

Precedence Health Care and IBM develop care management system to effectively manage treatment of patients with chronic disease

Overview

The Need

Precedence Health Care required a solution that enabled effective sharing of information to allow them to develop a care management system that effectively manages treatment plans and delivers better health outcomes for patients.

Solution

A Chronic Disease Management Network (CDM-Net) with IBM® eHealth Bus which allows all care givers to track and share information, ensuring the effective delivery of a collaborative treatment plan, and more importantly a better quality of life for the patient.

What Makes It Smart

- Manage and track patients and collaborate with other providers
- Alerts care providers to serious changes in a patient's condition
- Multiple care givers can easily connect with each other.

The Result

- Doubling of evidence-based care and best practice treatment of patients with chronic diseases
 - 60% increase in the use of managed care plans and a 140% increase in team collaboration.
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It is widely recognised that best practice for the management of chronic diseases, is through the implementation of a collaborative healthcare plan, accessed and maintained by all those involved in caring for the patient. In Australia, the Australian Medical Benefits Schedule has special payments to encourage the use of such plans. Currently, the majority of care plans are paper based, making them difficult to maintain with up-to-date information. Furthermore, the inability to effectively maintain and manage the plans has seen limited uptake of this special payment by General Practitioners (Primary Care Physicians).

The failure to use care plans in the management of chronic diseases, results in less effective care and poorer outcomes for the patient. One of the major drivers for the poorer outcomes is linked to the lack of information sharing between the multiple care providers involved in the patient's management. To address this, Precedence Health Care approached IBM to explore how its middleware technology could help solve this problem and drive information sharing between multiple parties nationally.

Based on a six month collaboration between IBM and Precedence Health Care, including both a design and a rapid development phase, the joint team was able to create an eHealth Bus to underpin their Chronic Disease Management Network (CDM-Net), leveraging IBM's middleware solution for the healthcare industry. IBM's eHealth Bus concept enables the effective sharing of information from CDM-Net Care Plans between healthcare participants involved in patients care. IBM's middleware technology allows multiple care providers to connect and share information via the eHealth hub underpinning CDM-Net, and translates multiple data standards to any preferred format, e.g., HL7.

The IBM eHealth Bus is based on IBM's Health Integration Framework, IBM's existing healthcare software assets, and encompasses Health Industry Standards. This approach supports a patient's care plan to exist as a dynamic document of treatment providing current, up-to-date, information for everyone involved in the delivery of care. Not only this, but CDM-Net also automates the delivery of the right documentation to the right person (with prior authorisation), at exactly the right time and in the right format. For example reminding a patient of an imminent appointment or informing a GP that a patient has filled a prescription.



Before CDM-Net, putting in place a care plan was highly labour-intensive. Now, in just minutes, using CDM-Net I can upload all the necessary information and get this to all team members.

– Dr Arthur Pape, GP

According to Dr Arthur Pape, a GP involved in trials of CDM-Net in Victoria and Western Australia, the benefits are clear, “Before CDM-Net, putting in place a care plan was cumbersome and highly labour-intensive. It might have taken an hour to make the necessary contacts and to provide relevant information – an hour, frankly, that few GPs can afford to spend on one patient. Now, in just minutes, using CDM-Net I can upload all the necessary information – including pathology results – and get this to all team members.”

“The outcomes are positive for me in the time saved and for the patient in terms of getting best practice care. It is clearly the future for chronic disease management.”

The implementation of the Chronic Disease Management Network (CDM-Net) enables all members of a patient’s healthcare team to share and track the patient’s healthcare plan and to collaborate on treatment. Specifically it facilitates the automation of following business processes:

- The ability to create and share individual Electronic Health Records
- Develop personalised care plans and distribute these to the patient’s care team
- Facilitate collaboration between members of the care team
- Monitor and support compliance with the care plan
- Help patients to self-manage by sharing knowledge and sending them reminders and alerts

For GPs, the CDM-Net radically improves productivity and therefore the quality of care they can deliver to patients with chronic diseases. The trials of CDM-Net in Australia found that initial data showed a doubling of evidence-based care and best practice treatment getting into practice. Within the trials there was a 60% increase in the use of managed care plans and a 140% increase in team collaboration. Follow up and review of the care plan had increased by 500%.

“This level of collaboration is previously unknown in primary healthcare. The clear success of the trial projects – supported financially by both the Federal and Victorian Governments – have now prompted a move to roll out CDM-Net nationally,” said Professor Mike Georgeff, CEO of Precedence Health Care.

Smart Healthcare Profile of an intelligent healthcare system

Instrumented =

- The combined power of CDM-Net from Precedence Health Care and IBM's eHealth Bus creates the ability to inform care providers of the status of a patient's care. It delivers a real-time status of patient care, and automated updates of relevant events such as admission to hospital or changes to the care regime.

Interconnected =

- Interconnects the Healthcare Plan with all care providers to enable the dynamic updating of detail relating to the patient's care.
- CDM-Net provides a system that enables "users" the capability to interact across many Health Domains to collaborate on a best practice Healthcare Plan for chronically ill patients.

Intelligent =

- CDM-Net employs intelligent mechanisms for collecting primary healthcare data and managing the collaboration processes involved in chronic disease management.

Business Benefits

- GP productivity enhanced two-fold or more and care plans are implemented and adhered to
- Team Collaboration increased by 140%
- Follow up and review of care plans has also gone up by more than 500%
- Patients living with chronic diseases receive fully informed and best practice care to deliver a better quality of life.

Solution Components

Software

- IBM's eHealth Bus

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*– Professor Mike Georgeff, CEO,
Precedence Health Care*

For more information

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