Integrated Electronic Records for Diabetes Patients

Department of Health and Social Services
Hobart, Tasmania, Australia

HealthConnect is a State and Commonwealth initiative in Australia that proposes a national health information network for Australia. HealthConnect aims to facilitate the safe collection and storage of consumer health information and enable its exchange between authorised health providers. HealthConnect sets out to improve quality and safety in health care by ensuring important clinical information is available when and where it is needed.

Under HealthConnect, health-related information about an individual would be collected in a standard, electronic format at the point of care (such as at a hospital or a general practitioner’s clinic). This information would take the form of summaries of a patient encounter, rather than a collection of all the notes that a health care provider may have made about a consultation.

Currently, the HealthConnect program is undertaking proof of concept trials in different parts of Australia. Orion Health has been involved in the trial in Tasmania.

Improving Information Exchange

Begun in October 2002, the HealthConnect trial in Tasmania aims to test technologies and concepts that may eventually be used to create universally “portable” electronic health records throughout the Australian health system.

The HealthConnect trial in Tasmania is focused on improving information exchange between health professionals caring for patients with diabetes in the Clarence municipality, part of greater Hobart.

A system was needed that would collect, store and share clinical information between both participating hospital and community practitioners. Diabetes consumers participating in the trial would be able to go anywhere within the trial region and participating healthcare professionals could access their “up to the minute” medical records that incorporated consumer information from various participating sources throughout the region.

Parties participating in the trial include primary care physicians, as well as physicians at Royal Hobart Hospital (470 Beds), the main tertiary hospital facility for Tasmania.

The overall aim of the trial in Tasmania is to improve delivery of care services to adults with diabetes, by giving their participating health professionals immediate access to the patient data.

Overview
The Tasmanian Department of Health and Human Services selected Orion Health to build the major components of the HealthConnect trial. All the electronic components of the project were built over a period of 14 weeks between July and September 2002. The system went live in early October 2002.

Customer Profile
Department of Health and Social Services
Hobart, Tasmania, Australia

Customer Website
www.dhhs.tas.gov.au

Scenario
Electronic Health Record
Information Integration

Business Situation
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Business Solution
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The solution consists of a web-based record that is available to authorized users (both clinicians and patients) via a secure log-on.

Business Benefits
- Up to date technology
- Visibility into Business Processes
- Greater Control of Business
The trial in Tasmania also set out to test technologies that would help enforce a patient’s privacy wishes. Central to the HealthConnect concept is consumer consent – information may only be shared with other providers after the consumer has given permission.

**HealthConnect Utilizes Existing Infrastructure**

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**Utilizing Existing I.T. Infrastructure**

The trial solution implemented in Tasmania makes extensive use of IT systems already in place. Information from existing systems around the Clarence region is collated via Orion Health software and made available to authorized users via the web.

**EDIS** is the emergency room system at Royal Hobart Hospital – the HealthConnect solution integrates with the patient search capabilities of EDIS, (via a generic SQL search operated by Concerto™), providing remote patient search capabilities to physicians and other authorised users in the trial. In addition some clinical information from EDIS is incorporated into the HealthConnect system.

**Triple G** and **Kestral** are repositories of patient pathology results. Triple G is used by Hobart Private Pathology and contains GP pathology results for the Clarence region. Kestral is the pathology system in use at the Royal Hobart Hospital. Rhapsody™ Integration Engine routes GP authorized laboratory result reports and hospital laboratory result reports from these systems as new results become available and pushes them to the Concerto Clinical Data Repository (CDR) where they are stored for on-demand access for online analysis, including charting.
RADOS is a system containing historical and current radiology notes and results. Data from RADOS is integrated directly into electronic documents when required.

**Electronic Consumer Access to Health Records**

"Consumers in the trial are now able to obtain copies of their own information, allowing them to more fully participate in the management of their care."

- Senator Kay Patterson, Australian Federal Minister for Health and Ageing. 25th February 2003

Some diabetic consumers on the trial have also been given secure web access to their own health records – making the Tasmanian HealthConnect trial one of the first electronic health record projects in Australasia to introduce electronic consumer access to their own records.

The Tasmanian HealthConnect trial is trialing web-based consumer access to their own health information, and a small number of participating consumers are involved in this aspect of the trial. It is expected that this part of the trial will provide useful lessons for possible implementations of electronic consumer access on a wider scale.

The consumer access trial has been described as a major step forward in Australia’s electronic health records efforts.

Consumers participating in the trial can securely access only their own web-based records via a standard public Internet connection, (e.g. from home or work). To gain access to their record, they need to provide a unique login name and password. The record is securely encrypted over the Internet so only the consumer can see it.

**Connecting with Primary Care clinics**

In the Tasmanian HealthConnect trial, the HealthLink network (www.healthlink.net) is used for the secure transmission of consumer records in HL7 format to authorized users. HealthLink runs over the Internet using the Secure Socket Layer (SSL) protocol and incorporates encryption and the use of Public Key Infrastructure (PKI).
Medical Director™ is the Practice Management System (PMS) used by all primary care physicians in the trial. Selecting a patient enrolled in the HealthConnect trial within Medical Director automatically allows users secure access to the web-based HealthConnect system and gives authorized users access to the patient’s electronic medical records.

General Practitioners can use Medical Director™ to create and send event summaries and medication information from their practice straight to the HealthConnect repository.

For the first time in Australia, general practitioners are also able to download hospital electronic discharge prescriptions directly into Medical Director™.

Results

Results, successes and failures of the trial itself are still being evaluated. Approximately 400 consumers are currently enrolled in the trial. Of these consumers, 29 are currently accessing the Health Connect system to view their own medical records online. Although the numbers participating are currently small, it is believed that this Tasmanian trial is the first I.T. project in Australia to involve patients directly accessing their own records.

Currently there are approximately 45 primary care physicians (GPs) in 11 practices using the HealthConnect System.

At Royal Hobart Hospital, there are in excess of 200 clinicians adding and reviewing information in the HealthConnect System.

The solution was successfully implemented and integrated with existing applications within the tight three month time frame imposed by the trial, allowing the trial to “go live” on schedule.