

Accenture works with Singapore to implement its National Electronic Health Record System

A graphic of an owl's face, looking forward, framed by a blue chevron shape that points to the right. The owl has brown and white feathers and large, yellow eyes.

High performance. Delivered.

### Business Challenge

MOH Holdings (MOHH) is the holding company of Singapore's public healthcare assets. It also undertakes strategic initiatives for the country's Ministry of Health and public healthcare institutions. These include managing the training and employment of junior doctors; recruiting of healthcare staff and providing corporate advisory services and support to Singapore's public health system.

In 2009, MOHH initiated a major project to develop a National Electronic Health Record (NEHR) for Singapore.

The vision of 'One Singaporean, One Health Record' will result in a single, unified health record for each patient, enabling clinicians to have more timely and accurate health information at the point of care to support effective prevention, diagnosis and management of illness.

This e-Health reform program also aims to contribute to greater efficiency and cost effectiveness in healthcare service delivery.

### How Accenture Helped

MOHH initially engaged Accenture to help develop an architecture blueprint for the NEHR system. This blueprint detailed the business, information, application and technology architectures.

MOHH selected Accenture because it brought relevant expertise and demonstrated success in projects of similar scale and complexity.

In 2011, Accenture and MOHH began deploying the NEHR to provide clinicians with a summary care record for each patient including problem lists, medications, discharge and event summaries, allergies, immunizations, investigations, and procedures.

Accenture's health and technical specialists provided program, project and release management, and integrated the underlying applications that made up the NEHR system. They also assessed the functionality the system needed to provide immediately and in the longer term.

Accenture and MOHH worked together to create the NEHR system using a common application architecture, as well as common data standards, and privacy and security guidelines. The integrated database and security solution consist of Oracle® Healthcare Transaction Base, Oracle Database 11g, multiple Oracle Database Options, Oracle VM, and several components of Oracle Fusion Middleware, such as Oracle Identity Management 11g, Oracle SOA Suite 11g and Oracle WebLogic Suite 11g.

The system uses the Orion Health Concerto Portal for the user interface; and Initiate's Enterprise Master Patient Index to maintain patients' demographic information and match their details from multiple source applications.

Accenture staff in Singapore, Bangalore and Prague used Accenture project methodologies and program management tools to complete the technical build of the national system within 10 months. Accenture provided the right mix of technical, business and clinical expertise and worked with MOHH to help deliver the NEHR system.

## High Performance Delivered

The first phase went live in April 2011 and included putting in place the entire technical solution, all physical system components and data centre equipment in fully tested and approved state. This was followed by the synchronization and integration of the NEHR system with existing legacy systems. The long term goal of the NEHR is to allow primary-, acute- and community-care clinicians access to shared clinical data that help to enhance medical treatment and improve patient safety and could in the future help analyze health trends and better manage disease.

This program is revolutionizing healthcare services in Singapore. According to Dr Sarah Muttitt, Chief Information Officer, Information Systems Division, at MOHH, the goal is for all Singapore health organizations to have real-time clinical information for treating patients.

"This milestone represents a significant step towards achieving our vision"  
said Dr Muttitt.

By June 2012, clinicians from all public healthcare institutions, selected community hospitals and general practitioners (GPs) will have access to the NEHR system. The NEHR will help provide the right information at the right time to assist with the development of diagnosis and treatment plans, and help eliminate duplicate tests and medication errors.

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