and are extending it with modules for electronic data capture, electronic medical records, clinical trials management and biospecimen management. Memorial Sloan-Kettering Cancer Center in New York, NY, and University Hospital UMAS in Malmö Sweden are currently using Caisis to enable collaborative prostate cancer research projects and clinical annotation of biospecimens for biomarker studies with tissue microarrays, blood plasma, and molecular assays.

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