Statement of Capacity

Radiation Oncology – Orange

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Prepared for Orange City Council

By

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Background and Current Situation

“Oncology” is the study and treatment of cancer.

Modern cancer treatment is complex, delivered by multidisciplinary teams in a comprehensive cancer care setting. Medical oncology and radiation oncology (the most capital intensive component in cancer care) are central to this care. Patient support services and medical research are included in such services. This paper focuses on the provision in Orange of radiation oncology a new service for patients living in Central and Western NSW.

Orange Profile

Orange is a modern city that has grown from its rich mining past, in fact Orange was the home to Australia's first payable gold discovery at Ophir in 1851. Orange has a population of 38,000 people and with surrounding towns and villages, supports a population of 100,000 through its industrial, commercial and service resources.

Located just 3.5 hours west of Sydney and 3 hours north west of Canberra in Central NSW, Orange is a cultural city, blending historic buildings and streetscapes with cosmopolitan cafes, restaurants, theatres and galleries. Orange's strong diverse economy, excellent education and health facilities and broad range of community services provide an excellent base for residents and visitors alike.

Orange's industry base is significant and diverse, ranging from fruit growing, wine, agricultural research facilities, through to whitegoods manufacturing, mining, tourism, agricultural support and research facilities.

The region has consolidated its position as a nationally significant metallurgical mining centre with the development of Cadia and Ridgeway Gold and Copper mining projects. The cumulative economic impact of the operation of Cadia Hill and Ridgeway Gold Mines is estimated to be in the order of $426 - $453 million in annual regional output, $271- $286 million in annual value added and $40 - $47 million in annual household income. The Mines currently employ some 500 people.

An extensive range of medical specialists and health services are concentrated in Orange

(Orange City Council, November 2006, web site: www.orange.nsw.gov.au).

Orange Radiation Oncology Catchment Population

The catchment population for radiation oncology in Orange includes all of the Local Government Areas (LGAs) for the Greater Western Area Health Service (Appendix 1 – Total and Indigenous Population – Greater Western Area Health Service) with the exception of:

- Broken Hill
- Balranald
- Central Darling
- Unincorporated Far West and
- Wentworth

The above LGAs have not been included in the catchment population as their historical travel pathways for medical treatment are to Victoria or South Australia.

The population centres are clustered around Orange and Bathurst in the eastern part of GWAHS. Within 100 kilometres of Orange there is a population of approximately 153,200 and within 150 kilometres of Orange 313,200.

The following Figure 1 shows the Greater Western Area Health Service geographical region identifying major population centres.

FIGURE 1 – MAP OF GREATER WESTERN AREA HEALTH SERVICE

Deaths from Cancer

Cancer is the major cause of death in Australia and affects approximately 350,000 people a year. Cancers which most commonly cause death for males are lung, colorectal and prostate and for females breast, colorectal and lung (Department of Health and Ageing, 2002).

Current data on cancer and non-cancer deaths demonstrates that there are approximately 187 deaths from cancer per 100,000 population per year (Palliative Care Australia, 2003).

TABLE 1 – DEATH RATES FOR ORANGE RADIATION ONCOLOGY CATCHMENT AREA

Description	2001	2006	2011	Data source/Comment
Orange Radiation Oncology Catchment Population	260,667	272,913	274,274	⅄Census 2001 (Increase 2001-2006 – 12,300) See Appendix 1 - Total and Indigenous population for GWAHS (NB: Less above identified LGAS in Orange Radiation Oncology Catchment Population)
Deaths from cancer per annum	487	510	513	Calculated using 2003 death rates (Palliative Care Australia, 2003)

⅄ Australian Bureau of Statistics Census data

There is a growing body of evidence showing that the 670,000+ Australians who live outside state capital cities are at risk of significantly poorer survival rates following a cancer diagnosis than people with similar diagnoses in the major metropolitan centres. Furthermore, the limited evidence on cancer in Indigenous people in non-metropolitan areas also indicates significantly poorer treatment outcomes than those in the mainstream (Clinical Oncological Society of Australia, 2006).

People living in remote NSW diagnosed with cancer are about 35% more likely to die as a result of their cancer over the ensuing 5 years than are people living in areas with the greatest access to services (Jong, K et al, 2004, cited in Greater Western Area Health Service – Oncology and Palliative Care Clinical Services Plan).

People living in GWAHS have the highest age adjusted death rates in NSW; the main reasons for premature death are neoplasms (35%), diseases of the circulatory system (28%), injury and poisoning (11.3%) and diseases of the respiratory system (8.7%), (Greater Western Area Health Service, December 2005).

Of the 35% of neoplasms in GWAHS 32% of deaths were from the former Macquarie Area Health Service (Appendix 2 – Map of the former Macquarie Area Health Service) and 54% were from the former Mid Western Area Health Service [Appendix 3 – Map of the former Mid Western Area Health Service] (Greater Western Area Health Service, December 2005).

New Cancer Cases

The number of people affected by cancer is increasing in both men and women as our population ages and grows. The Cancer Institute NSW estimates that the lifetime risk of cancer is now one in two men and one in three women (Cancer Institute NSW, May 2005).

As people grow older they are at greater risk of developing cancer. GWAHS has an identified ageing population, ie, the population aged 65 years and over will almost double from 2001 to 2011. By 2011 one quarter of the GWAHS population will be aged 65 years and over, therefore the number of cancer cases are expected to increase and this will affect the demand for services. (Greater Western Area Health Service – Oncology and Palliative Care Clinical Services Plan, p 9.)

The cancer registry currently captures new cancers diagnosed, but it does not capture recurrence of cancers nor the number of people currently living with cancer. This results in an underestimation of cancer cases and adds complexity to planning for new services. The following table represents GWAHS total population, projected new cancers, and GWAHS adjusted population for the Orange radiation oncology catchment area.

TABLE 2 – GWAHS POPULATION AND PROJECTED NEW CANCERS

No.	Description	2001	2006	2011	Data source/Comment
1	GWAHS Population	293,771	306,101	306,740	⅄Census 2001 See appendix 1 - Total and Indigenous population for GWAHS
2	Projected New Cancer Diagnosis for the total GWAHS population	1,478	1,714	1,931	✦Adjusted rate (local age specific rates / divided by the state age specific rates)
3	% of total GWAHS population	0.5%	0.5%	0.6%	Calculated from 1 and 2
4	Orange Radiation Oncology Catchment Population	260,667	272,913	274,274	⅄Census 2001 See appendix 1 - Total and Indigenous population for GWAHS GWAHS (NB: Less identified LGAS that flow to other area health services)
5	Projected new cancers for the Orange radiation oncology catchment population	1,303	1,364	1,645	Calculated from 3

⅄ Australian Bureau of Statistics Census data

✦ Cancer Institute NSW, May 2005 - Cancer in NSW Incidence and Mortality 2003 – Projections Table p.4

It is projected that there will be 1,645 new cancers detected in 2011 within the Orange radiation oncology catchment population.

The Cancer Institute NSW projection data (Cancer Institute NSW, May 2005) identifies that GWAHS will detect 5% of the new cancer within NSW for 2001 – 2011.

Of these new cancers it is expected 59% will be diagnosed in people residing in the former Mid Western Area Health Service (Appendix 3 – Map of former Mid Western Area Health Service) and 34% in the former Macquarie Area Health Service (Appendix 2 – Map of former Macquarie Area Health Service).

Demand for Radiation Oncology in Orange

Treatment of cancer involves a complex array of services provided by a range of specialists and allied health professionals. Once an abnormality is detected, a patient is usually referred to one or more specialists for diagnosis and treatment. Treatment may be in the form of surgery, radiation therapy, chemotherapy, hormonal therapy or a combination of these modalities (Clinical Oncological Society of Australia, 2006).

One objective of a radiotherapy system should be that all people with cancer have equal access to available treatment…' (Department of Health and Ageing, 2002, p.18).

However, in Australia "Over 10,000 people with cancer who could benefit from treatment did not receive radiotherapy in 2000. If current infrastructure trends continue, this figure may increase to 20,000 by 2005.

The health outcomes of these people are compromised as a result of insufficient radiation oncology resources.
Premature death, inadequate pain and symptom control, and reduced quality of life are the result of inadequate resources for radiation oncology." (Steering Committee for the National Radiation Oncology Strategic Plan, August 2001).

An estimated 40% of people with cancer can expect a normal life expectancy or cure following treatment and up to18% of these cures can be attributed to radiotherapy. One Australian study indicated that radiotherapy improved survival by 16%. This implies that for the year 2000, of an estimated 10,000 people who did not receive radiotherapy when indicated approximately 1,600 died prematurely. The remainder did not receive the benefit of radiotherapy treatment, to control pain and/or other symptoms, or prolong life. The years of life lost prematurely to cancer from lack of radiotherapy in 2000 alone was 12,320 or 7.7 years per person (Steering Committee for the National Radiation Oncology Strategic Plan, August 2001, p. 54).

A planning model for radiation oncology services which adequately deals with the need to expand services must be based on the number of people with cancer who need treatment. That is, it is based on the population, the cancer incidence amongst that population and proportion of those people who require radiation therapy. Internationally the benchmark suggests this is 50% to 55% of all people newly diagnosed with cancer (Steering Committee for the National Radiation Oncology Strategic Plan, August 2001, p. 43).

It is projected by the Cancer Institute NSW (Cancer Institute NSW, May 2005) that GWAHS will detect 5% of new cases of cancer within NSW by 2011, an increase from 1,394 in 1999 to 1,931 in 2011.

As the Cancer Institute NSW projects cancers for all of GWAHS and because of the cross-border patient outflows from remote LGAs (Broken Hill, Balranald, Central Darling, Unincorporated Far West and Wentworth), Table 3 projects the revised number of people with new cancers requiring radiation oncology within the Orange catchment area.

TABLE 3 – NEW CANCERS REQUIRING RADIATION ONCOLOGY IN THE ORANGE CATCHMENT AREA

No	Description	2001	2006	2011	Data source/Comment
1	Orange Radiation Oncology Catchment Population	260,667	272,913	274,274	⅄Census 2001 See Appendix 1 - Total and Indigenous population for GWAHS (NB: Less identified LGAS that flow to other area health services)
2	Projected new cancers for the Orange Radiation Oncology Catchment Population	1,303	1,364	1,645	✦Adjusted rate (local age specific rates / divided by the state age specific rates)
3	New Cancers requiring radiation oncology	651	682	822	Calculated from 2 - International Benchmark 50%
4	Re-treatment of new cancers	163	171	205	Calculated from 3 - Based upon information from other radiation oncology centres – 25%
5	Total people requiring radiation oncology	814	853	1,027	Calculated from 3 and 4

⅄ Australian Bureau of Statistics Census data
✦ Cancer Institute NSW, Cancer in NSW Incidence and Mortality 2003, Projections Table p.4

Patients residing in the Greater Western Area Health Service generally access radiation oncology in Sydney, Canberra, Wagga and Newcastle, as there is no service within this health area. It is projected by the year 2011 there will be 1,027 people that will require radiation oncology services (Appendix 4 – Current and Proposed Radiation Oncology Treatment Centres in NSW).

People living in rural and remote locations access radiotherapy services at lesser rates then people living in metropolitan areas. This is partly related to the location of services in metropolitan centres and social and financial impacts of lengthy treatment away from home (Greater Western Area Health Service – Oncology and Palliative Care Clinical Services Plan, p.9).

Table 4 projects the number of attendances for people with new diagnoses of cancer for the Orange radiation oncology catchment area. The numbers have been projected using data from Nepean's Cancer Care Centre (which has a similar sized population catchment area as the Orange radiation oncology catchment area) and National average projections from the National Strategic Plan for Radiation Oncology (Australia), August 2001.

TABLE 4 – PROJECTED ATTENDANCES FOR PEOPLE REQUIRING RADIATION ONCOLOGY (NEW CANCERS DETECTED) ORANGE RADIATION ONCOLOGY CATCHMENT AREA AND NATIONAL AVERAGES

Description	2001	2006	2011	Data source/Comment
Orange Radiation Oncology Catchment Area				
Total people requiring radiation oncology	814	853	1,027	Previous Table 3
Total radiation oncology attendances per year	13,528	14,176	17,068	Calculated - Based upon Nepean 2006 figures of 16.62 attendances per person requiring radiation oncology
Total patient attendances per day	54	57	68	Calculated - 5 day week over a 50 week period
National Average				
Total radiation oncology attendances per year	15,059	16,207	20,026	Calculated - ⍋Based upon national average of attendances per person requiring radiation oncology 18.5 in 2001 19.0 in 2006 19.5 in 2011
Total patient attendances per day	60	65	80	Calculated - 5 day week over a 50 week period

⍋ The national average attendance for radiation oncology is 18.5 for the course of treatment for one patient in 2000 and is projected to rise to 19.5 by 2010. (Steering Committee for the National Radiation Oncology Strategic Plan, August 2001- RANZCR data 1990-1999)

The above table;

- does not consider radiation oncology palliation ie the use of radiation oncology for palliative care patients, and is therefore an under estimation of demand.
- demonstrates that Orange has the potential to maintain and sustain a radiation oncology service, as the total patient attendances per day compare favorably to other NSW sites (including the rural site of Wagga Wagga) that have approximately 40 to 50 attendances per day.

Social, Emotional and Financial Needs

It is well documented that people with cancer require strong support mechanisms to address their social, emotional and financial needs, and the needs of their carers.

The majority of people accessing radiation oncology in the GWAHS catchment area predominately travels to Sydney. However, evidence indicates that women choose more radical treatment options, including tubal ligation, mastectomy and hysterectomy if they are unable or unwilling to access services requiring repeated or prolonged attendance away from home (Wainer, 1998). Local clinicians indicate that they see a number of patients that would benefit from radiotherapy who choose surgery because therapy is not available.

Travel for radiotherapy and other forms of cancer treatment is a major difficulty for many. Subsidies are inadequate, leaving many people financially disadvantaged or unable to access therapy. There is also a lack of access to a range of supportive services, including psychosocial and palliative care.' (Clinical Oncological Society of Australia, The Cancer Council Australia and the National Cancer Control Initiative, 2003, p.8).

"*Country people have to go away from their homes to see specialists, have tests, operations and treatments. It is very expensive and not often do we have people to stay with, so it is very taxing on the patients, their families and their pockets*" (Aoun & Kristjanson, no date).

Carers for people with cancer in rural communities often face the same issues as those they care for. Carers describe stress in terms of the following:

- Relocation to metropolitan centres for lengthy specialist treatment
- Meeting travel and accommodation costs
- Double grocery bills for family at home and family in the city
- The loss of employment
- Travel expenses of carers are not automatically reimbursed because an escort may not be considered medically necessary
- Rural people may not know information is available and without it they report feeling out of control and have difficulty making decisions
- (Aoun & Kristjanson, no date; Sheperdson, J 2002).

Rural businesses often cannot function if one family member needs to be absent for an extended time, many opt for alternative treatment options.

Currently residents from the GWAHS who have radiation oncology treatment within Sydney or Wagga can access the following assistance:

TABLE 5 – CURRENT TRAVEL, ACCOMMODATION AND FINANCIAL ASSISTANCE SERVICES

Service	Service Provider	Cost / Description	Comment
Travel	Isolated Patient Travel and Accommodation Assistance Scheme (IPTAAS - Bathurst)	$0.15 per km for over 100 km (New rate as of 1 July 2006)	Travel subsidy for outpatients One escort is included where it is certified by a GP or treating specialist that it is medically necessary
	Community Transport - Orange	$30 return to Sydney (all patients) $15 one way to Sydney (all patients)	Not means tested Requires a referral from a medical professional
Accommodation	IPTAAS Casuarina Lodge, Westmead Ecclesbourne - Double Bay (Must have a 24 hour carer) Hunter Lodge – Waverley Lillier Lodge - Wagga Wagga	$40 contribution per person (non pensioners) $20 contribution per person (pensioners)	Not means tested Accommodate carers/family NB/ Patients choosing to stay at commercial accommodation are reimbursed $33 (single room) or $46 (double room)
	♦Jean Colvin Hospital (Darling Point) 1	Health fund members – fully covered Pensioners – special rate $275 night for others	Means tested on capacity to pay 24 hour nursing care Accommodates patient only
Financial	♦Can Assist Orange and Bathurst	Provides financial assistance for a range of needs ie paying bills, reimbursement of pharmaceuticals, accommodation and transport	Financial assistance is varied and depends on the financial situation of the local office of Can Assist ie Bathurst caps their assistance at $1,200 per patient Referrals through General Practitioners and Cancer Services
Social and Emotional	Psycho-oncology Social Worker	No cost	Based in Orange, covering the Eastern and Southern Clusters in GWAHS.

Service	Service Provider	Cost / Description	Comment
	Allied Health providers including Social Workers, Physiotherapists, Occupational Therapists, Dieticians and Psychologists	No cost	Currently work within mainstream health services, both in acute and community settings, and within acute and community mental health services NB/ there are also a number of private providers within Orange that charge a fee for service

♦ Can Assist, Cancer Assistance Network (October 2006)

★ Cancer Institute NSW (2005) Accommodation Guide

1 Jean Colvin Hostel was established by a woman residing in Orange. It provided the first for many years the only accommodation for rural patients receiving cancer treatment in Sydney. It receives substantial financial support from the Cancer Patients Assistance Society

Currently the lack of access to radiation oncology in GWAHS places a financial cost and social burden on:

- patients
- carers
- families
- health and associated services
- community

This real opportunity cost has not been valued due to lack of data available.

See Appendix 5 - Cancer Support Services provided in Orange and towns within approximately 100 km of Orange, for a more comprehensive listing of services.

The Health Workforce to support Radiation Oncology Services in Orange

Orange: The Hub for Health Care

Orange is a recognized hub for health service provision for Central and Western NSW and extending to the North West, offering a comprehensive mix of medical specialist, generalist, allied health and specialist nursing services. This Health Hub provides a critical mass of health professionals to provide the range of services required by clients of cancer services throughout their treatment in Orange.

Medical Specialist Services

An extensive mix of specialist medical services live and work in Orange including:

Anaesthetics
General surgery
Ear Nose and Throat surgery
Facio Maxillary surgery
Cardiology
General Medicine
Gastroenterology
Thoracic Medicine
Neurology
Endocrinology
Obstetrics and gynaecology
Opthalamic surgery
Orthopaedic surgery
Paediatrics
Urology
Rehabilitation Medicine
Emergency Medicine
Nuclear Medicine
Pathology
Psychiatry
Geriatric Psychiatry
Geriatrics
Renal Medicine
Diagnostic Radiology and Ultrasound

In addition, there are a number of visiting cancer and palliative care medical specialist services to Orange including:

- Radiation Oncology
- Medical Oncology
- Palliative Care
- Haematology

Nuclear Medicine, Pathology, Medical Imaging and surgical services are located in Orange to support diagnosis, treatment and management of cancer patients.

Medical Education

Orange has a major university campus, the School of Rural Health of the University of Sydney for medical students and dental students. Many specialist Colleges use Orange Base Hospital for specialist training. Charles Sturt University has a rural Pharmacy course.

Primary and Community Health Care

Orange has an extensive primary and community health care network with services provided by the GWAHS, private practitioners, the NSW Central West Division of General Practice, an Aboriginal Community Controlled Health Service and other NGOs. The range of services includes:

- General practitioners (32 living and working in Orange)
- Aboriginal Health Workers
- Maternal, child and family nursing services
- Primary health care nursing services
- Allied health services – both public and private
- Generalist counseling services – public and private
- Community care services
- Specialised community based health services eg. Diabetes Education, Oncology, Palliative Care
- Drug and alcohol services
- Community mental health services
- Women's health
- Helicopter retrieval services

Current Services to Support Cancer Care

Drawing on the information above, Orange is well placed to provide a Comprehensive Cancer Care Service inclusive of radiation oncology. Current cancer services located in Orange include:

- Medical Oncology and Radiation Oncology specialists operating under a consultative model, visiting from St Vincent's Hospital, Sydney
- Palliative Care Physician, visiting from Sacred Heart Palliative Care Service, Sydney
- Haematologist, visiting from Prince of Wales Hospital
- GWAHS Coordinator of Oncology and Palliative Care
- Area Clinical Nurse Consultant (CNC) Oncology
- Area CNC Palliative Care
- Specialist Registered Nurses for Palliative Care, Oncology and Cancer Co-ordination
- Volunteers
- Range of community support services see Appendix 5

Public and private allied health professionals inclusive of occupational therapy, physiotherapy and dietetics are available for post-operative care and rehabilitation, with psychosocial support through GWAHS social workers, mental health services and other generalist counselling services provided by private providers and NGOs.

Radiation Oncology Service in Orange: What is required?

Underpinning the establishment of Radiation Oncology services in Orange is the development of a resident specialist health workforce with the appropriate skill mix to deliver services on a sustainable basis.

In addition, this critical mass of health professionals underpins the recruitment and retention of other health service providers to the region by building the capability to provide comprehensive multi-disciplinary care.

Analysis of the staffing profiles of Radiation Oncology units across NSW of a similar size and capacity to that planned for Orange (ie 2 linear accelerators) indicates the staffing mix will include:

- Radiation Oncology Specialists
- Medical Oncology Specialists
- Oncology nurses
- Radiation Therapists
- Engineer and Medical Physicists
- Multi-disciplinary Team Coordinator
- Data manager
- Managers and administration assistants

The FTE required for each discipline will be dependent on the service delivery model and casemix of the service.

What are the key factors contributing to the recruitment and retention of the health workforce?

There is now extensive literature to demonstrate the key factors contributing to the recruitment and retention of health professionals to underpin the provision of sustainable services in rural and remote locations (McDonald, Bibby and Carroll, 2002; QRMSA 2004, Battye and McTaggart, 2003). Whilst much of this research has focused on general practice and allied health services it has application for medical specialist and other professions. The three domains to be addressed to enable retention of a health workforce are:

- Professional
- Personal
- Community

Within the Professional domain the factors that support the recruitment and retention of health professionals relate to:

- Scope and variety of work
- Professional support and clinical networks if working in isolated or solo practice
- Managed after-hours and on-call commitments
- Locum relief and backfill
- Access to continuing education and professional development
- Adequate and appropriate remuneration particularly if working in isolated/solo practice

Within the Personal domain the contributing factors to recruitment and retention include:

- Employment opportunities for partners
- Quality schooling for children
- Access to family/friends, cultural opportunities

Within the Community domain, the enablers to recruitment and retention of health professionals include:

- Community resources and facilities in particular schools, hospitals, medical technology, housing, social and cultural facilities
- Sense of community
- Commitment to community

How does Orange "stack up"?

Within the Personal and Community domains Orange provides:

- Variety of schools and education opportunities for children
- Range of employment opportunities for partners particularly with respect to health and community services, professional services (accounting, law, teaching, stock broking), hospitality, mining, and trades
- Variety of housing stock, affordable for health professionals
- Cultural and social activities inclusive of theatre, music, visual arts, restaurants, sporting clubs including three golf courses
- Geographically close to major metropolitan centres of Sydney and Canberra
- Good access to medical specialist and primary and community care health services
- New Orange Hospital – state of the art –planned to open in 2010
- Airport service 3 to 4 times daily to Sydney and return

Within the Professional domain workforce capacity to sustain a Radiation Oncology Service can be developed, particularly through strengthening the linkages that currently exist with the metropolitan hospitals servicing this region, and by building linkages with the Riverina Cancer Care Centre, Wagga Wagga to enhance capacity of both services.

Appendix 6 describes in detail strategies to build the required workforce.

The key strategies relate to:

- Pipelines for training across medical, nursing and allied health disciplines through linkages with relevant tertiary institutions and specialist colleges
- Remuneration packages that provide flexible employment options, professional development and career progression
- Linkages with metropolitan and regional radiation oncology services to support and enable skills development and locum relief
- Clinical leadership
- Multidisciplinary team approach to service delivery

Appendix 6 – Strategies to build the Radiation Oncology Workforce, has specifically focused activity around Radiation and Medical Oncologists, Radiation Therapist, Physicists and Nursing. It is anticipated that recruitment to management and administration positions, data management, engineering and multi-disciplinary team coordination can be achieved through usual recruitment processes, however it is acknowledged that there is likely to be the requirement of specific training.

Support for Radiation Oncology in Orange

Supporting Statements

Orange has been mentioned on numerous occasions as the future site for radiation oncology within the Greater Western Area Health Service. The following list documents this:

- Construction is planned for new Mid North Coast Radiation Oncology Services at Port Macquarie and Coffs Harbour, to commence in late 2005. Next services are planned for the centres of Orange and Lismore.
  (NSW Health, 2005, NSW overseas recruitment program for radiation therapists, Recruitment document)

- 'The new Mid-North Coast Cancer Care Centre, which will operate at Port Macquarie and Coffs Harbour, is progressing well. I visited the sites last Friday, and both centres will have the capacity for two linear accelerators. Detailed planning for new radiotherapy services at Lismore and Orange has also commenced and these will be in conjunction with major redevelopment of hospitals in those towns.'
  (NSW Legislative Council Hansard, 29 March, 2006, statement made by the Hon. John Hatzistergos)

- '…a number of these facilities (radiation oncology) have been established in a variety of different locations. Increasingly we are trying to progress these into country areas – Coffs Harbour and Port Macquarie will be the next locations. We also have a priority to locate them in Lismore and Orange.'
  (NSW Legislative Council Hansard, 29 August, 2006, statement made by the Hon. John Hatzistergos)

- A comprehensive Cancer Care Centre including radiotherapy is to be developed at Orange.
  (Greater Western Area Health Service Draft Clinical Services Plan, 2006)

- Greater Western Area Health Service Draft Corporate Plan (2006)

- Federal Health Minister Mr Tony Abbott supports case for Radiotherapy and Cancer services in Orange, outlines sources of funds and willingness to work with NSW Health.
  (At meeting with Cancer Care West Alliance, Cowra, November 2006)

Local Community Support

The need and support for a radiation oncology service in Central and Western NSW has been fully endorsed by the Central NSW Regional Organisations of Councils (CENTROC). This organisation is made up of the LGAs from Oberon to Lachlan, Cowra to Mudgee (Mid-Western) and represents over 220,000 residents. Member Councils have committed to the Alliance formed to progress the campaign for access by their residents to quality radiation oncology services in their region.

The radiotherapy Alliance has been formed out of a movement in the community that is seeking a strategic approach to the provision of radiation oncology services in the region, to be based at the new Orange Base Hospital. The Alliance believes that the medical infrastructure in Orange – human and physical – provides an excellent opportunity to provide a much needed service.

The Alliance aims to bring together members of the community, clinicians, local government representatives, support groups and local politicians (state and federal) to plan and execute a strategy that will realize the radiotherapy service. There is a strong recognition within the Alliance that a program of fundraising for support services will demonstrate that the region means business and is keen to get behind the Government commitment. The expectation is that the fundraising will support the provision of accommodation for patients and their family and carers who need to stay overnight for treatment or if they are too unwell to travel. Additional fundraising for support transport is also being considered.

The Alliance has three planks to its strategic platform –

- providing and disseminating information
- building relationships with and commitment from Federal, State and Local Government representatives for the provision of radiation oncology services in Orange for the region
- planning and carrying out a regional fundraising program to provide support services for the patients and their carers/families.

Community charities, service clubs and organisations are very keen to commit to the goals of the Alliance and to demonstrate their support and participation by way of engaging in fundraising activities. This community support is across the region where there appears to be an almost universal agreement that radiation oncology must be provided for patients in the region.

Considerations in the Development of a Radiation Oncology Service

"How a radiotherapy service is structured, planned and co-ordinated has great effect on health outcomes and overall access to services" (Department of Health and Ageing, 2002).

Areas of need for radiotherapy services should be identified based on population, demographics, cancer incidence, likely future cancer incidence, workforce availability, referral base and availability of other services such as other cancer treatments, imaging and pathology (Department of Health and Ageing, 2002). The following are identified as key considerations for any current or new radiation oncology service:

TABLE 6 – CONSIDERATIONS FOR RADIATION ONCOLOGY SERVICE PROVISION

No	Consideration	Comments
1	Different types of service models Current services are provided through both public and private sectors in Australia. These facilities vary considerably in size from small clinics, to specialist departments in public hospital and comprehensive cancer care centres. (Steering Committee for the National Radiation Oncology Strategic Plan, 2001, p.17)	With the current development of Bathurst and Orange Hospitals an opportunity exists to establish a Comprehensive Cancer Care Centre in GWAHS The proposed development of a private hospital opposite to the new Orange Base Hospital facility also provides an opportunity for a joint service model to be investigated
2	Different areas of responsibility by levels of Government Problems can be traced to the fact that responsibility for different aspects of the radiation oncology system is divided between governments and funding does not directly follow these responsibilities. (Department of Health and Ageing, 2002)	Responsibility needs to be clearly articulated in the development of the model of service delivery
3	Different models of patient cancer treatment Multidisciplinary Cancer Care The assessment of each patient newly diagnosed with cancer by a team of specialists – has been shown to improve outcomes for some cancers and is increasingly practiced in Australia. (Department of Health and Ageing, 2002) Investment in psychosocial support services for people in rural and remote areas, who have been shown to have significantly inequitable access to such services (Clinical Oncological Society of Australia, 2006)	Patient treatment will depend upon the type of equipment, service structure, and skills of workforce to support a multidisciplinary model A multidisciplinary approach for breast cancer management is currently operating in Orange

No	Consideration	Comments
4	Financial costs and comprehensive cancer care "Dislocation from family, transport and accommodation and the associated burdens will continue even with distributed regional services, it is not feasible financially or practically to locate radiation therapy services in isolation from the services required for comprehensive cancer care. (Australian Institute of Radiography, 2002, p.8) Improved coordination of government-funded travel and accommodation schemes for cancer patients and their families in remote areas (Clinical Oncological Society of Australia, 2006)	Fund raising for Accommodation, Transport and Support Services is planned to be coordinated by Radiotherapy Alliance Group in Orange Other community groups within Orange and surrounding Orange, eg Rotary also have conducted fund raising activities With a new Hospital being built in Orange and a resident medical specialist population is established in Orange It is known that surrounding LGAs will support and sustain the new radiation oncology service located in Orange Orange already has a multidisciplinary cancer care involving visiting radiation and medical oncology, surgery and palliation
5	Not enough funding for capital expenditure and ongoing operational costs If there is an increase in radiation oncology utilisation of all new cancer patients to the 50% benchmark, there will be the need for a significant increase in funding to support this benchmark. Funding arrangements differ greatly between States and even Institutions within the State. Funding is a complex issue that may well lend itself to a national approach. (Australian Institute of Radiography, 2002, p.5) Cost shifting between levels of government is occurring. (Department of Health and Ageing, 2002)	Responsibility needs to be clearly articulated in the development of the model of service delivery
6	Critical mass of population and workforce Underutilisation of equipment due to no critical mass or referrals from specialists within the area, and/or workforce not being available to meet demand or operate equipment	The Orange radiation oncology catchment population will sustain a service (refer to Appendix 1) Orange currently has a range of resident medical specialist/ generalist, nursing, allied health, and diagnostic services to support and sustain a radiation oncology service

No	Consideration	Comments
7	Attracting and sustaining the workforce "The radiation oncologist, radiation therapist and medical physics workforce are inadequate to meet benchmark levels of service provision. Present number of places in training programs for radiation oncologists and radiation therapists are inadequate to meet present needs. Training programs in radiation oncology physics need to be more formally established and recognised. (Steering Committee for the National Radiation Oncology Strategic Plan, 2001, p.17) Support for distance education, mentoring and innovative models such as telemedicine in remote areas (Clinical Oncological Society of Australia, 2006)	Appendix 6 describes strategies that will assist to attract and retain the required workforce including pipelines for training and training pathways It is anticipated that a "state of the art" new Orange Hospital will assist to attract and retain the necessary workforce Programs to attract oncology specialists and therapists to livein Orange need to be established GWAHS has an effective telehealth networks across facilities
8	The Quality of Service being provided (Data collection processes and accreditation) Ensuring facility has accreditation, clinical protocols, benchmarking and data collection in line with current standards. (Department of Health and Ageing, 2002) Investment in clinical data systems to audit, monitor and plan oncology services (Clinical Oncological Society of Australia, 2006)	Attainment of accreditation for the Orange radiation oncology service will be included in its business plan A "Centre of Excellence" philosophy will be supported

Appendix 1

Total and Indigenous Population - Greater Western Area Health Service

LGA	Census 2001	Projected Population 2006	2011	2016
*Balranald	2,172	2,664	2,526	2,382
Bathurst Regional	34,755	37,891	39,520	40,942
Blayney	6,310	6,442	6,385	6,298
Bogan	3,077	2,990	2,796	2,612
Bourke	3,756	3,665	3,432	3,230
Brewarrina	2,067	2,030	1,889	1,770
*Broken Hill	20,357	20,398	20,056	19,789
Cabonne	12,128	12,545	12,518	12,436
*Central Darling	2,385	2,394	2,371	2,360
Cobar	5,003	4,951	4,649	4,335
Coonamble	4,629	4,544	4,236	3,959
Cowra	12,531	13,323	13,534	13,668
Dubbo	37,263	40,753	42,412	43,958
Forbes	9,740	9,788	9,414	9,009
Gilgandra	4,643	4,632	4,432	4,229
Lachlan	7,244	7,238	6,945	6,653
Mid Western Regional	22,007	22,895	23,390	23,808
Narromine	6,783	7,083	7,032	6,970
Oberon	4,854	5,287	5,523	5,727
Orange	35,529	38,181	39,252	40,096
Parkes	14,506	14,638	14,164	13,632
*Unincorporated Far West	857	807	773	751
Walgett	7,959	8,236	8,077	7,897
Warren	3,197	3,115	2,910	2,724
Warrumbungle	10,483	10,489	10,092	9,709
Weddin	3,753	3,679	3,517	3,358
Wellington	8,450	8,517	8,156	7,800
*Wentworth	6,793	6,925	6,740	6,535
TOTAL	**293,771**	**306,101**	**306,740**	**306,637**

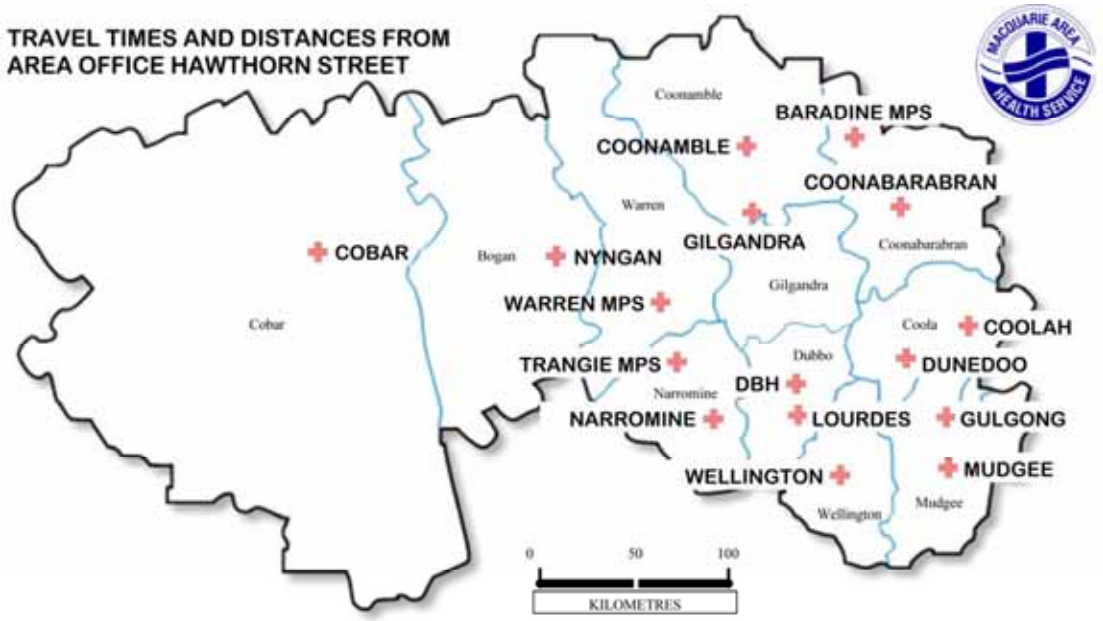
*Not included in the Orange Radiation Oncology Catchment Population

Population for LGAs not included in Orange Radiation Oncology Catchment

LGA	Census 2001	Projected Population 2006	2011	2016
Balranald	2,172	2,664	2,526	2,382
Broken Hill	20,357	20,398	20,056	19,789
Central Darling	2,385	2,394	2,371	2,360
Unincorporated Far West	857	807	773	751
Wentworth	6,793	6,925	6,740	6,535
TOTAL	**32,564**	**33,188**	**32,466**	**31,817**
NET TOTAL CATCHMENT	**261,207**	**272,913**	**274,274**	**274,820**

Appendix 2

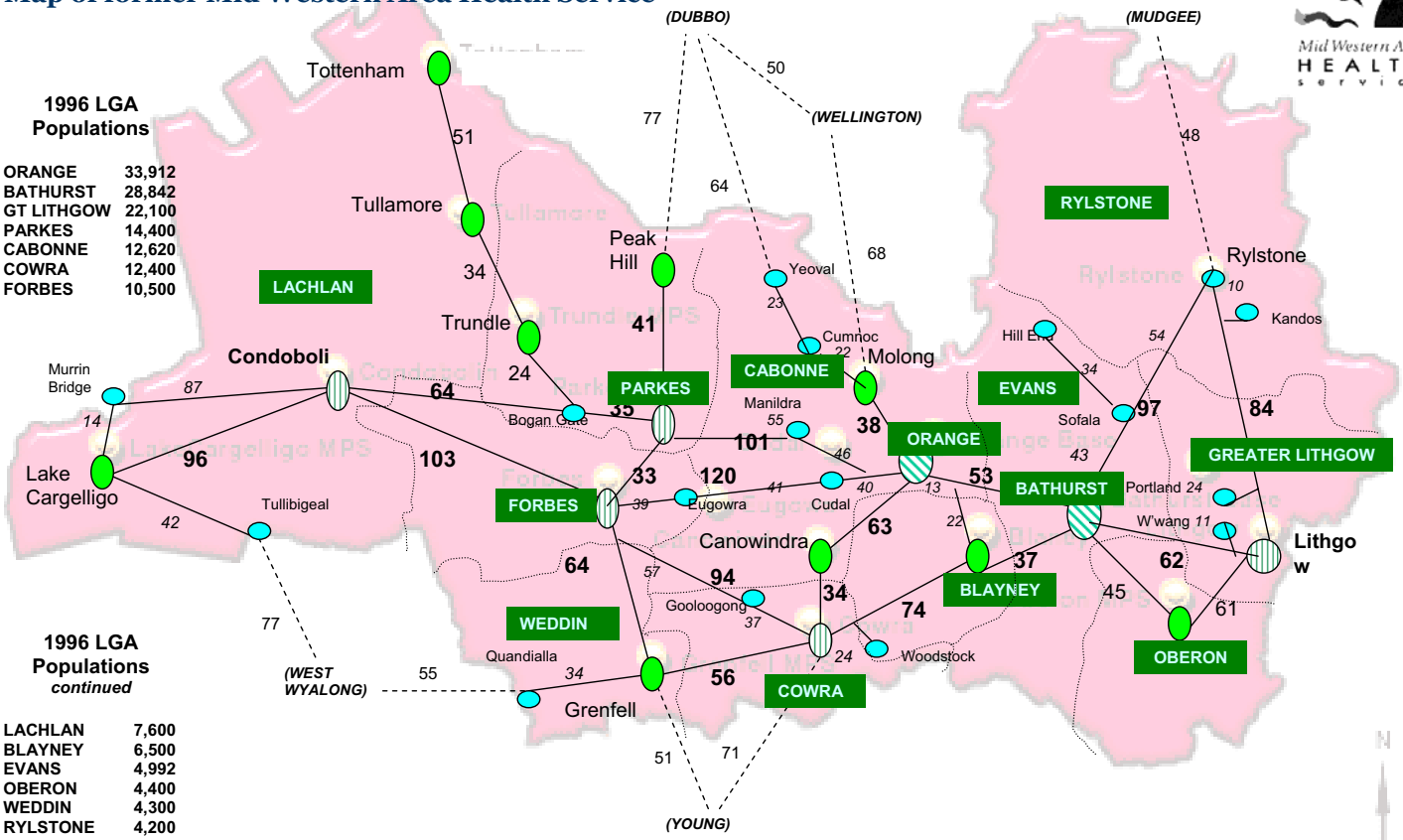
Map of former Macquarie Area Health Service



LOCATION	KILOMETRES	HRS TRAVEL	LOCATION	KILOMETRES	HRS TRAVEL	LOCATION	KILOMETRES	HRS TRAVEL
BARADINE	218	2½	DUNEDOO	93	1	NARROMINE	43	½
COBAR	300	3	GILGANDRA	67	¾	NYNGAN	168	2
COOLAH	137	1½	GULARGAMBONE	120	1¼	TRANGIE	77	1
COONABARABRAN	161	2	GULGONG	118	1¼	WARREN	124	1¼
COONAMBLE	163	2	MUDGEE	132	1½	WELLINGTON	50	½

Appendix 3

Map of former Mid Western Area Health Service



Appendix 4

Current and Proposed Radiation Oncology Treatment Centres in NSW

Currently within NSW there are 11 public and 6 private Radiation Oncology Treatment Centres (NSW Health 2001, NSW Health 2005). These are as follows:

Public

- Royal Prince Alfred Hospital (Sydney)
- Newcastle Mater Misericordiae Hospital
- Illawarra Cancer Care Centre
- Royal North Shore Hospital (Sydney)
- Prince of Wales Hospital Cancer Care Centre (Sydney)
- St George Hospital (Sydney)
- St Vincent's Hospital (Sydney)
- Liverpool Cancer Therapy Centre
- Nepean Cancer Care Centre
- Westmead Hospital

Private

- Central Coast Radiation Oncology Centre
- Radiation Oncology Sydney – Sydney Mater Misericordiae Hospital
- Sydney Adventist Hospital
- St Vincent's Clinic
- Wagga Wagga (The Riverina Cancer Care Centre)

New Services

Construction is planned for new Radiation Oncology services at

- Port Macquarie and Coffs Harbour, to commence in late 2005.
- Lismore
- Orange Base Hospital (Announced by Minister Hatzistergos, November 2006)

Appendix 5

Current Cancer Support Services provided in Orange and towns within approximately 100 km of Orange

(The Cancer Council New South Wales – Cancer Services Directory, Western (October 2006).

Accommodation

- Orange Base Hospital,
- Parkes District Hospital,
- Bathurst Base Hospital

Cancer Information

- Cancer Council Regional Office – Orange

Cancer Support Groups

- Bathurst
- Cowra
- Forbes
- Grenfell
- Lake Cargelligo
- Mudgee
- Orange
- Parkes

Can Assist

- Bathurst
- Orange
- Forbes
- Parkes
- Peak Hill

Cancer Support Networks/Programs

- Cowra & District Cancer Action Group
- Look Good Feel Better – Bathurst
- Look Good Feel Better – Orange
- Look Good Feel Better – Parkes

Cancer Treatment Centres

- Daffodil Cottage – Bathurst
- Oncology Service – Parkes
- Anson Cottage – Orange

Community Services

- Bathurst Information & Neighbourhood Centre
- Cowra Information & Neighbourhood Centre
- Orange Community Information & Services Centre

Financial Services

- IPTASS
- Program of Appliances for Disabled People

Garments/Prosthetics

- Capri Salon – Orange
- Hidden Agenda – Parkes
- Myer – Orange
- Swimwear Shoppe – Forbes

Home Services

- Central West Carer Respite Centre – Orange
- Home Care Service – Central West
- Home Care Service – Lachlan

Transport

- Ambulatory Care Service – Orange Base Hospital
- Bathurst Community Transport Group
- Community Transport – Cabonne
- Community Transport – Cowra/Weddin
- Community Transport – Lake Caregelligo
- Community Transport – Oberon
- Community Transport – Cowra

IPTAAS

- Community Transport – Mudgee
- Community Transport – Murrin Bridge
- Aboriginal Medical Service – Orange
- Community Transport – Orange
- Community Transport – Peak Hill
- Community Transport – Rylstone

Appendix 6

Strategies to build the Radiation Oncology Workforce

Objective	Strategies
Priority: Radiation Oncologists and Medical Oncologists resident in Orange, participating in and managing cancer services	
Establish pipeline to build specialist cancer services in the Central west	Short–term: Consultative model continues with adequate funding to support travel and accommodation for a Training Oncology Registrar as mechanism to promote Orange as a future location to establish practice
	Orange specialists to contact Oncology Learned colleges to promote Orange as a location in which to live and work - via local Seminars and Academic meetings
	In partnership with the University of Sydney, School or Rural Health have medical students and interns rotated through cancer care service to promote the specialty, and opportunities working in a regional centre
Establish and promote career path for Radiation and Medical Oncologists as an ongoing recruitment and retention strategy	Recruit an Area Director of Cancer Services to provide clinical leadership for cancer services throughout GWAHS
	To expand academic and research opportunities within cancer services to provide career enhancement for Radiation and Medical Oncologists
Develop remuneration package competitive with metropolitan hospitals	Remuneration package would include/address: ➢ Opportunities to work across private and public sector ➢ Professional development, continuing education, conference attendance ➢ Flexible working arrangements
Priority: Recruitment and retention of pool of Radiation Therapists and Physicists to enable sustainable provision of radiotherapy services	
Remuneration package competitive with metropolitan services and addresses key retention factors	Explore employment mechanisms to provide entitlements that meet the need of individuals ensuring the inclusion of: ➢ Salary commensurate with skills, experience and responsibility ➢ Professional development and conference leave ➢ Study leave for post-graduate development ➢ Mentoring and supervision ➢ Relocation subsidy
Pipeline established with tertiary institutions enabling ongoing recruitment to	Cancer Care Services becomes an accredited training provider for radiation therapists, allied health and nursing

Objective	Strategies
Central West	Partnerships established by Cancer Care Services with University of Newcastle, University of Sydney and Charles Sturt University Wollongong, to develop and host student placements for Radiation Therapists to provide pipeline of graduates for the Orange Cancer Care Centre. Similar partnership established with relevant universities for placements of physicists
Capacity for locum provision across regional Cancer Care Services	Partnership developed with Riverina Cancer Care Centre to mutually support the provision of backfill and locum relief across all disciplines
Priority: Establishing Radiation Oncology Nursing Capability	
Multi-pronged approach to building radiation oncology nursing capacity	➢ Recruitment of Radiation Oncology Nurse to the Central West ➢ Increasing skills of oncology nursing in this region through promotion of benefits of specialist nursing including graduate certificate qualification, remuneration in line with qualification, opportunity to work 'normal' hours v shift work, ➢ Encourage new career path into medical oncology, radiation oncology, palliative care, flexible working conditions ➢ Utilising linkages with Metropolitan Hospitals establish placements and training for oncology nurses in radiation oncology

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