

Beijing Xicheng District Health Bureau chooses IBM DB2 9 with pureXML™ to provide EMR healthcare information exchange.

Facts

Xicheng District Health Bureau, www.bjxchwsh.gov.cn
Beijing, People's Republic of China

Industry: Public Healthcare
Products: IBM DB2 9, WebSphere DataPower
IBM Business Partner: HongRuan JingWei Co. Ltd.

Executive Summary

Xicheng District Health Bureau in Beijing (XDHB) is using DB2 pureXML™ technology to deliver a unified healthcare management system that integrates all medical resources and information among local medical institutions. DB2's support for XML enables XDHB to provide better healthcare services as well as early detection and control of potential epidemics.

Introduction

Xicheng district has a local population of more than one million people, with more than 500 medical institutions, including municipal public hospitals, district-level hospitals and community health centers. Xicheng District Health Bureau (XDHB) supports community healthcare management and the Chinese government's healthcare reform initiatives.

Challenge

As the chief regional health management organization, XDHB provides healthcare and related administrative services for all local residents, public hospitals and community health services within its municipal jurisdictions. Their mission is to establish a healthcare management system that facilitates fast, automated and quality healthcare services throughout the treatment lifecycle. This includes patient registration, physical examination and symptom diagnosis, referral appointments for community clinics and central hospitals, and disbursement of medicines at the pharmacies. To achieve this, they need to have an Electronic Medical Record (EMR) system where medical information can be exchanged and shared among health service providers. However, XDHB's previous health management system was based on a major non-DB2 database and lacked the flexibility to handle full integration of disparate, hierarchical and sparse medical information from heterogeneous systems where medical communities and departments have their own medical record templates and infrastructure.

Solution

Building a service oriented architecture (SOA) platform for their health management system, XDHB chose DB2 pureXML technology to achieve flexible infrastructure for EMR and IBM WebSphere DataPower to increase efficiency of XML data transformation and exchange.

Patient medical information is stored in XML format in DB2 9. This approach accommodates various medical templates with ease while making the patient medical record readily accessible by health service providers. With DB2's support of both XML and relational database technologies, the system can access symptom descriptions, search for local medical resources and refer to the doctors or specialists for the treatment where patient medical data is automatically converted to their specific templates. Prescriptions can also be automatically sent to the selected pharmacy within the local vicinity for easy medicine pick-up.

WebSphere DataPower is used as an integration gateway for exchange and transformation of XML based clinical information between diverse clinics and Health Data Centers that use disparate healthcare formats.

With the new health management system, healthcare service has been evenly distributed among health facilities so that people can get their healthcare services right in their community and be sent to central hospitals or specialists when needed for a more serious case, instead of everyone coming to central hospitals even for minor illnesses.

Moreover, with updated information regularly reported from various medical organizations to the Community Health Data Center and with DB2's hybrid database technology, the system can be used for analysis and monitoring of infectious diseases as well as tracking of mobile patients so that development and spreading of diseases can be quickly detected and controlled.

Benefits of DB2 pureXML

- Faster and cheaper healthcare services.
- Early detection and control of epidemics.
- Faster and cheaper medical solution development with fast search capability.

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