Transformational Change enabled by IT

Case Study: New Zealand eHealth Story

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ConnectedHealth
My information. Better care.
Creating Shared Value . . . identifying and expanding the connections between societal and economic progress (Porter HBR 2011)

Atul Gawande, Being Mortal 2014
Examples of Shared Value enabled by IT

Transfer of care (eReferrals between GP and Specialists)
- 45,000 per month
- Structure communication designed by clinicians – Cardiac, cancer etc.
- 40% Reduction in hospital visits
- Hospital patients fully worked-up in the community.

Virtual diabetes register
- Identification of actual and potential diabetic patients
- Individuals provided to GPs for follow up and treatment
- The start of measuring of an important health outcome at a national level.

National aged care assessment (InterRAI)
- Structured clinical assessment for all consumers accessing either:
  - home support services or
  - receiving residential care services
- Rich dataset of 30,000 (and growing) consumers available for outcome measurement.

Consumers have real-time online access to their clinical notes and health information (“Patient Portal”)
- 5 - 7 online services that are sticky
- Initial research results:
  - 30% reduction in nurse time
  - 50% reduction in administration time
- Happy Consumers and Clinicians
YOUR GP HAS NEVER BEEN CLOSER.
Agenda

1. Introduction and definitions (Health 101)
2. Creating public value
3. Governance, leadership and delivery
4. The IT part of ‘IT-enabled transformational change’
5. Personal leadership reflections
Transformational Change

*Defn*: A shift in the culture of an organisation resulting from a change in the underlying strategy and processes that organisation has used in the past.

Organisationally wide and enacted over a period of time

It needs to be:

1. People orientated
2. Sustainable – financially
3. In response to... ...a burning platform?
Health and Disability Sector 101:

1. 80% of the health and disability system is funded by government from taxation (> $15 billion p.a.)

2. 50% of the system is operated by Government owned entities, the other 50% is operated by private businesses and NGOs

3. The Ministry of Health leads:
   - the policy direction for health and disability services
   - funds the sector (VoteHealth)
   - regulates and monitors the performance of the sector
   - Funds the delivery of some services directly (maternity, disability etc.).
   - Reports to the Minister of Health.
Health and Disability Sector 101:

1. 20 District Health Boards - DHB:
   - fund services for their geographic populations and provide hospital and other services
   - The Minister appoints the Chair and up to 4 members of the governance board that is responsible for the DHB. Remainder of board members are elected through local body elections every 3 years. In effect the DHB reports to the Minister via the Chair.

2. Consumers are generally well. They access most healthcare services in the community from General Practitioners, Pharmacists and nurses etc. Usually paying a co-payment.
Health and Disability Sector 101:

1. Health Information is ‘Owned’ by the consumer/patient
2. Clinicians are the custodian (similar to the role of a lawyer or other professionals)
Problem Definition in late 2009: eHealth

1. The Ministry and the DHBs separately invested in IT systems, and fed data into joint reporting systems (to enable performance monitoring and to meet international WHO requirements)

2. Two eHealth strategies had been published in 2001 and 2005 both generating broad support (and international acknowledgement)

3. Yet, IT investment remained fragmented and the big question of patients having access to their health information had not been addressed

4. Over last 10 years many western countries have invested significantly and not achieved a national health IT solution for their citizens (NHS England has invested 12 billion pounds!)

5. Clinicians, Politicians and consumers were very frustrated.
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Creating Public Value
Value Framework for Managing for Profit Enterprises

Environment - Customers - Funds Providers

Value - Goods and Services

Permission - Market signals

Delivery - Sales

Capability - Organisational

Resource-acquisition - Money

Production
Value Framework for Managing Not for Profit Enterprises

Authorising Environment
- Customers
- Funds Providers
- Political power-holders

Delivery
- Sales
- Transfers
- Direct provision

Public Value
- Goods and Services
- Public goods
- Equity

Capability
- Organisational
- External

Resource-acquisition
- Money
- Authority

Permission
- Market signals
- Political acceptance

Production

Co-production

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Governance, leadership and delivery
Framework to make a sustainable change in health service delivery:
Response from the National Health IT Board:

quality, trust and respect

92, 574, 1114, 2415, 4277, 4177, 5937, 8642
Western Health Systems are unaffordable...
...yet medicine is a young science.
National Health IT Plan - Principles

1. Information must be **person-centred**, standards based

2. Health IT Solutions must be co-designed and **co-produced** by clinicians, consumers and IT professionals

3. Healthcare organisations need to be **confident investors** in health IT solutions to meet their own needs, within the context of the health ecosystem
   - National Health IT Plan
   - Better business cases (2 stage process)
National Health IT Plan (October 2010)

eHealth Vision: …New Zealanders will have access to a core set of personal health information…..
Foundation Health Information

e.g. your name and address, ethnicity, allergies, GP details
Common Clinical Information
Including laboratory results, medications, referrals, discharges

Foundation Health Information
e.g. your name and address, ethnicity, allergies, GP details
Community information
Health information from your GP, pharmacists, midwives, community nurses

Continuum of Care

Hospital information
Health information related to care in hospitals and by specialists

Common Clinical Information
Including laboratory results, medications, referrals, discharges

Foundation Health Information
E.g. your name and address, ethnicity, allergies, GP details
Governance and delivery of Health IT Plan

Works with

- Health IT Cluster
- Health Benefits Ltd
- Health Workforce NZ
- Health Quality & Safety Commission
- Other Govt health agencies, eg, ACC, PHARMAC
- All of Govt agencies
- Non-Govt Organisations

Works with and Delivers Plan through

- Minister
- NHB

Advised by

- National Health IT Board

- National Information Clinical Leadership Group
- Consumer Forum
- Sector ICT Implementation Group
- Telehealth Forum
- Health Information Standards (HISO)
- Health Information Governance EAG
- Sector Architects Group

- Patients First
- Northern Region
- Midland Region
- Central Region
- South Island Region
- Ministry of Health

DHB Population

- DHBs
- DHBs
- DHBs
- DHBs

Patients First works with and delivers the plan through

- Northern Region DHBs
- Midland Region DHBs
- Central Region DHBs
- South Island Region DHBs

Minister and NHB advise the National Health IT Board.

All of Govt agencies, eg, ACC, PHARMAC, work with the Health IT Plan.

Non-Govt Organisations are also involved in the plan.
eHealth is Team Game
Reducing / Mitigating Barriers

1. National Contract for ICT Services
2. Vendor Board room meetings
3. Consumer ‘Town Hall’ meetings
4. Health information governance expert group
5. Ministry as national contract holder on behalf of sector organisations (including funding mechanisms)
6. Facilitated the creation of a Primary Health care CIO role
7. Introduced an ‘active procurement’ process to select IT vendors/solutions for innovation projects
   • Competitive Dialogue in new MBIE procurement rules
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The IT part of ‘IT-enabled transformational change’
Peppard Model for IT-enabled business change

1. Removal of existing problems & constraints + efficiency gains

2. Improved performance from internal integration of information & processes - changed roles & relationships

3. Innovation in selected processes & activities, based on knowledge derived from ES
Work programmes supporting the National Health IT Plan 2014/2015

Programme stage and national contract indicators current as at 1 July 2014

eMedicines Programme
- NZ ePrescription Service (NZePS)
- eMedicines Reconciliation (eMR)
- ePrescribing and Administration (ePA)
- NZ Universal List of Medicines (NZULM)
- NZ Formulary (NZF)

Regional Information Platform
- Clinical Workstation (CWS) / Clinical Data Repository (CDR)
- ED Information System
- eReferrals and Discharges
- Patient Administration System (PAS)
- Hospital ePharmacy
- Imaging / PACS
- eOrders for Investigations (Laboratory and Radiology)

National Solutions
- Finance Procurement Supply Chain
- Cancer Information
- Cardiac Health
- Maternity Clinical Information System
- Comprehensive Clinical Assessment for Aged Care
- Alerts and Allergies System
- National Patient Flow
- Surgical Site Infection Surveillance

Integrated Care Initiatives
- Shared Care Portals
  - Long Term Conditions
  - Shared Maternity Record View
  - Child Action Plan Information System
  - Whanau Ora Information System
  - Patient Portal
  - Provider / Clinical Portal
  - National Child Health Information Platform
  - Clinical Pathways (Standards and Integration)
  - eEnrolment


NC = National Contract in place
NCD = National Contract in Development
NCO = National Contract Opportunity
### Order of priority of programmes supporting the National Health IT Plan 2014-15

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<thead>
<tr>
<th>Critical</th>
<th>Important</th>
<th>Emerging</th>
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### Final Implementations

- Imaging / PACS
- Comprehensive Clinical Assessment for Aged Care
- NZ ePrescription Service (NZePS)
- Microsoft Common Operating Environment
- NZ Universal List of Medicines (NZULM) and NZ Formulary (NZF)
- Cardiac Health - ANZACS QI and Cardiac Theatre Registry
- Surgical Site Infection Surveillance
National Infrastructure Platform

Community ePrescribing

Maternity

Patient Portal

Hospital ePrescribing

National Child Health Information Programme (NCHIP)

Common Clinical Information
- Including laboratory results, medications, referrals, discharges

Foundation Health Information
- e.g., your name and address, ethnicity, allergies, GP details

Transformational

Professional

Sustainable
Defining the Operating Model

Process Integration
(Common Framework, Common Data)

Process Standardisation

High

Coordination
Maternity
NCHIP

Unification
Community & Hospital ePrescribing

Diversification
Patient Portal

Replication
National Infrastructure

Low
One Goal, Many Journeys

Process Integration
(Common Framework, Common Data)

Process Standardisation

High

Coordination

Unification

Diversification

Replication

Low

High
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*Personal leadership reflections*
Achievements

1. Increased engagement and awareness by leaders of what it takes to deliver IT-enabled change in the health system
2. Improved understanding of roles and responsibilities
3. Attracting and retaining key personnel
4. IT and information issues are identified and being mitigated or addressed
5. Sector is poised to take the next steps into new digital services
   - For example - mobile apps, telehealth, and increased use of decision support.
Personal Leadership Principles, *when creating public value*....

1. **Distributed Leadership:**
   What is the conversation going to be after I have left the room, and then again in one week's time?

2. **Developing leaders to carry the messages to their networks:**
   $n^x$ - transformation is a team sport, and teams need leaders and colleagues to look up to and learn from. If you do not create them, they will create themselves in response to the change you and others are promoting.

3. **The ‘Auntie Patsy’ communication test:**
   How will I explain what I am doing to my auntie at the next family gathering?
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Extra Slides
Virtual Health Information Centre
(a common method to access health information)

Data for Clinical Research
- Clinical Outcome Data & Quality Reports
- Clinical Trials
- Medication Efficacy & Utilisation
- Atlas of Healthcare Variation

Data for Clinical Decision Support
- Health Assessments
- Coordinated Care Plan
- Medication Interactions
- Electronic Health Record (view)

Consumer Data
- Patient Reminders & Alerts
- Medication Adherence Support
- Patient Portal Access to Health Information
- Access to Lab Results

Health Information
- Clinical Registers
- National Patient Flow Reporting
- Supply chain Reporting
- Performance Reporting

Health Administration & Activity Data
(Better Public Services)

connected health (security)

Identity / Standards / Integration / IT Infrastructure