



Cancer Clinical Networks - the Role of Data and IT

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Overview

- Cancer Clinical Networks - the Role of Data and IT
 - What are the ICS?
 - Why do they exist?
 - What do they aim to achieve? (Clinical Networks)
 - What does that mean for patients?
 - What does that mean for data?
 - What does that mean for IT?
- Data - Mining the data mountain - data to support cancer care - NEMICS
- IT - Evaluation of Cancer Outcomes Project - BSWRICS

Disclaimer

- Some of the views expressed are my own and not those of my employer or DHS Victoria

Objectives

- How will you know this was worthwhile attending?
- If by the end of today's talks you understand a lot more about:
 - Clinical Networks
 - the ICS'
 - the problems being faced – especially the complexity
 - how data and IT can begin to assist in the roll out of clinical networks

What are the ICS?

- Integrated Cancer Services – 3 rural, 5 metro, PICS
- Forerunner of cancer clinical network
- Stroke, Emergency, Renal, Maternity/Newborn
- CN worked well in other Australian states inc NSW, Qld, WA...and OS – Canada, various in UK
- ICS -varied entities – non legal; host organization
 - WCMICS – includes PMCC and is host
 - NEMICS – host is Austin
 - BSWRICS – host is Barwon Health
- But common principles.....

Why do they exist?

- Gaps in process – safety implications – eg - lost follow up
- Volume/outcome debate
- High process variability
- Perhaps address economies of scale
- A good way to focus on the patientnot my discipline, my speciality, my ward, my hospital
- And to stop.....this is a “health service X patient”I've never seen a label on a patients head in 20 years

What do they aim to achieve? (Clinical Networks)

- Common principles (flow on to networks)
 - Reduce unwanted variations in care*
 - Improve co-ordination of care*
 - Improve and support MD care (MDT/MDC)*
 - Improve and support supportive care

What do they aim to achieve? (Clinical Networks)

- In addition
- Increase clinician participation in decision making and policy development
- Increase dissemination of evidence-based practice
- Improve system monitoring and performance benchmarking
- Improve integration of continuous quality improvement activities
- Improve effectiveness of service delivery

What does that mean for patients? (my take.....and COSA's)

- A more seamless journey – eg – the next step in care is clear
- Not having to tell their story 25 times ...and that's just in the first week
- Having everyone singing from the same hymn book (but “Doc Jones said”) - where possible

What does that mean for patients? (my take.....and COSA's)

- Not having to come to the hospital 5 times when 2 times will do (logisticsshort term and rationale..... long term)

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"CAN YOU BE HERE AT 9 A.M.? THE DOCTOR WILL SEE YOU
SOMETIME BETWEEN THEN AND 4."

What does that mean for patients? (my take.....and COSA's) (cont)

- Getting the same “deal” irrespective of where they live (where possible – eg CNS!!!)
- “Evidence shows the further from a metropolitan centre a cancer patient lives, the more likely they are to die within five years of diagnosis.^{1,2,3} For some cancers, remote patients are up to 300% more likely to die within five years of diagnosis.⁴”

(COSA report – “Bringing multidisciplinary cancer care to regional Australia: requirements for a regional cancer centre of excellence”)

What does that mean for data?

- How can data support these objectives?
- 2 simple examples
- Reduction of variation
 - Measure baseline
 - Measure variations in baseline
 - Measure reductions in variation
- Care
 - Measure process eg – time to being seen once referred
 - Measure outcomes eg - 5 yr survival, morbidity from chemo (eg – neuropathy)

What does that mean for data? (cont)

- VAED Data
 - Some clinically relevant, much resourcing relevant information
 - Allows valid comparison (public and private - 40% + anecdotally and some data)
 - Linked key
- ESIS Data
- VEMD Data
- (VINAH Data)

What does that mean for data? (cont)

- NCCI – CCCD → AIHW Cancer Data Set
 - Vic version – VCR
- State-wide radiotherapy data set (evolving)
- HIC data – Medicare billing
- Intra hospital systems
- PCOC – Palliative Care Outcomes Consortium (national initiative)

What does that mean for data? (cont)

- And none of these specifically, in isolation, address the research needs of clinicianshence standalone databases, Biogrid
- A key point is re outcomes – death data
 - Death date and cause ? Cancer related
 - In hospital (VAED) – most not
 - BDM – but access issues (except VCR)
- Also on outcomes ..long term survivorship and morbidityunique data issues.....
 - What to collect, where, by whom, using what capture mechanisms

What does that mean for IT? (cont)

- DHS view
- CN implicitly recognise multi-agency involvement in health service provision for patients with complex conditions, spanning the interface between the acute and primary settings, and a range of individuals and institutions
- Systems and tools are required to support communication between and collaboration of clinicians, to facilitate dissemination and uptake of information into clinical practice, and to monitor and assess utility and outcomes. (e-Health in a nutshell???)
- A key challenge - is in contrast to acute health service governance structures that are organizationally focussed

What does that mean for IT? (cont)

- DHS view (cont)
- ICT development in the Victorian acute setting has been driven over the last five years through the HealthSMART strategy (OHIS 2008)
- While this is having significant impacts on ICT capacity within health services, the role of ICT at a state-wide and organizational level in supporting CNs remains unclear
- In particular, HealthSMART and other activities do not directly address:
 - patient centred service models
 - contemporary care pathways for patients across
 - range of community and acute services, and
 - different care delivery settings (ward admitted, day admitted, outpatient XRT, private)

What does that mean for IT?

- State-wide Clinical Networks IT Seminar
 - very successful - evaluation report at DHS and will be on WCMICS web site
 - in summary - 60-72 % think current ICT environment poor re CN's and would like to see
 - Support for local innovation-including funding (vs central)
 - Linking of existing systems
 - Provide standards
 - Note - alignment with Scotland, UK, US-recent reports and strategies
 - Outcomes
 - feed into next Whole of Health ICT strategy to help prioritise need
 - guide interim actions and priorities

What does that mean for IT? (cont)

- MD Care - “Clinicians working mainly in the public sector argue that treating cancer is intrinsically a multidisciplinary endeavour, and an approach that involves **discussion by a multidisciplinary team** is the only way to ensure optimum care for people whose cases are not straightforward.”

(COSA, Cancer Australia, NCCI: “Optimizing Cancer Care” 2003)

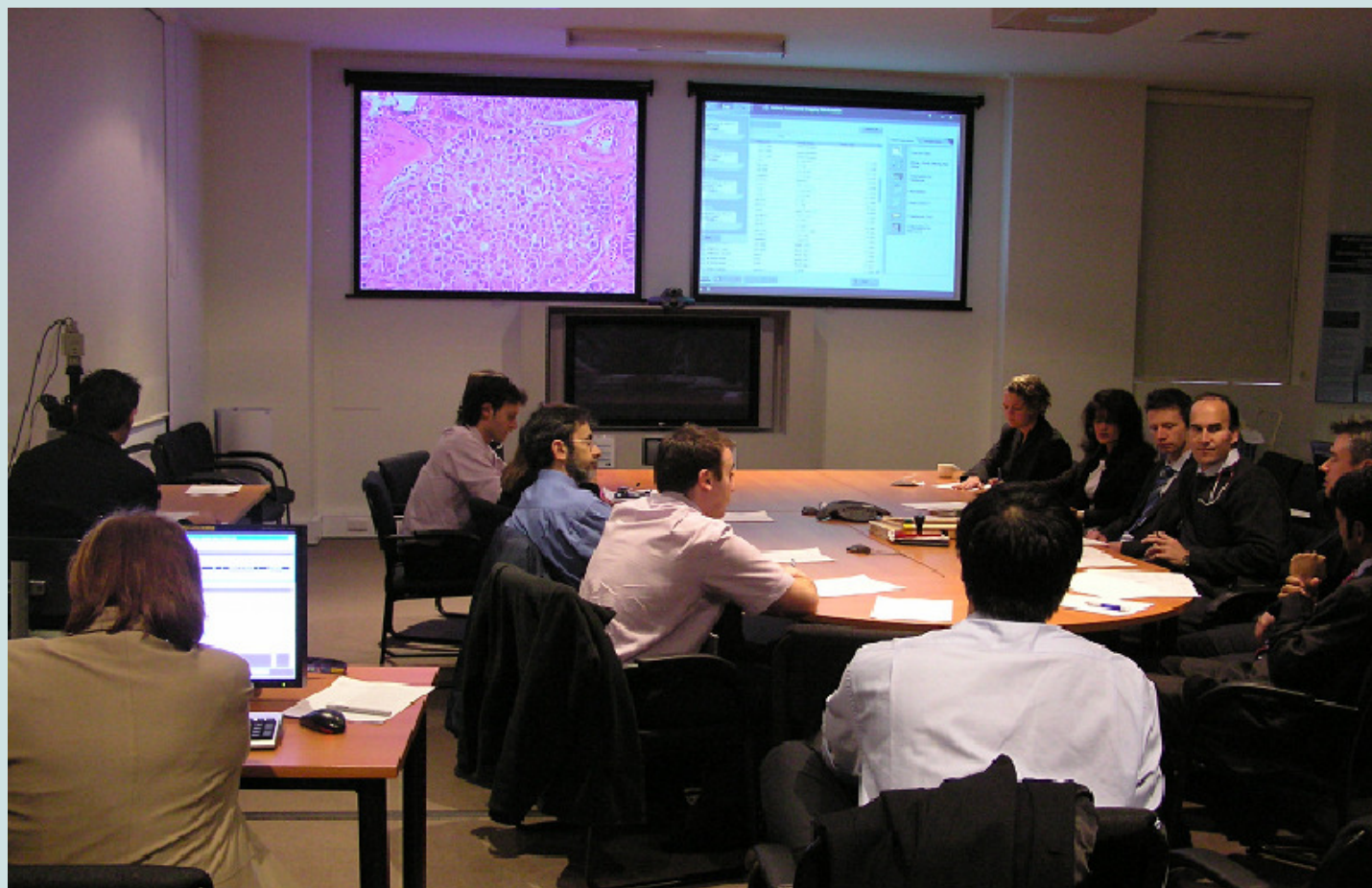
What does that mean for IT? (cont)

- What is an MDT meeting?
 - Meeting – up to 20-30 participants (different levels)
 - All in one room -> +/- VC links to 2-3 other sites
 - Patients discussed one by one
 - Surgeon, medical oncologist, organ specialist (eg - lung physician, dermatologist), radiation oncologist, allied health, radiologist, pathologist, GP even
 - Need good technological support as:
 - treatment recommendations are being made
 - significant time investment for many and
 - much disparate information needs to come together

What does that mean for IT? (cont)



What does that mean for IT? (cont)



What does that mean for IT? (cont)

- Kane et al (Ireland 2007) - pathology and radiology contribute (large university teaching hospital): 2-8 per day
 - **For one month**, over 300 h were spent by pathologists and radiologists on **81 meetings** (n ~ 1000 pts)
 - The review process in preparation for meetings improves internal quality standards but external docs (eg - imaging) can be almost 50% of the material to be reviewed on a single patient
 - **For each meeting hour**, there were, on average, **2.4 pathology hrs** and **2 radiology hrs in prep time**
 - 2-3 meetings per week are conducted over a TC link. Average meeting time is 1 h. Preparation time per meeting ranges from 0.3 to 6 h for pathology, and 0.5 to 4 for radiology
 - Meetings per month has increased by 50% over the past 2 years - further increase is expected (same issue here - uptake/enforcement and % compliance)

What does that mean for IT? (cont)

- Reducing referral-to-treatment waiting times in cancer patients using a multidisciplinary database
 - Nouraei et al 2007 (UK- Head and Neck)
 - designed and implemented a trust-wide system - interfaces for registering and tracking patients, and automated worklists for pathology and radiology
 - audited MDT - 11 and 10 weeks before and following (n= 226/187)
 - significantly improved cross-speciality co-ordination
 - highly significant reduction in the number of patients whose treatment planning was delayed due to unavailability of adjunctive investigations ($P < 0.001$)
 - this improved the overall efficiency of the MDT by 60%.

What does that mean for IT? (cont)

- Visited multiple tumour streams at
 - WCMICS – RWH, PMCC, RMH, St V's, Western Health
 - Barwon (BSWRICS)
 - Latrobe RH (Gippsland RICS)
- Some existing solutions – Bite IT, St V's OIS
- Functional spec list – 100+ requirements
- Grid
 - pre, intra and post meeting
 - patient and meeting management
 - essential vs nice to have (1-7)
- Will put on web and give to DHS
- As a development and/or funding guide

In summary

- Clinical networksin cancer via ICS represent:
 - a patient centric service model approach successfully used in other states of Australia and OS
 - an attempt to focus on the patient's journey for complex or chronic diseases
 - a challenge in terms of data collection, storage, analysis and reporting
 - an even bigger challenge in relation to how IT should be harnessed to support their objectives

.....but at the same time a unique opportunity and a great informatics problem to be tackled (the ultimate in e-Health –crack this and it's all done ? ☺)