Purpose
The ED Linking Project is the first step toward implementation of a secure health information exchange system that will enhance care coordination and provide needed medical information to clinicians when patients present for care. The system is being designed to be useful for all patients, with an initial focus on safety net providers and emergency departments. Patients enrolled in the Medicaid and General Assistance Medical Programs (GAMP) in Milwaukee County will be among the first group of patients with data available through the system. Data sharing partners include:

- Aurora Health Care
- Wisconsin DHFS Medicaid
- Children’s Hospital of Wisconsin
- General Assistance Medical Program
- Columbia St. Mary’s
- Wisconsin and Milwaukee Public Health Officials
- Froedtert & Community Health
- Federally Qualified Health Centers
- Wheaton Franciscan Healthcare

In the first phase of implementation, the ED Linking Project shall provide emergency physicians immediate access to past medical history for patients that register for care at their facilities. This will be accomplished in a manner that is virtually transparent to current workflow. This type of information has been shown to improve quality of care and decrease costs in other cities. It is expected to reduce redundancy of testing and decrease frequency of medical errors. The ED Linking system will be compliant with HIPAA regulations and will include a robust security environment to ensure confidentiality of all individual patient information.

Methods
WHIE is a non-profit organization, with a broad based governance group, that is an evolving provider of regional health information exchange services. WHIE is working with the Milwaukee Health Care Partnership, a collaboration between Milwaukee health care providers, state and county government, and the Wisconsin Hospital Association.

WHIE and its technical partners conducted a series of activities to support the initial technical plan development. Included were interviews with end users and data providers, assessment of proposed technology platforms and data hosting sites, documentation of detailed requirements, development of a work breakdown structure (including itemized labor and cost estimates), creation of a risk analysis and mitigation strategies, and review of the plan with multiple stakeholders. This plan was used as the basis for confirming funding supplied by the region’s health care provider systems and the Wisconsin Hospital Association, and as the basis for pursuing funding through a State of Wisconsin Medicaid Transformation grant.

The ED Linking project will roll out initially at three Milwaukee hospital emergency departments: Columbia St. Mary’s Milwaukee; Aurora Sinai Hospital; and St. Francis Hospital. Common protocols and workflows have been established so that regional queries for past medical history data occur automatically when patients present for
care for immediate access by clinicians. As the system proves to be effective, it will be expanded to include 10 hospitals, and federally qualified health centers.

The technology platform for the WHIE ED Linking project will be the Azyxxi system supplied by Microsoft Corporation. The innovative Azyxxi software has won accolades for its ability to integrate data from multiple diverse health care systems and to present information to clinicians in a useful manner. The WHIE implementation will lead the nation in the application of this software platform to address the complex needs of a regional health information exchange system.

The ED Linking Project shall follow a structured development path with specific milestones. The first phase of the project will commence on April 1, 2007 and will end March 31, 2009.

Evaluation
An independent evaluation of the WHIE ED Linking project will be provided by a team comprised of experienced academic researchers from the University of Wisconsin in Madison and the Medical College of Wisconsin.

The goals of the ED Linking project will be to demonstrate improvements in health care quality, including decreased redundancy of testing, improved decision making by clinicians, reductions in medical errors and improvements in cost efficiency.

Long term sustainability planning for this project and its expansion statewide is being integrated with the State of Wisconsin eHealth Board’s five year roadmap to encourage the use of health information technology.

Background
This project was initially conceptualized by the Emergency Department Care Coordination Committee (EDCCC) commissioned by the Milwaukee Health Care Partnership. After a series of planning meetings a Request for Proposal was offered in the summer of 2005. The proposal submitted by the non-profit Wisconsin Health Information Exchange (WHIE), in collaboration with technical partners, was chosen for implementation. In the spring of 2006 the State of Wisconsin Department of Health and Family Services (DHFS) awarded WHIE initial funding for the development of a formal technical plan for the ED Linking Project. WHIE created this plan in consultation with local health care providers and technology partners. Subsequent funding commitments have been obtained from local health provider systems, and DHFS was awarded a federal Medicaid Transformation grant to fund implementation of the ED Linking Project over two years beginning April 1, 2007.

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