NBR CENTER FOR HEALTH AND AGING
Health Information Technology and Policy Lab

New Zealand HIT Case Study

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Summary

New Zealand has a highly integrated health IT capability, which is facilitated by its having implemented a single national patient identifier—the National Health Index (NHI)—in the 1980s. National secondary patient information collections have since grown over time.

New Zealand's current Health IT Strategy (HIS-NZ), established in August 2005, targets 12 action zones, with a heavy focus on primary and community care, as well as the integration between care settings. The strategy recognizes the need to transition from a focus on secondary health information to an integration of information between secondary, primary, and community care settings. The initial focus of the governance group established for the stewardship of the strategy (HISAC) has been the National Network Strategy and National Systems Access.

HIT Adoption

The evolution of systems has been based on establishing and maintaining primary and secondary information systems integrated by a core set of systems with a focus on public, inpatient events. HIT in New Zealand has seen a high uptake of general practitioner systems—99% for approximately the last ten years—with four main systems in use, including:

- National Health Index
- Health Practitioner Index
- National Minimum Dataset (hospital event summary)
- Medical Warning System

With this core established, the focus shifts to integrated primary, community, and secondary information, including:

- national non-admitted patient (outpatient) collection
- integrated mental health system (service provision and outcomes from primary and secondary care settings)
- national primary and community care collection

Though patient management systems exist in all government-funded secondary care facilities, their use of data in clinical systems has been limited, with inconsistent deployment. Interchange of information, particularly in the diagnostics and clinical support arena, is a focus area not yet widely implemented. This is driven primarily by the development of standards. New Zealand's Health Information Standards Organization (HISO) has standards initiatives targeted at electronic referrals, status, and discharge, eLab results, and ePharmacy.

Lessons Learned

- Successful HIT adoption requires clinical information buy-in among all stakeholders. Accuracy of information relies on having data collected as close as possible to the point of care. Engaging clinicians to do this relies on having the information serve a clinical purpose first, with the ability for it to be mined for management and administrative purposes as a secondary goal.
- Information-sharing and collaboration rely primarily on the adoption of standards.
- Real value comes from outcome information as well as inputs/episodic information.
- Sector innovation should be encouraged. New Zealand has approached this by supporting the Health IT cluster of NZ Health IT Vendors.

Government Policy

HIS-NZ: The New Zealand Health Information Strategy[1]

Action zones	The HIS-NZ, published in 2005, outlines 12 actions zones which can be generally grouped into three areas: 1. Improvement of the national systems and communications infrastructure. 2. Introducing standards, depth, and availability of information around primary, community, and chronic (long-term) care. 3. Improving connectivity between providers (eReferral, eLabs, eDischarge, and ePharmacy).
Focal areas	• Continuum of care and patient-centric information. • Coordination and bridging of gaps between healthcare providers.

Who Drives HIT?

Health IT standards are primarily driven through national (and, in some cases, regional) compliance reporting. As a public health system, New Zealand combines a range of national statistical data collection and compliance reporting for funding. Bulk funding requires reporting to validate case volumes and, oftentimes, payment subsidies. NGOs and community care providers are usually funded via regional contracts with District Health Boards (DHBs) who have a range of different requirements for compliance reporting. Although process improvement and better health outcomes are a goal, the direct adoption of IT tends to focus primarily on meeting compliance and legislative requirements to ensure continuity of funding.

Who Pays For HIT?

The cost of technology is borne by the users of the systems, whether this is DHBs, local GPs, pharmacies, or other health organizations. After new compliance requirements are announced by the Ministry of Health each year, vendors update their applications to meet the new requirements.

1 See http://www.nzhis.govt.nz/publications/strategy.html.

The government funds new, and updates to existing, national collections and registers at a central level while vendors absorb the other update costs into annual maintenance fees to meet new requirements for the end-user community. Where new collections are required, subject matter experts are co-opted from the health community (across vendor, clinical, healthcare providers, and consumers) to have input to the new standards—investment of time on these advisory panels is largely on a voluntary basis. There is a national Health IT vendor vehicle (the New Zealand Heath IT Cluster), a voluntary organization which sponsors collaboration initiatives funded by dues from its membership (the New Zealand Ministry of Health is a founding member of this organization).

Challenges

Transferable models	There is a dearth of successful business models and available capital for HIT adoption.
Standardization	The age and divergence of existing patient management and practice management systems make standardization and information-sharing between institutions difficult.
Cost	Deferred maintenance and low budgets for new and replacement HIT systems delay progress and integration.
Capacity	Capacity for new national projects is limited. It can be difficult to balance the need to meet current demand and shifting the focus to a new paradigm of health information.
Collaboration	Collaboration is easy to describe yet difficult to engineer (who pays and who benefits?).
Leadership	Strong sector and central leadership is necessary.

Future Direction

New Zealand faces a growing aging population and an increased burden of chronic illness. Successful health information will be gauged on efficacy of healthcare delivery and decreasing the reliance on secondary care.

This places the focus on a patient-centered record, available at point of care with standards-based information available to validated healthcare professionals (in line with most other countries). As New Zealand heads toward its goal of integrated data, including a primary healthcare record and outcomes measurements, the challenge will be to replace yesterday's "hospital-centric" health information with a borderless record. In navigating this course, New Zealand continues with center-driven health standards and an encouraging clustering of initiatives—a collaborative health record across care settings with the patient at the center. The true test will be in the leadership, funding, and execution of the vision.

Healthcare Landscape

Expenditure. New Zealand's health system is funded mainly by the government, and provides health and disability services to all citizens. New Zealand has a population of 4.1 million with a commonwealth-based (publicly funded) healthcare system and a public health budget of $6.5 to 7 billion. Over 75%of healthcare is publicly funded.

- Public health expenditure in 2003 was 6.3% of GDP
- Private health expenditure in 2003 was 1.8% of GDP

Coverage. Essential healthcare is still provided free to all residents through the public health system; 38% of New Zealanders are privately insured. The New Zealand health system is comprised of public, private, and voluntary sectors that work together to provide and fund healthcare, which is provided at two levels:

- Primary care is offered by practitioners that people access outside a hospital; for example, GPs, mobile nursing and community-based services, dentists, physiotherapists, osteopaths, and counselors.
- Secondary health services are hospital-based.

Infrastructure. Twenty-one DHBs are responsible for the health of their respective population. DHBs have a provider arm (secondary services) and a funder arm (funding primary healthcare organizations) within their region for an enrolled population.

- There are approximately 17,000 general practitioners, specialists, nurses, midwives, pharmacists, physiotherapists, occupational therapists, and private hospital providers.
- There are a further approximately 800 community, aged care, and non-government mental health providers—partly funded by charity, DHB contracts, and private insurance-based funding.