National eHealth strategies

A review of success factors in 5 countries

Panel coordinated by the Australian College of Health Informatics

Panel program

- **Presentation on success factors in each country**
  1. ***Program description***
  2. ***Success factors***
  3. ***Issues and priorities***
- **Interactive session (30”)**
  - ***What are the important success factors?***
  - ***What can we learn from each other?***
- **Summation (5”)**

Panelists

- Australia
- Kenya
- NZ
- Chile
- Canada

- *Teng Liaw*
- *Terry Hannan*
- *Brendan Kelly*
- *Evelyn Hovenga & Carola Hullin*
- *Nicola Shaw*

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Our assumptions

- Patient safety and quality of care is our mission
- Clinical decision support is our most important task
- Inter-professional is our approach
- Technology is NOT our problem
- Training and support is our need
- Evaluation & quality control essential
- Our involvement must be incremental

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Success factors framework

1. **Business case established**
2. **Formal strategic / business plans with budget and KPI**
3. **Governance & Accountability of responsible organisation**
   - ***Change management arrangements? Capacity building?***
   - ***Evaluation, quality control and monitoring arrangements?***
4. **Outcomes focus and deliverables?**
   - ***Products and services congruent with objectives?***
   - ***Safety & quality of clinical and population health outcomes?***
5. **Stakeholders and shared decision making? Expectations?**
   - ***Consulted on program objectives, agency and deliverables? How?***
6. **Critical "environmental issues" and government policies**
   - ***National plan and implementation strategy?***
   - ***Inter-sectoral support and issues?***

Our questions

What are our priorities for eHealth?

How can we promote success?

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Australia

Professor Teng Liaw
University of Melbourne
President ACHI

National Shared EHR program

- **National eHealth Transition Authority (NEHTA)**
  - ***not-for-profit company to develop better ways of electronically collecting and securely exchanging health information in an interoperable e-health environment***
- **Key "accelerators"**
  - **UPI&UHPI, terminology, directories, messaging protocols, privacy, security, access control**
- **Business case & benefits realisation**
  - **Efficiencies in processes and messaging initially, then benefits from EDS (10 years)**
- **Standards-based approach to engage industry**
- **Capacity building of health workforce**
- **Change management: *HealthConnect***

Report card

1. **Clinical and population health focus not explicit**
2. **Strategic or business plans or budget not explicit**
3. **Business case for eHealth being developed**
4. **NEHTA organisation**
   - ***Governance structure does not reflect clinical & PHC stakeholders***
   - ***Accountability arrangements not clear***
   - ***Leadership style and communication/engagement strategy***
   - ***Change management arrangements not apparent***
   - ***No explicit capacity building strategy***
   - ***No formal evaluation, quality control and monitoring arrangements***
5. **Deliverables described but not linked to health outcomes**
6. **No shared decision making; expectations probably unrealistic**
7. **The critical "environment factors" are not apparent**
   - ***Supporting government policies and legislations?***
   - ***National plan and implementation strategy?***
   - ***Inter-sectoral support and issues – HISA survey 2007***

HISA survey 2007: successes

- Continue existing standards work
- SNOMED licensing
- Raising the awareness of eHealth in the broader health, business and consumer environments
- Creating order in the complex and dynamic health environment
  - ***Constrained focus on interoperable and secure eHealth environment***

HISA survey 2007: failures

- Does not understand the operational needs of Australian eHealth, leading to complex, costly and possibly unsafe systems and processes;
- Inappropriate leadership style and limited engagement with industry and external stakeholders (clinical, vendor and health manager);
- Lack of meaningful content in communications;
- Lack of transparency with apparently complex and bureaucratic processes within NEHTA;
- Lack of a defined vision, realistic goals for the organisation, and an appropriate strategy;
- Costly with a lack of useful outcomes;
- Currently a poor return on investment

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Issues are a lack of…

- a nationally consistent vision of eHealth
- a nationally coordinated implementation plan, supported by all jurisdictions, with a clear governance structure and an adequate budget
- a significant and adequately funded nationally coordinated eHealth R&D program, avoiding duplication of efforts and improved ROI
- a national capacity building strategy
- a national change management strategy based on incremental uptake
- a clinical focus on decision support to promote safety and quality of care
- a population health focus

Kenya

Terry Hannan

Physician & Informatics consultant

Regenstrief Medical Record System

(IJMI 1999; 54)

- Retrieval times - Fast (blink times)
- Data and information - Comprehensive
- Data storage - Long-term and lifelong
- Data applications - Introspective of total database
- Data storage-
  - 200 million coded observations
  - 3.25 million narrative reports
  - 15 million prescriptions
  - 212,000 ECG tracings
  - More than 1.3 million patients
- Access-
  - 1300 medical nurses
  - 1000 physicians
  - 220 medical students
  - Across health care institutions (16)
  - Data access more than 628,000 / month

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Kenyan project Jan 2000- Aug 2007

- Resource poor nation
- Paper based records and reporting
- Unreliable energy resources
- Prior computer inexperience or illiteracy
- 14% prevalence of HIV
- Electronic data on 1500-2000 pats/day
- 10M electronic observations
- 400,000 visits
- 45,000 patients
- Managed by local Kenyan population
- A web based EMR - www.OpenMRS.org
- In 7 countries

Success factors

- Priority clinical domain - HIV/AIDS
- Involve multidisciplinary clinicians
- Researchers and quality improvement officers: data, data, data
- Well proven EHR, scalable and transferable; mutually supports health practice

MMRS data (2 years)

33,000 patients enrolled; 64,000 visits made

Diagnoses	# Visits	Drugs	# Visits
Malaria	17,495	Paracetamol	24,944
URI	8,479	Fansidar	11,550
Septic wound	1,329	Quinine, injected	8,769
Gastroenteritis	964	Penicillin, injected	8,058
Tonsilitis	938	Quinine, oral	7,851
Wound (unspec.)	791	Penicillin, oral	4,753
Myalgia	700	Amoxicillin	4,725
Amebiasis	629	Depoprovera	4,443
Laceration	618	Piriton	3,766
Worms (unspec.)	544	Brufen	3,323

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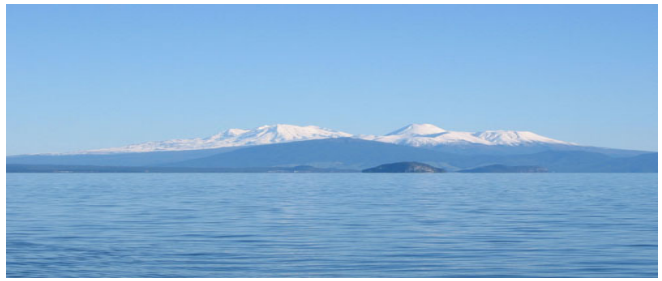
Issues: not IT but IM

- The CPR is an evolving concept
- Clinical decision support is the task
- Meeting User Needs
- Political change is critical
- Leadership
- Legal and Social Issues
- Standards
- Costs and Benefits
- Evaluation

MINISTRY OF HEALTH
MANATŪ HAUORA



New Zealand

Brendan Kelly

Interim Deputy Director-General,
Information Directorate, NZ

NZ Program Description

- Health Information Strategy for New Zealand (HIS-NZ) (2005)
  - a plan informed & led by the Health & Disability Sector to enhance the safe sharing of health information to meet emerging challenges & remedy identified gaps in health information
  - the Ministerial Advisory Committee Health Information Strategy Action Committee (HISAC) provides governance, oversight and leadership for strategy implementation
- Primary Health Care Strategy: Key Directions for the Information Environment
  - a proposal to create an information environment that helps achieve the Primary Health Care Strategy goals
- National Health Information Systems Upgrade
  - a 4-year Ministry initiative with 5 key work streams
    - Connected Health
    - Access & Integration
    - Recipient & Provider Identity Services (NHI, HPI)
    - Statistics & Reporting
    - Health Payment Systems

NZ Success Factors

- Extensive computerisation of patient information (eg 99% GPs with PMS in 2004)
- Broadly accepted strategy – HIS-NZ 2005
- Well-established information anchors – patient (NHI), practitioner (HPI) & standardisation of key data
- Established national health network & clear direction for health connectivity
- Strong national, regional & local relationships in clinical, administrational & specialist areas

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NZ Issues and Priorities

- National Network Strategy – uptake of secure broadband nationally
- National Health Identifier – improve awareness, access & processes
- Health Provider Index Implementation
- E-pharmacy – including electronic transcriptions
- E-labs – central tracking & monitoring of lab tests from order to result
- Hospital Discharge Summaries – consistent & shared btwn providers
- Chronic Care and Disease Management – to support clinical decisions
- Electronic Referrals – standardise the processes & protocols
- National Outpatient Collection – to better understand pattern of care
- Primary Care Information – standardise data collection & KPIs
- National System Access – improve analysis & reporting & avoid privacy issues
- Anchoring Framework – “retrofit” NHI & HPI to link information

Reference

- Ministry of Health. 2005. *Health Information Strategy for New Zealand 2005*. Wellington: Ministry of Health.

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Chile
National Digital Agenda & Health Reform

Evelyn Hovenga / Carola Hullin

CHILE 2004-2006 agenda digital TE ACERCA EL FUTURO

Chile está mejor REFORMA DE LA SALUD

Digital Agenda & Health Reform

- "Digital Agenda" initiative
  - In Health: operationalised by DADES/Minsal
- Libro Azul
  - Recognizes 'semantic interoperability' as main requirement
  - How to achieve it however unclear
  - Strategic vision and focus?
- ICT infrastructure
  - Often: non-existent or obsolete
  - But: ambitious initiative to upgrade infrastructure
  - Ambitious pilot projects
  - Major differences between Santiago and regional/remote areas

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Issues to consider

- No health information managers
- 50% of the population treated by primary healthcare centres and have access to secondary and tertiary healthcare for specified diseases only
- Government must have results by 2010
- National dedicated network

Success factors

- Overall aim is to improve:
  - Access to health services
    - Primary health care and public health focus
  - Sustainable health system
    - Efficiencies
    - Skilled health workforce in adequate numbers
  - Patient safety – effectiveness
    - Consumer participation

Strategic Focus

- **Promote** Semantic Interoperability
- **Identify** National Business/Policy needs
  - Electronic Health Records – *open*EHR approach
  - Casemix
  - Telehealth
  - Critical pathways – AUGE Plan
- **Establish** National Standards Infrastructure
  - **Technical standards**
  - **Concept representation standards**
    - **Statistics, classification, casemix, reporting, archetypes**

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Canada Infoway

Nicola Shaw

Canada

Dr. Nicola (Nikki) Shaw

Research Chair, Health Informatics.

iCARE, University of Alberta & Capital Health

Canada Health Infoway

- **Established in 2001 to *"accelerate the development and adoption of modern systems of health information and to define and promote standards governing the health infostructure to ensure interoperability"***
- **Budget $1.6 billion**
  - **$500 million (2001); $600 million (2002); $100 million – Public Health Surveillance (2004); $400 million (2007)**
- **Goal: To have an interoperable Electronic Health Record covering 50 per cent of Canadians by 2010**
- **Nine Investment programs**
  - **Registries, Diagnostic Imaging, Drug Information Systems, Laboratory Information Systems, Telehealth, Public Health Surveillance, Interoperable EHR Systems, Innovation and Adoption & Infostructure**

Success factors

- **Infoway success model has six conceptual dimensions**
- **Three quality dimensions:**
  - **Information**
  - **System**
  - **Service**
- ***Plus:***
  - **Use**
  - **Satisfaction**
  - **Net Benefits**

Issues & Priorities (2001)

Infoway's goal

To have an interoperable Electronic health record Covering 50 per cent of Canadians by 2010

with

The elements of the Solution in place across All jurisdictions

CURRENT PRIORITES

Innovation and Adoption - $60 million

Telehealth $120 million

Public Health Surveillance $100 million

Chronic Disease

Cancer

Wait Times

Primary Care

Patient Safety

Mental Health

Etc.

Interoperable HER - $175 million

Registries $134 million

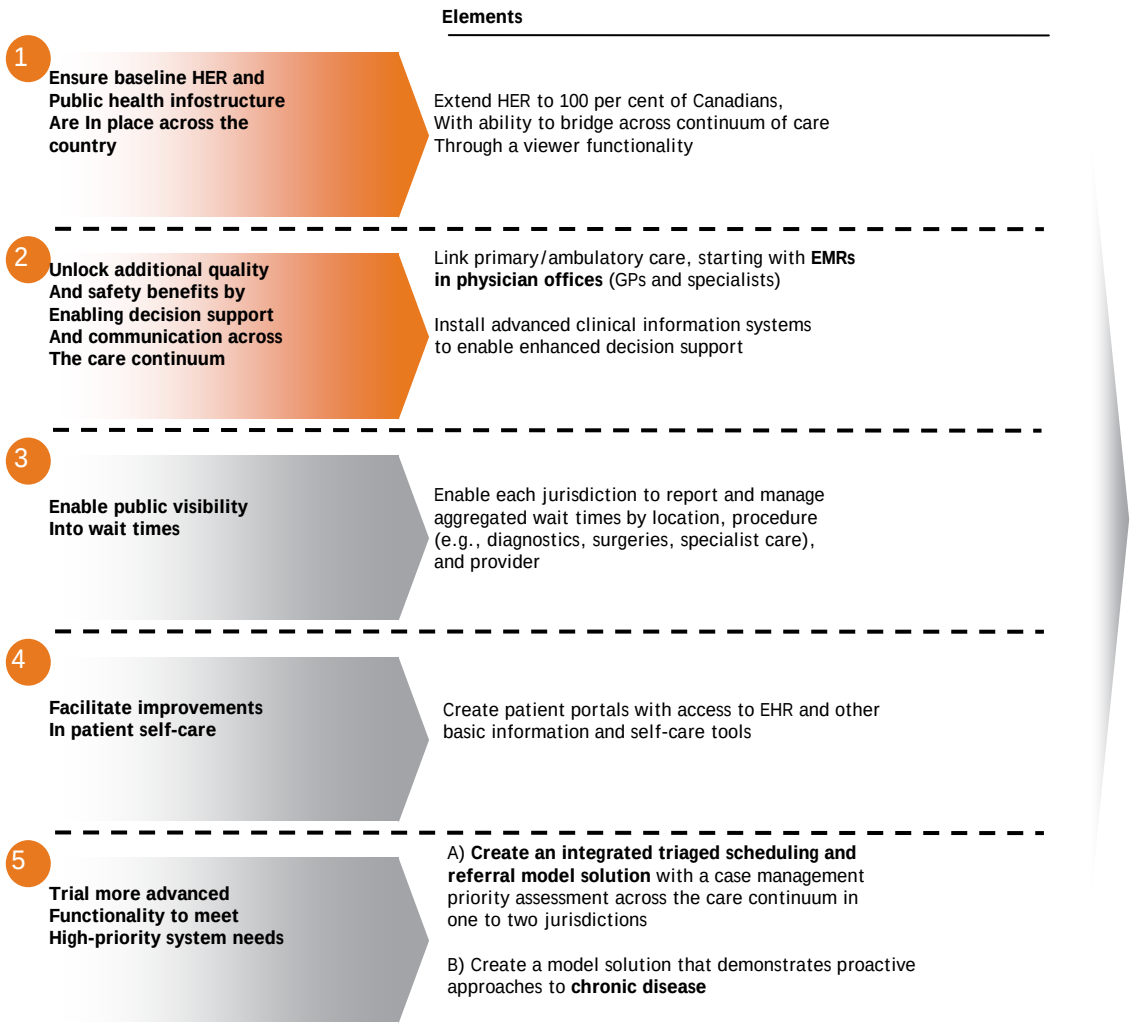
Drug Systems $185 million

Laboratory Systems $150 million

Diagnostic Imaging $310 million

Infostructure - $32 million

Issues & Priorities (for 2015)



Rationale

- Significant jurisdictions will be unlocked by pursuing these priorities
- Stakeholders consistently articulate these as the highest priorites
- Some jurisdictions will be able to start on these elements soon (and in some cases already have) and create compelling examples of improved care delivery

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What are the critical success factors for eHealth programs?

Success needs Energy

The Laws of Thermodynamics

- **Energy cannot be created or destroyed**
- **Disorder always tends to increase**
- **Perfect order is unattainable**

What it really means is …

1. **You can't win!**
2. **You can't break even!**
3. **You can't give up!**

Allen Ginsburg

We are in this together…

… along with a common iceberg avoidance plan!