IBM Client Reference

**Guang Dong Hospital of Traditional Chinese Medicine**

**Synopsis:** A hospital network in China facilitates patient-centric management and sharing of clinical information when it works with IBM Research to deploy an intelligent, open standards-based electronic records system based on the IBM DB2 9 data server.

**Location:** China

**Industry:** Healthcare

**Client Background:** Founded in 1933, the Guang Dong Hospital of Traditional Chinese Medicine is southern China’s largest hospital system and has been selected by China’s Ministry of Health as one of the nation’s 16 key Traditional Chinese Medicine (TCM) clinical and research bases. The hospital system handles more than 10,000 patients each day for a total of approximately four million patients every year. As an integrated clinical services, research and teaching facility, Guang Dong Hospital is recognized as a leader in combining the strengths of TCM and the innovations of modern Western medicine.

**Business Need:** Recently, China’s state council passed a medical reform plan that included a resolution to provide universal medical coverage to all citizens by 2011. To support this initiative, the government also wanted to establish common care standards and practices to encourage improved patient care and increased cooperation among medical facilities.

To meet the expectations of this reform, Guang Dong Hospital needed to streamline a number of its operations, particularly those surrounding its patient records. The hospital is composed of a main facility and four branch treatment centers; however, the five locations did not share the same records systems, and the differences between the systems made it particularly difficult to transfer records between locations. For example, if a patient underwent a battery of medical tests at one facility, the results of these tests would not be available to other hospitals, since these other locations used different testing equipment and stored information in alternate formats. So
when patients transferred to a different facility, the hospital would have to perform a second battery of tests to capture the same information.

Recognizing the inefficiencies and redundancies of its existing processes, Guang Dong Hospital wanted to deploy a more intelligent, patient-centric solution that would enhance the quality of its regional healthcare service systems through a platform based on open standards and information-sharing technology. In particular, the organization hoped to deploy an electronic records system that could integrate complex medical information into a standardized, cohesive record that would be bound to individual patients. Ideally, this new system would promote increased interhospital and intrahospital data sharing to improve overall efficiencies.

Solution:
Collaborating with China's Ministry of Health and IBM Research, Guang Dong Hospital deployed an intelligent medical records system that consolidates medical data from multiple systems into a single record that can be easily shared. The new, first-of-its-kind Clinical and Health Records Analytics and Sharing (CHAS) system leverages the IBM DB2 9 data server to create a common repository for medical information of various types and formats that can be tagged to refer to individual patients. The system incorporates advanced semantics technology from IBM that enables it to understand and analyze the scientific meaning of specific terms used in individual patient records and to process those terms, regardless of format, terminology or language, into one standardized document, simplifying data tracking and encouraging rapid data access. And with information regarding both TCM and Western medicine in a single location, hospital personnel can analyze the effects of both disciplines, determining the best treatment for each illness or condition.

IBM Research First of a Kind also provided solution services.

Benefits of the Solution:
Guang Dong Hospital is confident that the new CHAS system will enable it to improve the overall quality and care that it can deliver to its patients. The open standards-based solution enables easier sharing of information within the hospital as well as, eventually, outside the hospital to other healthcare facilities. With a standardized medical records platform, the hospital's staff can easily evaluate patient records from a single system, yielding increased insight into medical history and helping to improve diagnosis processes. And with data from both TCM and modern Western medicine in a central repository, medical personnel can study which treatments work best for particular diseases. In the future, the hospital believes this will enable it to create highly personalized treatment plans that leverage the strengths of both Eastern and Western medicine. The hospital also anticipates that the new system will enable it to extend the use of medical data for deep analytics that drive cutting-edge research and innovation in global healthcare.

Driving even further value, Guang Dong Hospital has helped to create a new medical records benchmark that can be easily reproduced in other Chinese medical facilities. By replicating the CHAS system, other hospitals will be able to shift patient loads to improve care levels and overall efficiency. Patients will be able to schedule routine medical evaluations and simple procedures at local healthcare facilities, relying on larger hospitals only for emergency services and specialized care. "Hospitals are finding it increasingly difficult to manage and share information in the digital age, simply because there is more data being generated than ever before," said Dr. Thomas Li, director of IBM China Research Laboratory. "We are creating and implementing the kinds of innovative technologies that will make the healthcare system smarter - more effective, more accessible and more affordable for all."

Client Quote:
"We are committed to maintaining our exacting standards, and IBM's CHAS technology is helping
us do just that by moving us away from siloed, antiquated systems in favor of integrated, patient-centric processes."
- Mr. Lv Yubo, president, Guang Dong Hospital of Traditional Chinese Medicine