Beyond Bricks & Mortar
— Building Quality Clinical Cancer Services

Report on the key messages

RORIC SYMPOSIUM 2011
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**Why This Symposium?**

The Commonwealth Government is investing $560 million in new or upgraded cancer centres in regional communities enabling Australians with cancer outside metropolitan areas to receive care closer to home and their community. While this investment is in infrastructure, the focus now needs to shift to establishing and maintaining the delivery of quality care.

This Symposium looked beyond the bricks and mortar and considered how the different elements of the cancer service system need to fit together to ensure that patients receive the highest possible standard of care and the best possible health outcomes.

**About The Radiation Oncology Reform Implementation Committee (RORIC)**

RORIC sits within the Australian Health Ministers’ Advisory Committee (AHMAC) structure. RORIC was established as an inter-jurisdictional forum to assist with national reform of radiotherapy following the 2002 inquiry chaired by Professor Peter Baume.

RORIC has three working groups to support reform priorities: quality, workforce and service planning. The RORIC Quality Working Group has undertaken significant work over the past five years to develop and implement a quality framework for radiation oncology, including supporting the development of Radiation Oncology Practice Standards and the trial of the Australian Clinical Dosimetry Service.

**About This Report**

This report provides highlights from the Symposium, “Beyond Bricks & Mortar – Building Quality Clinical Cancer Services” held in Melbourne, 10-11 August 2011. The Symposium was hosted by RORIC’s Quality Working Group, and was facilitated by Dr Norman Swan. This report was prepared by GSB Consulting and Communications Pty Ltd.

This report intends to capture some of the key points made by the speakers and panel members during this event and the views expressed in this publication should be considered in this context.
Symposium Summary

- There are now many examples of models of care for regional cancer centres that span the public and private sectors and show that each place and community has specific needs and capabilities.

- The investment, particularly in radiation oncology, is installing state of the art technology in regional areas.

- Consumer involvement in all aspects of service design and implementation facilitates a patient centred approach. Timely, appropriate psychosocial support is a critical need as is understandable information delivered via the most appropriate medium.

- Telehealth for some regional cancer centres is proving to be a useful way of reducing the need for travel of both specialists and patients but there is an ongoing need for expanded bandwidth and reliability.

- Multidisciplinary team based care improves outcomes across a number of important variables but the difficulties attracting and retaining workforce in regional centres makes such team development a challenge. Networking in a hub and spoke model is providing solutions for some centres, which are finding themselves able to deliver high quality care more consistently.

- An important aim is to reduce variation within and between services and that requires systematic measurement and feedback loops for improvement. These variations in outcomes need to be transparent to consumers as they are part of informed consent. The NSW model of Quality Systems Assessment is an online tool for teams to assess the strengths and weaknesses of their systems.

- Data sharing within and between services and across jurisdictions remains a critical facilitator for service improvement and benchmarking.

- The primary health care sector needs to be more engaged in the cancer journey – not just at the prevention and early detection stages. As yet, there are few examples of that happening.

- Cancer outcomes for Aboriginal and Torres Strait Islander communities are stage for stage considerably worse than the rest of population and this remains a major challenge.

- Regional Cancer Centres are highlighting the need to clarify role delineation and in particular the place of surgical subspecialisation and specialised tumour streams. Defining the tumours that cannot be treated in regional centres is an essential part of the role delineation but hard to generalise because of the variation in local skills and experience.

- Explicit and clear clinical policies and guidelines as well as shared data and IT systems will significantly enhance compliance with evidence-informed care.

- Health services with regional cancer centres need to give cancer the priority its burden suggests it deserves.

- The Tripartite Radiation Oncology Practice Standards were launched at the meeting to assist radiation oncology facilities achieve best practice by providing a framework of requirements considered essential to the delivery of safe, high quality care to radiation oncology patients.

- An options paper was also launched which focuses on evaluation and implementation of these standards including questions about the degree to which they should be mandatory.
Dr Brian Richards
RORIC Chair; Executive Manager, Health Technology & Medical Services Group, Department of Health and Ageing

• The aim of the symposium is to bring together private and public sector providers of radiation and medical oncology to share experiences of building and sustaining high quality, safe cancer care and to explore the challenges and opportunities which come with a rapid expansion of capital infrastructure, particularly in regional and rural areas.

• There is already:
  • An ageing workforce and workforce shortages
  • Rapidly changing technology requiring new skills and protocols
  • A growing cancer incidence and an ageing population
  • Tightening financial resources.

• Over the next five years there will be an approximate 25% growth in the capacity of radiation oncology facilities as a consequence of the Commonwealth’s investment in infrastructure. These challenges coupled with this level of growth increase the potential for things to go wrong.

• The Symposium gives an opportunity to consider where the real risks are, what the critical control points might be and how to avoid those risks being realised.

• Dr Richards encouraged participants to respond to the working group options paper on evaluation of services against the new practice standards released at the conference.

Professor David Currow
Professor of Palliative & Supportive Services, Flinders University; Chief Cancer Officer, Cancer Institute of NSW

Improving cancer outcomes needs more than dedicated clinicians. It needs system changes, better service coordination, data collection to define variations in performance and benchmarking to help understand why these variations occur. Through a whole-of-sector approach, improvement in five-year survival is achievable using current knowledge implemented systematically.

The following key points were raised in Professor Currow’s presentation.

• What is working well in cancer control?
  • Australia has some of the best health outcomes in the world. While incidence is rising, mortality rates are declining
  • Five-year survival has improved from under 50% several years ago to 64% today and cancer treatment has contributed to this
  • Variations are marked between countries. For instance, five-year survival for colorectal cancer is 66.4% in New South Wales, while in England it is less than 55%.
Breast cancer incidence rates have been trending downwards since 2002. The challenge for Australia is to recognise our success factors so we can stay at the international forefront.

Where are there areas where cancer control can be improved?
- Cancer is still the single largest cause of years of life lost
- While we have seen an improvement in five-year survival for cancer, the improvement is not as large as seen in cardiovascular disease
- Cancer outcomes for Aboriginal and Torres Strait Islander communities are stage for stage considerably worse than the rest of the population. People from rural and remote communities are significantly less likely to present with localised disease. The reasons for this include access, and not getting the message that you are more likely to survive cancer if it is found early.

How can the system meet needs more effectively for people already diagnosed with cancer?
- Need to enlist consumers and integrate across boundaries. This is not being done effectively:
  - at system levels
  - at transitional points of treatment
- Provide psychological support during and after treatment
- Provide parking
- Bring GPs into cancer care and early detection – they are largely absent at the moment
- Provide point of care data and greater use of evidence e.g., utilising EviQ. Using EviQ Cancer Treatments Online general practitioners and other clinicians can view and quickly understand what the aim of the therapy is and the likely side effects they need to be responsible for in providing care
- Create communities of practice
- Planning at a service level needs to acknowledge that one in two people will have their life shortened by cancer
- Plan for end-to-end cancer control
- August 19 saw the launch of the new Online Cancer Services Directory of New South Wales, which allows general practitioners who have not had a lot of contact with health services or contact with that particular cancer the ability to identify the closest multidisciplinary teams
- Recognise that with multi-disciplinary care, there is evidence of improved:
  - survival, satisfaction and perceived quality of health care for patients
  - patterns of treatment, staging, coordination of care, better use of available evidence and better communication between clinicians for professionals
- This means that when planning cancer services, it should not be one oncological discipline against another. If you need another radiation oncologist, chances are you need another medical oncologist, a palliative care physician, as well as additional resources for pharmacy, occupational therapy, physiotherapy and social work. Everyone needs to fight together for resources because cancer care is a collaboration.

How can we best identify avoidable variations in clinical outcomes?
- There is evidence that for some tumours and procedures there can be a three-fold difference in 30-day mortality depending on volume. Patients have a right to know this and understand that if they want the best outcomes, there are some things that they will have to travel to receive.
- If we really want to reduce five-year survival we need to track patients through the system, e.g., between private and public, between in and outpatient. Governments must share data in a timely way so we can understand the performance of the system
- Ultimately, collaborations with and between consumers, primary care, other clinicians and governments are needed to make and sustain a difference to cancer outcomes in the future.
Travelling to Traralgon: Building High Quality Oncology Services In Regional Victoria

Associate Professor Jeremy Millar
Director Radiation Oncology, Alfred Health; Head of Brachytherapy Services

Associate Professor Millar raised the following key points with regard to building high quality oncology services in regional Victoria:

- Gippsland has been underserved with cancer services compared to other rural areas in Victoria.

- It has had the highest age-standardised cancer mortality in the state and at 37%, the lowest 5-year survival rate overall compared to the rest of Victoria. A man with prostate cancer in Gippsland is twice as likely to die of his disease than elsewhere in Victoria.

- The deficit in access to radiotherapy amounted to about 250 patients per year and probably contributed to 40 avoidable deaths.

- There were and to some extent still are significant outflows to metropolitan cancer services, although they’re now more planned.

- In the last 5 years since the regional centre opened, Gippsland has seen the greatest improvement of survival across Victoria.

- Their technology is state of the art and was installed ahead of some major centres.

- Challenges have included:
  - Being constrained by having only one linac which is saturated at approximately 450 treatments per year:
    - next year they are getting a second machine with VMAT, which will double their capacity
  - obtaining enough nursing staff to allow treatments to take place 12 hours a day
  - Tremendous problems with staff recruitment & retention, for example they have had only one medical oncologist, resulting in long waiting times. They rely heavily on a hub and spoke arrangement with The Alfred. Next year they will be looking for a third radiation oncologist. Joint appointments with The Alfred have worked well. Finding Australian trained ROs has been hard. Physicists and radiation therapists are in short supply as well
  - Building surgical oncology capacity
  - Running a Telemedicine service, but it is inadequate. It is difficult to get busy clinicians to use it, as it regularly doesn’t work. Then have to find an IT person which takes a couple of days. This makes maintaining a multidisciplinary team difficult
  - A problem that a lot of regional cancer centres are going to face is the community belief that you do not get the same quality of treatment in a small regional centre as you do in a larger metropolitan centre
  - You need an organisational structure which nurtures the team and a health service that focuses on cancer and gives it priority appropriate to its burden.

- Lessons they have learnt:
  - Building the team is incredibly important and difficult in regional centres
  - Take the long-term view
  - Work to a plan
  - Work with and understand the local stakeholders
  - Deal with the unrecognised costs. It is more expensive to provide a high quality service in a rural town without a lot of infrastructure
  - Protocol adherence must not be taken for granted.
Dignity & Distance: A Consumer Perspective On Systems & Processes

Dr Ian Roos
Chair, Cancer Voices Australia

Cancer centres, in addition to providing good clinical and supportive care, need to have in place systems and processes that deliver a number of tangibles and intangibles that contribute to the wellbeing of people affected by cancer. These include preservation of dignity, the provision of timely and appropriate information, psychosocial support that facilitates good outcomes and the management of transitions within clinical pathways. Overlaying all of these is the ‘tyranny of distance’ and the impact of this on our approach to the systems that are meant to deliver care.

The following key points were covered in Dr Roos’ presentation:

- We should be using volunteers more to assist the cancer journey.

- Consumer engagement is essential and there is now a National Framework for consumer involvement which can help services take a systematic approach. This was the result of a partnership between Cancer Voices Australia and Cancer Australia. They addressed individual and organisational imperatives and identified four key elements for consumer involvement:
  - Organisational commitment
    - the organisation has to be committed to meaningful consumer engagement
  - Capable Consumers
    - consumers should be supported, trained and selected for their capability to engage meaningfully with the system and be able to speak on behalf of other people
  - Inclusive Groups
    - effective consumer engagement occurs in groups and teams, which require focus and determination to develop and maintain
  - Shared Focus
    - consumers and professionals working together will have a much better chance to achieve mutually beneficial outcomes

- Consumers want processes and systems that will provide them with:
  - Dignity and respect. Examples of not being shown dignity and respect are:
    - backless gowns
    - mixed gender wards for elderly people
    - cancer pain badly dealt with in Emergency Departments
    - lack of flexibility with appointments
      - need to consider the added stress that accompanies long travel times for rural people
      - people are struggling to get to appointments outside their work hours. This would not be acceptable in other industries.
      - patients should not have to drive three hours to get to their cancer centre only to have to wait another three hours
    - indirect discrimination
      - while we set out to treat everybody exactly the same, in reality we discriminate against people who are not exactly the same
    - large waiting rooms with lack of privacy and intimacy
  - The necessary information that is relevant to us in the most appropriate fashion:
    - it is very easy to get information overload from pages of booklets and brochures. You should not flood but trickle information
    - face-to-face information is highly valued. This does not have to be a consultant or nurse, it can a trained volunteer who has been through the same experience
• give people something to take away. After the consultation giving patients a taped conversation so they can play it back whenever they like is an excellent and appreciated practice
• with Internet-based information, we should have trained volunteers to assist people with what are appropriate websites for information
• Supportive care before, during and after treatment regardless of the outcomes and extended to our friends, families and carers:
• for those who need it, we should have available assistance to coordinate career, financial, family, and psychological support. Again more use can be made of volunteers in this area
• Transitions that are well managed and not leave patients hanging. This includes:
  • recognising and celebrating the ends of phases and treatments
  • preparation for the next stage of the journey. Once finished with one stage of their cancer treatment patients are often left to begin again with a new group of people for the next stage
  • with psychosocial care, focussing on the social should reduce the need for the psychological

Quality Standards In Australian Radiation Oncology: Time To Put On The “Yellow Jersey”

Associate Professor Christopher Milross
Chair of the Tripartite Committee; Dean of the Faculty of Radiation Oncology, RANZCR; Director of Radiation Oncology, Royal Prince Alfred Hospital

Radiation Oncology has a proud and longstanding tradition of safety and quality. We have only ever been able to do our job as a team - medicine, physics, and therapy - all with unique and interdependent roles. The development of the Tripartite Radiation Oncology Practice Standards represents a culmination of a series of significant stages in our growth and development as a sector. The Radiation Oncology Practice Standards were officially launched at the symposium. In launching the standards, Associate Professor Milross noted the following.

• In 2002 the report A Vision for Radiotherapy (otherwise known as The Baume Report) identified a number of national safety and quality issues for radiotherapy, with the key message of the report being vision and change.

• In 2005 the Department of Health and Ageing funded the Royal Australian and New Zealand College of Radiology (RANZCR) to develop a suite of Practice Standards.

• A period of consultation followed, which saw a lot of writing and rewriting.

• The National Association of Testing Authorities, Australia (NATA) successfully tendered to run the pilot of the draft standards. They tested with a mix of public and private services, metropolitan and regional sites, large and small radiotherapy centres, and single and multi-site services to see how well the standards could be implemented.

• The NATA pilot found facilities already have 75% of the documentary evidence prescribed by the standards. This is a good thing as it tells us the standards are achievable while representing a “stretch goal”, which will ultimately make radiotherapy better.
• The sector needs to think hard about the implementation of the standards including:
  • Their use as a measure of quality – to be reported so that everyone knows to what level we meet the standards
  • As a tool to facilitate quality improvement
  • Related issues associated with the standards such as accreditation and certification
  • Evaluation.

• The Tripartite Committee has committed to keeping the standards themselves current and relevant in an ongoing review.

• It is important to consider the scope of the standards, the resources that will be required to report against the standards and the cost of doing so.

• Implementation of an agreed set of quality standards provides radiotherapy with an opportunity to define who we are and what we want to be known for – high standards and excellent patient care.

Plenary Session: Designing & Delivering Quality Care

Establishing A New Service: Learnings From The Maternity Sector

Associate Professor Anthony Weeks  
Director Clinical Services and Lead Anaesthetist, The Cradle

Dr Kate Willis-Sullivan  
Quality and Policy Manager, The Cradle

Associate Professor Weeks and Dr Willis-Sullivan, co-founders of The Cradle, an innovative private sector maternity service, shared their story of how they conceived, designed, raised capital (during the Global Financial Crisis), planned, built, registered, certified, accredited, staffed and commissioned a brand new maternity hospital in less than three years. The end result of this roller coaster ride is a unique model of care and, they argue, a new level of specialist maternity services not seen before in Australia. They believe many of the lessons they have learned along the way are applicable across the health sector. The following points were covered in their presentation.

• Communicate your vision and goals clearly and often. Start building a team and do not be afraid to ask for help.

• In only six months they turned an office block into a hospital. This is the first time in the Southern Hemisphere, they say, an existing building has been converted into a hospital and is something to think about for projects that are still at the bricks and mortar stage as it can save a lot of time and money.
It is important to define a brand identity:
• The challenge is conveying to other people who you are and the services you provide. Branding is one way of doing this
• In medicine we often forget we are not selling health or treatment, but providing a service. This should dominate how we interact with one another and the patient
• Eliminate slogans, instead focus on a common goal and working together as a team.

Practices to avoid:
• Inconstancy of purpose. You need to ensure everyone is engaged in achieving the same goals
• Dependence on inspection to achieve quality. You should strive for quality without assessments
• Emphasis on short-term profits or gains
• Evaluation by simplistic performance measures which encourage gaming rather than true quality. An example is the Four Hour Rule in emergency departments
• Management changes. You need to institute leadership so staff are all heading in the right direction. This is difficult if management is constantly changing
• Running a company on visible figures alone. Sometimes need to stop and refocus - remember what are you trying to do, what your purpose is, what your values are with providing that service, and how to maintain those values.

Models Of Care & Regional Cancer Services

Dr Stephen Vaughan  
Director, Grampians Integrated Cancer Services

Dr Vaughan discussed the following points in his presentation of models of care and regional cancer services.

• In health care there are three interdependent dimensions: quality, volume and cost.

• Quality is not a costless quantity and we have to decide which are the things we do that are cost effective.

• Because health is a complex system, organisational change is never easy. People who work in health systems have multi dependencies to:
  • Government
  • Colleagues
  • Patients
  • Professional organisations.

• Interventions in one can have impacts on the others.

• There is a need to assess the success of organisational change on global metrics.

• A lot depends on relationships which are under recognised. There are many informal relationships that can explain some doctors’ referral patterns. Therefore there is a need to define relationships between regional centres and major centres.

• A centre is not a building, it is a group of people who work together. It has to be more than a building with different entrances and tearooms on different floors for different departments. Joint management and integration at a clinical level between treatment modalities is needed.
• Care is given in different ways which have an impact on cost and integration:
  • Sequential
  • Semi parallel
  • Parallel
  • Semi synchronous
  • Synchronous.

• These are not bad or good but you need to decide which is most appropriate to a given part of the patient’s journey. Medicine tends to be sequential when parallel or synchronous activity is called for.

• Things you have to do to get integrated services across providers:
  • Establish boundary-spanning roles
  • Develop shared guidelines and protocols
  • Introduce shared IT systems and common datasets
  • Develop networks and support networking.

• The word consumer has overtones associated with it. Changing a person’s title from consumer to advocate can get a more active response.

• More important than what is said to patients is what is understood. That must be evaluated in real time. Mostly patients’ expectations of public healthcare are too low but we should not necessarily think that meeting these low expectations is sufficient because the level of care may not be.

• The systemic risk to the private sector is over servicing and the systemic risk to the public sector is low productivity.

• Organisational change is difficult to measure. If you make large changes then usually in the short-term there will be a detriment to performance and you will need strong leadership and vision to overcome this.

• Never forget the primary affiliation of any clinician is to his or her craft group. That has to be understood and managed in any change process.

ACHS Clinical Indicator Program: Measuring Performance To Improve Outcomes

Dr Jennifer Bichel-Findlay
Co-ordinator, Performance & Outcomes Service, Australian Council on Healthcare Standards (ACHS) Clinical Indicator Program

The Radiation Oncology indicator set was introduced into the ACHS Clinical Program in 1999, and is currently in its 3rd version. A working party of practising radiation oncology clinicians, in addition to a consumer representative, a statistician and ACHS staff, was established in late 2010 to review the indicators. The 4th version, to be available from mid 2012, is discussed in relation to the proposed topic areas.

• Measurement in health care should be:
  • Valid
  • Acceptable
  • Evidence based
  • Accurate
  • Reliable
  • Relevant
  • Consistent
  • Feasible
  • Sensitive
  • Specific
People are interested in a clinical indicator program to:
  - Understand how a system works and how it might be improved
  - Monitor if and how a system is performing to an agreed standard
  - Show accountability to patients, government and other stakeholders including funders.

Radiation oncology has the least reported clinical indicator sets. Currently only 20 organisations are reporting.

Issues include recruitment to clinical trials, which may be falling, the quality of informed consent and explaining variation.

Development and review of indicator sets occurs every three years.

ACHS staff cannot tell a working party they can’t have an indicator, but can only advise against it.

Plenary Session: Measuring, Monitoring & Coordinating Care

Quality Systems Assessment

Professor Clifford Hughes
Chief Executive Officer, Clinical Excellence Commission NSW (CEC)

- The aim is safer systems and safer care - we know more about how to build a safer building than a safer system.

- The Commission has looked outside health to high-risk organisations and developed a set of guiding principles that allow teams to think about what they do. The tool is called Quality Systems Assessment (QSA), which is a five-year framework.

- The purpose of the QSA is to:
  - Identify statewide policy and program gaps and report publicly the results
  - Assess degree of effectiveness of implementation of policies, performance monitoring and risk controls throughout the system
  - Provide health organisations and clinical departments with information to improve their performance
  - Include all public health organisations (PHOs) in New South Wales
  - Not duplicate but support accreditation.

There are four components of the QSA:
- Completion of a self-assessment at team and local levels of the organisation
- Verification of the self-assessment
- Feedback and reporting to respondents, the health system and the community
- Development of improvement plans at each level of the organisation to respond to the issues identified in the self-assessment process. The CEC visit the unit and ask what improvements they plan to implement. After five months come back and verify the data and whether they implemented the improvement plans.
• Immediate uptake of voluntary self-assessment was undertaken upon the launch of the QSA by 82% of the statewide clinicians. Now it’s 93%. They got a high uptake response because it isn’t a bureaucratic exercise. It provides clinicians with an agile tool to fix practices quickly, and also earlier than a traditional audit can deliver.

• Reporting provides:
  • Feedback on individual performance as well a comparison against other organisations
  • Information on systems issues
  • A means to identify specific initiatives or policy development requirements.

• To drive a system further, we need to not just think about the bricks and mortar, but rather whether the people and the systems within it are as effective as possible.

• Issues came down to things like sepsis and clinical handover – none were a surprise but allowed clinicians to ask why little had been done about them despite a lot of activity in the past.

• Found that when policies and guidelines were clear, compliance was high.

• Compliance was also higher when there was appropriate measurement in place.

• Found a disconnect between what Area Health Services thought was happening and what was actually happening (e.g. poor penetration of warfarin management processes).

• Barriers to effective teamwork and systems include staffing levels and workload.

• The next stage in this five-year process is to assess the effectiveness of the improvement plans and spreading successful models and examples.

Coordinating Care To Achieve Best Patient Outcomes

Professor Bruce Mann
Director of Breast Cancer Services for Royal Melbourne & Royal Women’s Hospitals, Professor of Surgery at the University of Melbourne, Director of Advanced Surgical Training, Royal Melbourne Hospital

Medical problems requiring complex therapy are difficult to manage in any system. Delivering this care in a regional centre poses extra complexity, with the natural desire of many patients to be treated close to home. This talk explored the issues involved in delivering complex cancer care to regional patients. The following key points were discussed by Professor Mann.

• In order to give best care to our patients we require appropriate subspecialisation:
  • Some will happen naturally
  • Some will need encouragement
  • Some we will need systems designed to facilitate it.

• There are some treatments best left to high volume clinics. For example in Maryland a study of Whipple’s procedures in people with pancreatic cancer showed a significant relationship between volume and mortality, length of stay and cost. Paradoxically length of stay was reduced in low volume centres but it was due to patients dying.
There are some treatments best left to high volume clinics. For example in Maryland a study of Whipple’s procedures in people with pancreatic cancer showed a significant relationship between volume and mortality, length of stay and cost. Paradoxically length of stay was reduced in low volume centres but it was due to patients dying.

Other areas where volume seems to matter included complex colorectal and rectal cancer, sarcoma and some forms of bone marrow transplantation. Even with breast cancer there are developments that are probably deployed faster in high volume sub specialised centres. These include sentinel node biopsy, management of triple negative disease and emerging molecular classifications. In thyroid cancer, there are difficult decisions when it comes to tailoring treatment and these need experienced thyroid multidisciplinary teams.

Principles for optimal care:
- Selected patients should be treated in major centres (e.g. pancreatic cancers should be done in a centre that is used to treating them)
- Selected aspects of treatment of many patients should be done at a major centre
- All patients will require aspects of their care delivered in their local community.

Drivers for suboptimal care:
- Patients travelling long distances for treatment that can be delivered locally
- Patients having treatment done locally that is best delivered in a subspecialist centre.

To move to optimal care, role delineation is essential:
- If a doctor operates on thyroid cancer every week, his colleague at the same hospital who does one a year should not operate. We should have regulations and systems to enforce that this happens.

A good example of a system can be viewed at UC Davis in America:
- Four smaller community based programs link with a high volume University Cancer Centre at the same time for presentation via a Telelink, which allowed transmission of high-resolution images of radiology and histopathology
- Four Virtual Tumour Boards met weekly
- Found UC Davis participants who were subspecialists attended only one of the Virtual Tumour Boards
- Community participants were mostly “generalists”, participating in more Virtual Tumour Boards but not every week
- Community sites benefited with:
  - access to subspecialist opinion without having to send patients down for management and fearing they may lose them
  - facilitating appropriate referrals
  - access to information (e.g. recent clinical trials results)
  - access to services (e.g. clinical trials)
- Central Site benefited with:
  - referrals being better prepared
  - personal links being developed
  - access to patients for clinical trials becoming better
- Patients benefited from:
  - access to telemedicine consultation with academic oncologists without the need for travel
  - the ability to receive appropriate therapy closer to home

For regional patients to get not just treatment but the whole package, optimal patient care requires coordination. It’s not easy to develop and maintain these links between sites.

Teams will only work if they know and respect each other
- If something goes wrong and cases need to be presented for the optimal outcome, the presenting person will only present the case if they feel it will not be used against them.
No amount of system engineering will replace the need for trust between members of the treating team.

Cancer Link Nurses: Strengthening Support & Connecting Care

Ms Maggie Stowers
Cancer Coordination Manager, Barwon South Western Regional Integrated Cancer Service

This presentation discussed a model of nurses providing emotional support and information to patients and families. Using a web-based system and video-conferencing, communication links between treatment teams are enhanced. Education and support at a local level can improve patient journeys.

Ms Stowers outlined the following about Cancer Link Nurses program:

- Rural cancer patients need to access care providers at multiple sites.
- Need to improve communications between cancer clinicians throughout the Barwon region.
- An online database that nurses can access was created so they could map the journey of cancer patients with complex needs.
- Patients identified that emotional support and timely provision of information was what they needed most. This is delivered by local nurses employed at their centres.
- They have embraced IT communications via:
  - Video conferencing
  - Multidisciplinary Care Meetings: clinicians are linked across the region
  - Cancer Education Forums: attendees at each site simultaneously view presentations and interact at question time
  - Regular Meetings: Cancer Link Nurses meet each month and also have online training
  - CanMAP: a web based tool that allows for communication and multidisciplinary meetings in real time and in a paperless manner
  - Have trained clinician nurses with laptops to provide videoconferences for patients to their family at home:
    - this developed from an incident where a mother went home to find her child was frightened by what she looked like. So now children can see and have contact with the parent throughout treatment
    - reports from families are that they did not realise how it was important to visually see their family
  - A quote from a patient sums up what a Cancer Link Nurse means to patients: “What we all need is someone with plain-speaking common sense, who we know to be a nurse, who we can call and who provides information, liaison, relief of tension, and peace of mind that helps us eat and sleep. All of this is engendered in the Cancer Link Nurse”.

Advanced Technology In Radiotherapy: How Can We Ensure Maximum Benefits For Patients?

Associate Professor Tomas Kron
Peter MacCallum Cancer Centre

This presentation provided a brief discussion of IMRT and IGRT as examples for advanced technology in radiotherapy settings and an exploration of how these technologies can add to the quality of radiotherapy delivery. A summary of steps that need to be considered to ensure that the technology is introduced efficiently and safely was discussed by Associate Professor Kron.

- Intensity Modulated Radiation Therapy (IMRT) technology allows delivery of radiation to a tumour with more precision and accuracy, while giving the oncologist more opportunity to spare the surrounding organs from radiation.

- Therapy is not just about treating the target, it is about sparing the known structures. IMRT allows oncologists to treat concave and convex surfaces, which allows sparing organs that do not need treatment. This is enhanced with dose modulation so more radiation is given to the affected part of the target and less to the unaffected part. The advancements of image-guided radiation therapy (IGRT) help clinicians verify they’re putting the radiation in the right spot.

- Benefits to patients:
  - Better normal tissue sparing with less toxicity
  - Can possibly give a higher overall dose because it is more focused on the target, which leads to a higher chance of the patient being cured
  - Can potentially give a higher dose in a fraction, which would make the treatment more intense, therefore needing fewer fractions and reducing hospital stay and resource requirements
  - There is clinical evidence for the use of IMRT. With a review showing evidence of reduced toxicity for various tumour sites.

- Drawback of using IMRT:
  - There is more complexity and risk as you can give higher doses and therefore have to ensure the dose is put in the right spot
  - Need for new (and more accurate) equipment with IMRT
  - More need for Q&A
  - Longer treatment times.

- It is possible to generate images now (e.g. PET, PET CT and PET MRI) with a lot more information than previously possible. What we can do with these higher quality images includes:
  - Help detect systematic errors from planning to treatment
  - Position the patient, target, or organ at risk
  - Detect changes in patient or tumour size
  - Modify the treatment plan or choose an appropriate plan. Using IGRT we can modify our treatment approach i.e. adaptive radiotherapy.
• Patient specificity: what is good for one patient may not be good for another. We need to ask ourselves whether it is ethical to use this new technology without clinical trials.

• Quality assurance is important and we may want to know if it is safe, feasible and widely applicable as well as resource effectiveness when conducting clinical trials.

• There are more hidden problems with IMRT that can be difficult to communicate with patients. Smaller beams that have to be on for much longer, which could potentially lead to more leakage.

• When introducing a new technology, manufacturers will tell us it is needed but we need to ask ourselves if it actually is.

• Learning about the technologies from others through workshops and seminars is important.

• Procedures and protocols should be followed and the results of the new technology to maintain quality evaluated.

• An example is from a Belgium clinic where they found once they introduced image guidance the outcomes surprisingly got worse. When they improved the quality of their image guidance the clinic reduced their error margins by half.

• When using new technology it is best to proceed with caution.

• Cancer isn’t one disease and new molecular classifications could change the face of individualised treatments.

Novel Ways To Enhance Rural Patients Access To Cancer Services

Dr Sean Brennan
Senior Radiation Oncologist, Townsville Cancer Centre, Queensland Health

Dr Brennan discussed the following regarding access to cancer services for rural patients:

• Care of diverse rural populations with low health care worker numbers and long distances to access specialist health care are not just Australian issues. There are a lot of data from other countries such as Canada and the US, which clinicians can use to optimise care in rural areas.

• There are three typical rural models of care for oncology:
  • Oncologists travel to rural centres for consultations and follow up. Patients need to travel to regional centres for treatment
  • Oncologists travel to rural centres where more is done locally. Consultations, limited treatments that are relatively easy to safely administer and follow up are done there
  • Patients travel to regional centres.

• One alternative is tele-care. There are a number of benefits to this:
  • Patient centred since the consultation comes to the patient who gets a multi-disciplinary team interaction
  • Access to allied health
  • Involvement of primary health care physicians.
• An example of this is the model found in Mt Isa:
  • Treating doctor stay in regional centre and dial in to Mt Isa. Infrastructure has been created now where chemotherapy is undertaken in Mt Isa
  • The patient is seen by a Telelink in Townsville and in many circumstances never leaves Mt Isa for the entire duration of their treatment
  • This is done in medical oncology and can be done with radiation oncology as well, although it is dependent on regional centre technology.

• Radiation oncology model has a Telelink or face-to-face communication depending on stage:
  • Initial consultation – Telelink
  • Subsequent consultation – Telelink
  • Planning and treatment – Townsville
  • Post treatment follow up – Telelink / telephone
  • Follow-up – Telelink / Townsville.

• Reasons why patients like having consultations at home:
  • Patient convenience
  • Cost saving
  • Time saving
  • Travel saving
  • Reduced family disruption - a lot of patients would otherwise travel two days for a consultation that lasts less than 10 minutes.

• Other benefits include:
  • Greater involvement of primary physician
  • Telelink provides urgent medical advice and supervision which can see an 80% reduction in the referral rates of patients requiring emergency information once introduced
  • It accommodates indigenous community needs better as Aboriginal and Torres Strait Islander patients have on average four family members accompany them, which would have been impossible if they’d had to travel
  • They found that no patients reported difficulties with hearing or seeing the Telelink. Increasing volume or zooming on screen made any sight or hearing impairments easy to overcome.

• Overwhelmingly patients agreed with the following statements in a survey:
  • I felt my privacy and confidentiality were respected
  • I could ask questions and seek clarification openly and easily with my oncologist
  • I found it easy to establish rapport with my oncologist over Telelink
  • I felt my diagnosis and treatment options could be adequately explained to me by my doctor
  • I felt it reassuring to have a nurse or local doctor with me for my consultation.

• Patients reported that travel and cost were the most important advantages of Telelink consultations.

• When asked if the Telelink should be abandoned not one patient supported this. A significant proportion just wanted to use only the Telelink.

• An audit of rural clinician satisfaction found that 100% of rural clinicians supported Telelink. Rural doctors didn’t see the inability of specialists to perform physical examination as a concern.
• Factors that should be considered when implementing a similar infrastructure:
  • Decide on the relevance – Because of the large distance in North Queensland for them it is extremely relevant, but it may not be relevant to you
  • Decide on the model of care
  • How best to integrate consultations
  • Serviceability agreements
  • Medico-legal concerns – Need accurate, reliable appropriate documentation
  • Ensure the equipment and technology is appropriate and simple to use
  • Provide training in use of the technology
  • Specific communication skills are important, so there may be a role for a little bit of coaching with clinicians who don’t have the best communication skills.

• Telelink is not the answer to everything, but it is a valuable complementary service for rural patient care and is fully applicable to specialist oncology and can be extended to other specialities. It is widely accepted by both patients and clinicians in Queensland.

An MDT Toolkit - What’s In The Bag?

Ms Shoni Colquist
Manager, Queensland Cancer Control Analysis Team (QCCAT), Queensland Health

The Queensland Cancer Control Safety & Quality Partnership (the Partnership) was established in 2005 for the purpose of monitoring and evaluating health services. Several areas were identified as being crucial to the success of the Partnership, specifically: utilising existing electronic sources of data where possible; improving data collection and coordination of cancer data; combining activities with ‘best practice’ multidisciplinary care; and engaging clinicians and administrators in cancer safety and quality issues by providing a mechanism for analysis, reporting and feedback of cancer data. The QLD Oncology On-Line application is a suite of web-based tools developed in collaboration with Queensland clinicians in response to the identified clinician need. The following key points regarding the MDT toolkit were covered in Ms Colquist’s presentation.

• There is variation in cancer outcomes across Queensland depending on whether you live in urban or rural Queensland and the treatment practices used. Cancer stage is a key component in understanding variation.

• The Queensland Cancer Control Safety & Quality Partnership (the Partnership) was established in 2005 for the purpose of monitoring and evaluating health services. The purpose of the partnership is to:
  • Facilitate participation of clinicians and administrators in statewide collection, coordination, analysis, reporting and feedback of cancer data; and negotiate development and uptake of strategies to address safety and quality gaps.

• Five areas of focus were identified as being crucial to the success of the Quality Assurance Committee
  • The first was to utilise existing electronic sources of data where possible. The organisation is rich in data, although much of it is ‘locked up’ in silos, in disparate systems, which do not ‘talk’ to each other. So it can be disconnected from clinicians, and often inaccessible
    • the challenge was being able to track a patient through the system
  • The second area of focus was in response to the clinician need for cancer staging information. They heard time and again that to make sense of the unexplained variation in outcomes cancer stage was a key component
    • they built the Queensland Oncology On-line web based system to integrate existing “data silos” and make available ‘just in time’ clinical information for multidisciplinary case conferencing, service improvement, monitoring safety and quality, and research

19.
It soon became apparent that there was a need for a collection of ‘missing’ clinical data, the data not contained in the existing electronic sources such as important prognostic factors – and a web application was developed to meet this need

- this statewide clinical registry aims to link patient information from multiple systems and facilitates the sharing of information between clinicians and facilities, producing a single patient summary view across the state
- It had been demonstrated in a statewide study conducted by the QAC that patients who were reviewed by a multidisciplinary team (19% at that time) were more likely to receive a greater range of treatment options and have a documented cancer stage than patients who were not reviewed by a multidisciplinary team. They combined these activities with ‘best practice’ multidisciplinary care
  - this allowed online scheduling for MDT meetings
- The fifth area of focus was to engage clinicians and administrators in cancer safety and quality issues by providing a mechanism for analysis, reporting and feedback of cancer data
  - examining trends and variations allows you to know where you stand

**Plenary Session: Managing & Linking Cancer Care**

**Building Roads To Quality**

**Mr Leigh Smith**
Chief Radiation Therapist, William Buckland Radiotherapy Centre, The Alfred Hospital

**Ms Jo Smylie**
Radiotherapy Manager, William Buckland Radiotherapy Gippsland

Alfred Health provides a radiation oncology service at Traralgon in Gippsland in partnership with Latrobe Regional Hospital. Two organisations, change, distance and a range of other issues ensure that providing a quality service in a regional area of significant need is an ongoing challenge, but a challenge that ultimately benefits both organisations and the people they care for.

Ms Smylie and Mr Smith raised the following key points in their presentation:

- The William Buckland Radiotherapy Centre is a joint venture between two organisations, Latrobe Regional Hospital (LRH) & Alfred Health (AH). They use a hub and spoke model.
- The three major causes of delays in patient treatment are related to machines, staff and public holidays.
- Strategies for avoiding delays:
  - Linacs break down and also need to be serviced regularly. Have the first line maintenance done by staff. This can eliminate some minor delays
  - Plan for a second linear accelerator as soon as possible. Having two machines allows patients to be treated on a service day or during a breakdown. The Centre retrofitted the existing linac with Volumetric Modulated Arc Therapy (VMAT), On-board Imaging (OBI) and Conebeam CT (CHCT). This is the same technology of their second linear accelerator so they have two of the same machine available
  - The result is better planning for public holidays
• Workforce strategies:
  • Having a hub and spoke model helps with workforce issues. The hub can provide staffing support through patches of increased demand or on a long-term basis as required. This may at times require the hub’s staffing to be a little higher than normal to enable the leeway to send staff to the ‘spoke’ site.
  • They do experience gaps at times and this sometimes necessitates sending down more senior staff to provide experienced support and free up local senior staff to get on with development work.
  • The temptation is to manage workload rather than workforce, (i.e. extend waiting list times, triage patients and send some patients to the city). However in terms of patient care it is better to manage workforce rather than the work load and hence support staff to enable extension of operating hours to keep waiting times within acceptable bounds. Consideration is needed to avoid staff burn out due to long hours.
  • Give recruitment & retention incentives.
  • Invest in staff development and in junior staff.
  • Need to have the technology to attract young staff and show the centre has the potential to grow. Need to ensure spoke keeps up with hub.
  • Develop research capacity and capability.
  • Target local students and interns. Every intern they have taken on has stayed with them.

• Planning for the future is critical if the service is to expand and grow:
  • When planning the location of their centre they took into account the need for expansion of the service some years down the track. They have ensured they won’t be land locked.
  • When you are dealing with two organisations it is vital to build understanding and cooperation between them. Have to re-build these relationships when regime changes, as they inevitably will.
  • It is important that where technical advances are made the two sites move in sync with those advancements so that quality is equitable at both the hub and spoke.
  • Consider IT and linkage issues such as firewalls, unstable connections, and different hospital systems.

• Try to minimise anxiety for patients. They need support, accommodation, transport:
  • Every one of their patients sees a social worker and every week the team meet to discuss patients that are on treatment.
  • There are long distances for many patients to travel even to the regional centre so there’s a need for local and affordable accommodation. Consider deals with local motels and caravan parks and build accommodation near the hospital for patients.
  • In rural areas patients may struggle due to a lack of community transport, thus having to rely on friends or family. Develop volunteer transport services for patients living locally.

• Key Messages:
  • Hub and spoke model important in ensuring quality and viability.
  • Planning for the future is vital.
  • Two linear accelerators are better than one.
  • Delays and interruptions can be managed with planning.
  • Technical quality of care should be equitable.
  • Supporting infrastructure must be considered.
  • Can always find a way around obstacles by looking at alternatives and negotiating.
Experiences Of A Regional Radiation Oncology Provider In Queensland

Associate Professor Michael Poulsen
Director Radiation Oncology, Mater Centre Queensland

This talk covered a private sector model of care based in Toowoomba and Cairns as well as factors affecting the delivery of high quality radiation oncology services in regional areas including; being a provider for all patients in the region, both public and private; ensuring sound communication between stakeholders; minimising leakage of referral to maximise facility utilisation; and developing a brand name that is associated with quality radiation oncology services to attract and retain staff.

The major points covered in Associate Professor Poulsen's presentation follow:

• What should a regional cancer centre offer:
  • Integrated cancer care
    • between disciplines (radiation and medical oncology for instance)
    • across the public and private sector
  • Interaction with the community
  • Multidisciplinary care
  • Quality of service delivery
  • Staff development and education
  • Research
  • Access to specialised services.

• Benefits for the community:
  • Local treatment for patients
    • don’t need to travel anywhere near as much
    • parking not as much of an issue
  • Less social and financial impact
  • Employment opportunities
  • Reduced carbon footprint.

• Challenges:
  • Legal agreements are complicated. Be very patient with it and have significant money for the lawyers.

• Communication processes and moving information amongst the key players:
  • Good communication is critical to the smooth, safe and efficient running of the department. Both the Toowoomba and Cairns practice run paperless radiation oncology records that are networked via a 10MB/sec fibre optic link. This allows transfer of data from one end of the state to the other. It also allows treatment plans to be moved from one centre to the other depending on demand
  • Developing workable partnerships is really important
    • the Toowoomba service had St Andrews assisting with managing pay and shared senior nursing roles
  • Capturing the market and preventing leakage
    • the financial success of a radiation oncology practice depends on sufficient numbers of patients using the treatment machine. As the cost of machines and staff are fixed, the profitability of the business depends on the machines being filled. There is a critical tipping point between financial loss and making a profit. The majority of regional centres in Australia with two linear accelerators will be limited by the population numbers to about a machine and a half of workload. Because the outgoings in running a linear accelerator are fixed (lease costs, service contracts and staff), this limits the financial viability of many regional centres in the private sector
• Ensure you:
  • Market - It becomes increasingly important to capture the full caseload in the region. Marketing can help you do this
  • Analyse referral base for gaps
  • Minimise leakage.

• Developing a brand name is really important. It is how you define your organisation and how others outside of your origination perceive you.

• There is a risk of professional isolation when working in a regional cancer centre. Consequently you have to go out of your way to promote ongoing professional development
  • Encourage staff to extend themselves by giving a presentation or preparing a research protocol. This may challenge staff but in the long term creates much more in the way of worker engagement and job satisfaction.

• Radiation oncology relies on a comprehensive medical infrastructure and this is not always available in regional centres. For instance the public hospital in Cairns has a fly in, fly out radiologist service.

• Research is not only beneficial for the staff, but is also actively sought after by patients. Research will provide extra challenges for staff, which results in improved worker wellbeing as well as improving organisational culture. Patients appreciate having access to the latest research protocols that would not normally be available to them.

• Strengths of the private sector:
  • Less bureaucracy - Decisions about the purchase of equipment can be made in a fraction of the time as there is less red tape. In addition, the timelines for commissioning of equipment is less
  • Ability to balance output & input. In the private sector output and input are linked so that is has the ability to grow should there be an increase in demand. Public establishments have a fixed budget, which is often difficult to increase should there be an increase in the workload
  • Ability to offer competitive packages for staff
  • Flexibility in forward planning. This enables new technologies including IMRT and RapidArc to be embraced making the service more attractive to staff
  • Efficiency.

• There is not a single model of care that is best for all regional centres:
  • In Toowoomba where there is a strong private sector with 60% of patients having private health insurance, it was appropriate for the regional facility to be located in a private hospital
  • In Cairns where there is a lower level of private health insurance and higher proportion of lower socioeconomic patients, all patients are treated for the Medicare rebate and the state government provides an infrastructure co-payment.

• A successful cancer care unit depends on the development and nurturing of many key partnerships in both private and public hospitals:
  • A local philanthropist in Toowoomba provided scholarships for two local radiation therapy students to complete their professional development year in Toowoomba
  • Local contributions in Cairns provide a patient shuttle to transfer patients from the oncology building to the main part of the hospital
  • The Cancer Council has been involved in the development of accommodation for patients who live outside of Toowoomba to assist them during the time they are receiving radiation treatment.
Key messages:
• Private providers can provide a regional radiotherapy service, which is viable
• Multidisciplinary care is deliverable for common cancers
• Infrastructure limitations are a challenge
• Legal agreements are complex and expensive
• Good communication within and outside the organisation is essential
• Minimise leakage of referrals
• Need to create a brand name to attract and retain staff
• Embrace research and staff training
• Learn from other industries (networking, centralisation of payroll, central audit, shared education).

Cancer Survivorship - Quality Care From & Beyond The Oncology Setting

Ms Cathie Piggot
A/g Project Manager, Australian Cancer Survivorship Centre, Peter MacCallum Cancer Centre

The increasing numbers of cancer survivors and the chronic nature of the disease suggest the need to move away from a ‘specialist only service’ to the provision of survivorship care as a community responsibility. The Australian Cancer Survivorship Centre is engaging with people affected by cancer and clinicians involved in cancer care to develop tools and resources and to promote the principles of survivorship. The challenges for all health clinicians remain in implementing services that will optimise quality of life for survivors of cancer.

Ms Piggot raised the following key points in her presentation on cancer survivorship:

• 3.2% of the Australian population are living with cancer or its aftermath.

• Rather than asking when survivorship begins it is better to consider where there are gaps in cancer experience and where we may be able to make changes so that the outcomes for people affected by cancer are improved.

• The Australian Cancer Survivorship Centre (ACSC) is a virtual centre with a project team working with clinical providers (medical, nursing, allied health for instance) throughout Victoria to facilitate improved care for survivors.

• The key issues regarding the impact of diagnosis of cancer and finishing treatment for a patient are:
  • Fear of recurrence
  • Ongoing treatment side effects (e.g. fatigue)
  • Late and long-term effects of treatment
  • Psychological distress
  • Relationship issues
  • Vocational and employment issues
  • Financial and practical issues.

• Where we should focus survivorship care treatments include:
  • Supportive care interventions, rehabilitation and self-management strategies tailored to need
  • Promotion of healthy behaviours so people can live as optimal a life as possible
  • Surveillance and early detection for cancer recurrence, new cancers or late effects
  • Coordination between specialists and primary care providers to maximise outcomes for people affected by cancer.
There are some tools available to assist patients and clinicians to have a discussion earlier so patient needs could be addressed sooner:

- One of these tools is a supportive care needs screening tool, which is completed by the patient and then a focused discussion is held to identify the needs and prioritise any interventions required
  - a supportive care screening tool is only effective if the clinician is skilled in communication. Supportive Cancer Care Victoria have developed short five minute video learning resources on their website specifically to assist clinicians when discussing supportive care needs

- Another tool is the Survivorship Care Plan, which summarises information about the diagnosis, treatment, follow-up care, symptoms to watch for, and steps you can take to stay healthy.

- To assist in identifying effective survivorship models of care in Victoria there has been a recent call for expressions of interest for a maximum of five pilot projects for $300,000 over two years per project. Guidelines for the pilot projects are:
  - Follow-up care is tailored to meet individual needs and considers diverse population groups
  - Care will be delivered in the community
  - The project will have strong engagement with consumers
  - There is linkage of survivors to existing services and ‘packages of care’
  - Specialist cancer clinicians, primary care providers, nursing and allied health providers are engaged in a formalised transition pathway, from the acute to community care settings, and vice versa
  - Self-management strategies for cancer survivors and their families/carers and peer support opportunities are included as a component of follow-up care.

- In supportive care you need to take a systematic approach. There are tools available you can use to assess the patient’s needs and plan for the future.

Concurrent Session A: Capacity & Innovation

Building Innovation & Expertise In A Remote Location: The Allan Walker Experience

Associate Professor Michael Penniment
Deputy Director of Radiation Oncology, Royal Adelaide Hospital & Visiting Radiation Oncologist, The Allan Walker Cancer Care Centre

The steps taken at the Allan Walker Cancer Care Centre to ensure patients are given access to treatment equal to larger units in other major cities were discussed, along with a short history of cancer treatment delivery prior to the centre opening. Following are the major issues covered in Associate Professor Penniment’s presentation.

- Allan Walker Cancer Care Centre opened in March 2010 for clinical services.

- In the service planning stage it is important to:
  - Consult the community where you are providing a cancer centre
  - Have no prior assumptions
  - Consider independent consultants to help validate where money is spent
• Include existing service providers to the region
• Focus on what patients need, not what doctors want
• Set up a critical path analyses
• They had 15 months from announcement to opening. Their critical path analysis laid out what had to happen along a closely managed timeline
• Set up operations model
• Highlight gaps early
  • the complexity of commissioning machines, getting staff, working out patient needs and distribution is very complex. The sooner you highlight these issues the better.

• Get staff, multi-disciplinary team, and technology right before you start operations. They were very clear in what they wanted:
  • An engineer and IT on the ground, as it is a four hour plane flight from Adelaide
  • The same planning system as Royal Adelaide as the majority of the doctors that are involved external to the centre rotate from the Royal Adelaide Hospital
  • MOSAIQ so they could be paperless and have full remote access
  • To be giving state of the art treatment right away and to attract staff who had the same opportunities as in other major centres
  • Two linear accelerators with scheduling to cover breakdown and maintenance
  • A sound strategy with what is not negotiable laid out explicitly (e.g. protocols)
  • To create common quality assurance and pathways as they knew staff would be rotating across Darwin and Adelaide.

• Key messages:
  • Define your core needs, preferably with independent review
  • Plan with the people you are going to have to work with (e.g. health department, doctors, independent experts)
  • Fight to get needs of patients and staff met before operations start
  • Embrace any opportunity to audit - trials, independent expert review, and rotation of staff. All of these things are ways to benchmark services and practices and should be embraced as they help detect mistakes early and build credibility.

Building Quality Learning & Professional Development Communities

Dr Shane Dempsey
Senior Lecturer, School of Health Sciences, Faculty of Health, The University of Newcastle

This presentation discussed the use of learning communities as a means to benchmark, develop staff education and support, and implement the appropriate use of technology in the modern cancer service. Learning communities shift the focus of learning (and knowledge construction and interpretation) from the individual learner to learning as part of a socially constructed community whose members can come from organisations who operate at large distances from each other. The presentation demonstrated the use of online tools that can be used to provide a platform for online learning communities to develop. Dr Dempsey covered the following in his presentation.

• The Radiation Oncology Practice Standards state employers now have an obligation to provide support for staff to continue their learning.

• Learning has changed. Industry requires a team approach to knowledge and skills owned by a team, which make the industry outcomes robust against workplace changes
  • People enter and leave the team always. Avoid at all costs a workplace environment where loss of a staff member results in a large loss of knowledge and a detriment to the team.
Many believe the most desirable attributes of staff are those related to social competence (e.g., team work, communication and leadership). Allow for social development and competence to take place in education. One way to do that is through learning communities.

Benefits of a learning community:
- Location of an individual is not a factor
- Learn from each other
- Can easily borrow from and make use of experts.

An example is the Australian Radiation Therapy (RT) clinical universities group, which through funding provided by DOHA has:
- Provided for student placements in regional centres
- Developed RT simulation labs at universities
- Developed a national RT student evaluation tool
- Provided five virtual linacs in Australian RT Universities
- Provided Virtual linac Community of Practice.

To ensure quality across regional Australia we need to adapt to E-Learning. Integrate email, Facebook and Twitter.

Elluminate (Blackboard Collaborate) is web based software that allows for:
- A web conferencing teaching and learning system
- Multi-point audio
- Interactive whiteboard
- Application and desktop sharing
- Rich media
- Breakout rooms
- Session recording.

In 2012 radiation oncologists should develop an RT community of learning colloquium. A community based blackboard site that:
- Allows for discussion forums
- Allows for webinars
- Gives resources for what is new
- Gives resources for what is being done
- Gives resources of best practice at our most innovative centres
- Allows experts to be available for advice and opinion
- Interfaces with Facebook & Twitter.

Key messages:
- Learning communities allow for exchange of information across boundaries
- Learning communities allow for social constructivist learning where we can learn and debate
- Learning communities are socially and professionally engaging and fun
- Learning communities challenge the authority and mastership of who owns the knowledge
- Learning communities will help build quality clinical cancer services in regional Australia
- Learning communities allow for people who feel isolated to feel connected.
Changing Models Of Care To Meet Future Cancer Workforce Challenges

Associate Professor Rosemary Knight
Principal Adviser, Population Health Division, Department of Health and Ageing

An overview of some of the key challenges facing cancer services with a focus on innovative models of care to address workforce shortages and rising cancer rates with increasing consumer expectations in a tight fiscal environment. The following are the major issues raised by Associate Professor Knight.

• There is excellent life expectancy in Australia. However, by the time we reach 85 one in two men and one in three women are likely to experience a form of cancer.

• We have to keep the focus on prevention. Australia is doing extremely well with reducing tobacco use (down to approximately 15%), however obesity is on the rise.

• The increasing complexity of cancer treatment is a continuing challenge at a government and financial level. Drugs and techniques are advancing so fast scientifically that we don’t often have enough time to evaluate them yet they put an enormous cost on the health care system.

• The increase of co morbidities means a need for a wider range of multidisciplinary teams.

• Survivorship and follow up care is something we need to focus on and has huge workforce implications.

• We do white middle-class medicine well in Australia, but we do not do so well with indigenous and migrant groups
  • Large influxes of migrant groups with long-term tobacco exposure. This will change the profile of cancer in Australia in the future.

• We have excellent cancer registries that tell us a great deal about incidence and mortality. However we don’t have a comprehensive way of recording, auditing and monitoring what happens from diagnosis to survival or death at a national level.

• There are challenges in workforce with recruitment and retention and the long lead-time to produce new clinicians.

• The absence of agreed definition across Australia of what constitutes a cancer team is an issue. From the patient’s perspective this is about the journey and an integrated journey is what patients want.

• There is no good definition of what routine cancer care is and current arrangements don’t take account of policy changes and emerging techniques very well.

• There is a debate about the workforce numbers required to provide a safe, effective cancer treatment. Most people say there is a shortage, but perhaps the existing workforce is not being used efficiently.

• Three ways to improve our workforce:
  • Grow your own
  • Import from overseas
  • Role redesign.

• Need to consider how increasing cancer workforce by role substitution impacts the rest of the healthcare system.
• Health Workforce Australia was recently setup. Its first major initiative is to:
  • Profile the current cancer workforce
  • Identify mutual requirements
  • Develop innovative-shared models of care to address work force pressures.

• Patients often complain about the lack of coordinated care:
  • The cancer journey is as important to the patient and carers as is the outcome
  • Also important are the out of pocket costs. Advocates complain on a regular basis about the large cost they face when they develop cancer.

• In role redesign think less about individuals and think more about the capability of the cancer service and what the regional centre can do. Some regional centres do not have the caseload, the experienced clinicians and capability to do everything and therefore is best integrated with another cancer service (e.g. hub and spoke model, network model) to provide best practice care.

Concurrent Session B: Patient Centred & Safe Care

‘Mind The Gap’: Therapist & Patient - Journeying Together

Mr David Collier
Chief Executive, Australian Institute of Radiography

This presentation focussed on a patient’s view of a treatment journey, highlighting strengths and weaknesses from that experience. In early 2008 the patient, with a Grade III-IV anaplastic ependymoma embarked on radiation therapy, receiving over 33 treatments. The patient suffered damage to the pituitary arising from the radiotherapy, which has led to the onset of panhypopituitarism.

The following key points were discussed in Mr Collier’s presentation:

• Emphasis on patient care, involvement and support of the patient, particularly in relation to the long-term effects and treatment.

• Focus on the holistic care of patients – the fourth dimension. How treatment and the time after treatment affects patients as well as their families.

• The observations of this case highlight that surviving and treating cancer is a whole family journey.

• The role of radiation therapists in supporting families is important.

• Key suggestions in the support of patients and their families:
  • The development of a clinical role of the radiation therapist telephone counsellor – “follow-on” specialist practitioner authorised to call families at specific intervals after treatment has finished to provide information, support and reassurance
  • Provide a guideline manual for parents, not about the treatment, but about what follows treatment. This manual would include case studies and examples
  • Strengthen the value of diversionary treatment proposition through providing longer term tools for families
  • Life goes on after treatment. This is called the fourth dimension of care and is a whole family journey.
DAY TWO

Verification Of Practice: Maximum Safety & Minimum Risk For Patients

Dr Ivan Williams
Director, Australian Clinical Dosimetry Service (ACDS)

Your centre is built, it’s operating, the ribbon is cut and the polish is beginning to fade - how do you know you are delivering what you think you are? This talk discussed the role of the ACDS as the independent auditor assisting facilities to avoid incidents. Dr Williams covered the following.

- The number of patients and fields treated with therapeutic radiotherapy within Australia is increasing.
- Internal quality assurance and quality control programs may already be in place, but accidents can occur and mistakes can be made.
- There is international evidence that independent, external dosimetric verification of practices improves the accuracy of treatment delivery
  - This highlights the need for external audits of radiotherapy practices, particularly before the use of new machines.
- In July 2010, the Australian Government funded a trial initiative to conduct such audits – the ACDS (Australian Clinical Dosimetry Service).
- This initiative will provide three levels of free audit service and will be developed over the next three years. Continuation of this initiative will be assessed and determined after this three-year trial period.
- This trial initiative will be a free trial service for the three years, but may incur a cost if it continues after the trial.
- There is an absolute need for independent dosimetric verification to ensure safety, particularly before a new machine is used clinically.

Incident Of Inadvertent Radiation Exposure In A Radiotherapy Bunker & Lessons For The Interlock Systems

Mrs Mary Aerts
Radiation Health Branch, Department of Health Western Australia

This presentation described an incident of inadvertent radiation exposure to a staff member who had entered a radiotherapy linac bunker. In this particular case the radiation exposure was trivial, but the event highlighted a potential design flaw in linac maze systems. The talk discussed the physical requirements and operational procedures, which need to be in place to prevent such radiation incidents.

The following key issues were discussed by Mrs Aerts in her presentation:

- Learning from ‘near misses’ is crucial in preventing re-occurrences of incidents in the future.
- One incident involving a cleaner in a linac maze highlights the importance of learning from these ‘near misses’.
- A number of factors contributed to this incident such as limited instruction to the relief cleaner and limited signage upon entry to maze.
- The cleaner’s radiation exposure was limited because she was not exposed to the primary beam and was only in the bunker for a short time.
This incident resulted in the review of procedure and facilities. Here are some possible solutions:

- Create a Beam-On interlock barrier. Have a stable door/gate or a virtual door such as laser detectors.
- Put a gate or virtual door at or close to the maze entry.
- Make the design such that no one can crawl under or step over it (whether physical or virtual) without tripping the interlock.
- Last man out button needed for gate as well as for virtual door.
- Location of last man out button is crucial. Make sure it is positioned so a person can view the whole bunker.
- Interlock clearance button outside virtual door (for exiting maze).

Summary of lessons learnt from the incident:

- Area must be signed/chained off during maintenance, servicing and quality assurance work.
- All staff with access to linac areas, including non-radiation workers, must be adequately instructed and supervised/escorted.
- Must view treatment room before resetting Beam-On clearance.
- Attention should be given to the location of Beam-On interlock barrier, last man out button and interlock clearance so the treatment room is viewed whenever the Beam-On clearance is reset.

- Be alert to spot potential safety situations (being proactive), which may lead to incidents, particularly when non-routine activities are involved.

**Plenary Session: Standards & Assessment Within A Quality Framework**

**Quality In Pathology: An Overview**

**Dr Michael Harrison**

Chief Executive Officer and Managing Partner, Sullivan Nicolaides Pathology

Australian pathology has a long history of quality assessment measures and accreditation. Accreditation and standards setting commenced in the 1980s with all Australian pathology laboratories becoming accredited in 1987. Specific standards used in the accreditation process are developed by a legislatively defined professional committee system and the accreditation process for medical testing is undertaken by a joint program of NATA and the Royal College of Pathologists of Australasia. International standards are also used in the process along with highly developed quality assurance programs and quality control measures used in laboratories. In addition, laboratories have quality systems which are also accredited. These processes have ensured the Australian people are serviced by pathology laboratories, both public and private, which provide services at a reliable and good standard.
Radiation Oncology now has the practice standards developed by the Tripartite Committee. What can be learned from other sectors about models for implementation and evaluation? Dr Harrison’s presentation highlighted the following:

- Pathology has had accreditation in Australia for approximately 26 years.
- Quality care is getting things right. The challenge is getting everyone to agree what right is.
- An optimist sees the opportunity in every difficulty. An accreditation process is a difficult process. Instead of focusing on the problems associated with bringing changes to the system, recognise problems with the existing system and how the changes will improve that system.
- Role of NATA & The Royal College of Pathologists (RCPA) in Pathology Accreditation:
  - They work with NATA, a not for profit organisation, that assesses organisations and accredits them
  - NATA provides secretariat, lead assessors, and infrastructure of the assessment process
  - RCPA provide professional advice and help recruit voluntary assessors and provide mechanisms for review of fellows if necessary.
- Prior to 1986 pathology accreditation was voluntary. Since then it has become a mandatory scheme linked through the Health Insurance Act to the payment of Medicare Benefits. A laboratory does not have to be accredited, but if a laboratory is not accredited then the pathology services provided are not eligible for Medicare benefits.
- Medicare Australia has a significant administrative role:
  - Reports are issued to Medicare Australia following each assessment activity
  - Laboratories are responsible for submitting assessment reports to Medicare to get accredited
  - Benefits cannot be paid until an assessment report is provided and Medicare accredits the organisation on the basis of this assessment.
  - Renewal requires successful reaccreditation.
- National Pathology Accreditation Advisory Council (NPACC) has a philosophy which is that it pitches standards and guidelines at an aspirational level. Elements in the guidelines ask laboratories to stretch themselves to the next level.

- If focuses on safety, quality, professionalism, medical and scientific excellence.
- There is a document hierarchy for NPAAC standards:
  - Tier 1, which is the general principles document, are set out in the Health Insurance Act
  - Tier 2 are standards and supervisory requirements for pathology laboratories
  - Tier 3 are requirements for good medical practice in all pathology laboratories
  - Tier 4 are specific requirements for certain types of individual laboratory
  - Tier 5 are supporting documents and endorsed third-party documents
  - Tier 6 are other documents of interest.
- Pathology accreditation process:
  - Assessments are at least once every three years. Some laboratories will get assessed more than once every three years if they have a poor history or if there are any major changes to technology and senior staff
For a full assessment there is a panel of people, which includes peer assessors. It is a one-day assessment process for each laboratory. At the end of this process there is an exit interview and an accreditation report is prepared. The reports are intended to be educative as well as advise on compliance.

The detailed accreditation report contains:
- Conditions that must be addressed for accreditation
- Minor conditions that must be addressed as a condition of accreditation
- Observations that are suggestions for improvement.

Any lab can respond at any point, either by compliance, correction or to argue the case.

The Australian pathology accreditation system has produced excellent outcomes at a reasonable cost.

Panel Discussion: What Determines Quality Health Care & How Can We Measure It?

Panel Members included:

**Dr Michael Harrison**
Chief Executive Officer and Managing Partner, Sullivan Nicolaides Pathology

**Associate Professor Rosemary Knight**
Principal Adviser, Population Health Division, Department of Health and Ageing

**Associate Professor Christopher Milross**
Chair of the Tripartite Committee; Dean of The Faculty of Radiation Oncology, RANZCR; Director of Radiation Oncology, Royal Prince Alfred Hospital

**Ms Sue Sinclair**
General Manager Service Delivery & Clinical Practice, Cancer Australia

**Professor Margaret Banks**
Senior Programs Adviser, Australian Commission on Safety and Quality in Health Care

The purpose of the panel discussion was to draw on the expertise of panel members and facilitate a broader consideration of what is already being done and what could be done to assure the quality of cancer services and in the context of the symposium, the quality of radiation oncology services. The following key points were raised during the panel discussion.

- Pathology standards have evolved over time from ‘shoulds’ to ‘musts’ and have become more restrictive. They do, however, create a level playing field.

- The quality standards and a system for measuring the extent to which people meet those standards is only one part of determining quality radiation oncology service (e.g. other examples or regimes include publishing departments clinical trial rates and indirectly by looking at staff turnover rates).

- If part of accreditation is having robust quality systems and fast responses then a requirement is being responsive to adverse events.
• Period of consultation of the options paper is to September 16, a quick turn around for such an important topic.

• Consultation about the options paper is intended be a two phase process:
  • First seek the general opinion of stakeholders
  • Once these come they will consider a number of different models and do analysis on the costs associated with each one.

• The total cost of accreditation should be commercially feasible.

• Quality healthcare should occur at the patient, provider and system level.

• Consider how the standards will be implemented. Will it be mandatory? If it isn’t people will not have a level playing field as the good centres will do it well and the bad centres may not follow suit.

• It is important to accrue participation in clinical trials for free to ensure you get a quality program.

• There are minimal standards, but they are not trivial.

• Need to see measurement at a patient level so the consumer’s experience can be understood.

• Develop guides in the national standards that include a patient participation standard with a requirement for consumer engagement as part of that.

Release Of “Longer Term Conformity Assessment Of Radiation Oncology Practice Standards” Option Paper (July 2011)

Mr Leigh Smith
Chief Radiation Therapist, William Buckland Radiotherapy Centre, The Alfred Hospital; Chair, RORIC Quality Working Group

Much has been achieved in radiation oncology in the almost ten years since the Baume Report. Along with the opening of the Australian Clinical Dosimetry Service (ACDS) this year, the publication of the Standards by the Tripartite Committee is a significant milestone in the development of a quality framework for radiation oncology. The Standards are an important guide to good practice and a valuable quality assurance and quality improvement tool particularly for those involved in establishing, staffing and operating new or expanded regional cancer centres.

Now that the Standards are published it is important to consider how the Standards might be implemented and measured in the long term. These considerations should recognise that many radiation oncology facilities already participate in accreditation, certification and quality improvement processes and it might be possible to incorporate the radiation oncology practice standards into an existing program, or to recognise such a program as part of any assessment of them.
An Options Paper outlining possible approaches to assessing conformity with the radiation oncology practice standards was released in this session for consultation. The paper has been prepared by the Radiation Oncology Reform Implementation Committee’s Quality Working Group which is hosting the Symposium. As outlined in the paper, there is a range of approaches to conformity assessment that vary in their level of prescription, governance and approach to assessment. Conformity assessment can be considered along a spectrum, from voluntary self-assessment overseen by the professional bodies, to formal or legislative compliance obligations with government or regulator oversight.

- Comments are sought on a self regulation or mandatory regulation model in regards to:
  - Governance
  - Assessment type
  - Participation.

- Different models come with heavy and light costs.

- The Options Paper is seeking comment and no model is set in stone. The options paper is available on the department’s website and it is important that people read it and give feedback.

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**Where To Go For Help Or More Information**

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