NSW GOVERNMENT Health

Rural Surgery Futures 2011-2021

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List of Acronyms

ANU	Australian National University
BMI	Body Mass Index
CMO	Career Medical Officer
CNC	Clinical Nurse Consultant
CNE	Clinical Nurse Educator
ED	Emergency Department
FWLHD	Far West Local Health District
GP	General Practitioner
HETI	Health Education and Training Institute
HDU	High Dependency Unit
HNELHD	Hunter New England Local Health District
ICU	Intensive Care Unit
JHH	John Hunter Hospital
LHD	Local Health District
MLHD	Murrumbidgee Local Health District
MNCLHD	Mid North Coast Local Health District
MoH	NSW Ministry of Health
NNSWLHD	Northern NSW Local Health District
RFDS	Royal Flying Doctor Service
RGP	Rural Generalist Pathway

SNSWLHD	Southern NSW Local Health District
VMO	Visiting Medical Officer
WNSWLHD	Western NSW Local Health District
WWHS	Wagga Wagga Health Service

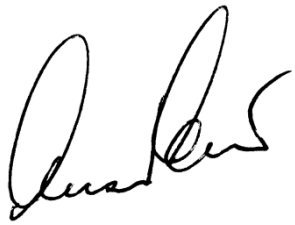
Foreword

We are pleased to commend this Rural Surgery Futures report. It has been developed through an extensive consultation process with clinicians and managers in regional and rural NSW. The Rural Surgery Futures report provides a framework for public sector surgery (both planned and acute) in rural NSW for the next 5 -10 years.

The Rural Surgery Futures project acknowledged that major challenges exist in surgery that are well identified and quite unique to regional and rural areas. A comprehensive assessment of rural surgical services has been long overdue and rural clinicians and managers have embraced the opportunity to participate in this process.

The report provides a number of recommendations that will require a partnership between Local Health Districts, clinicians, surgical networks, health professional training networks, Colleges, professional associations, the Agency for Clinical Innovation and the NSW Ministry of Health. These recommendations have been crafted with the aim of creating sustainability for the future of rural surgery services.

We endorse the *Rural Surgery Futures* report to readers and anticipate a collaborative and successful implementation of its recommendations to ensure optimal surgical services are delivered to our regional and rural communities across NSW.



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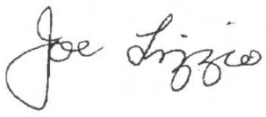

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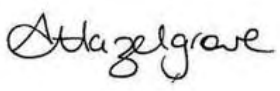

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Executive Summary

The Rural Surgery Futures Project has been undertaken to guide the development of surgical services across rural NSW over the next 5-10 years. This report is a result of work undertaken by the NSW Surgical Services Taskforce in conjunction with the NSW Ministry of Health.

The Rural Surgery Futures Project team visited 26 non-metropolitan hospitals across NSW and has undertaken extensive consultations with over 200 rural clinicians and hospital managers, as well as the key stakeholder organisations and Colleges. In addition, approximately 200 clinicians and managers completed the Rural Surgery Futures survey and provided invaluable feedback.

The consultations and site visits revealed wide variation in service provision in rural NSW. The key recommendations for the future development of rural surgical services that have emerged from the project include:

1. **Networking Model:** this is considered a key concept for the sustainability of rural surgical practice with the need to identify and develop the model of a regional resource centre that networks with surrounding district hospitals. There are significant benefits to be gained by the networking model including: sharing of workforce, promotion of collegiality, supporting surgical services in smaller communities, strengthened continuing professional development and training across the network, improved processes for inter-hospital transfers, standardisation of equipment and avoiding inappropriate duplication of services.

2. **Clinical Services Planning:** needs to be updated regularly, considerably strengthened and have input from clinicians into the network clinical services plans. This includes requirements for new technology, future work force and succession planning and community expectations. A current Clinical Service plan provides clinicians with certainty about service provision and future requirements.

3. **Workforce Attraction & Retention:** targeted incentives are required to attract and retain a high quality and diverse medical, nursing and allied health workforce to rural and remote areas. Remuneration, access to training and education, formalisation and acknowledgement of the role of GP proceduralists (surgeons, anaesthetists, obstetricians, and ED physicians) is critical in achieving and sustaining a viable rural workforce. The overuse of locums was seen as an additional stressor for permanent staff. While their use is sometimes necessary, there should not be an over reliance on them to fill workforce shortfalls. There is an opportunity

to expose newly qualified surgeons to the rural practice through the establishment of Rural Surgical Fellowships.

4. **Training and Education:** this was identified as a key constraint for all clinicians (surgeons, anaesthetists, nurses and allied health staff). A model of integrated training with the local medical clinical school demonstrated benefits to all clinical staff. Access to dedicated education staff was identified as advantageous to improving staff retention and the quality of patient care.

5. **Senior Hospital and Medical Managers:** the lack of continuity in management in many rural hospitals places significant barriers to progress the development of rural clinical services. Stability in these positions is required to restore confidence with clinicians, build relationships and facilitate local decision making and planning.

A number of other issues have been identified and specific recommendations have been made to address these.

Rural Surgery Futures is not intended to provide an in-depth and detailed services plan. Rather, it is a framework for Local Health Districts to establish essential surgical networks and an informed clinical services plan that will provide sustainable rural surgical services.

SECTION 1

1 Introduction

Over the past 50 years there has been significant demographic, economic and social change across rural NSW. This has led to major growth in some areas and major contraction in others. The infrastructure and traditional referral patterns and patient flows that have served the public well in the past in accessing surgical services are in some instances no longer fit for purpose. In order to continue to provide high quality care in the future, it is timely to examine how and where services are provided and develop contemporary models that will best prepare the system to meet the significant workforce and technological challenges in the future.

Demand for surgery will continue to grow in NSW. Our current rural workforce projections indicate that we cannot continue to organise services in the same way if we are to provide quality surgical services in the future. The overall goal of the Rural Surgery Futures project was to build upon initiatives and innovative models of care identified through the Surgery Futures report to:

- Improve access to surgical services for all people across rural NSW;
- Improve safety and accountability in all surgical services; and
- Improve sustainability of the peri-operative workforce and promote clinical leadership and collaboration.

Rural Surgery Futures is a collaborative project between NSW Health and the Surgical Services Taskforce under the guidance of the Rural Surgery Futures Project Steering Committee.

The Rural Surgery Futures report outlines a framework for public sector surgery (both elective and emergency) in rural NSW for the next 5-10 years. This will assist policy makers, health service planners, clinicians, surgical services staff, professional bodies and managers to direct future investment in emerging technology, workforce retention and training and infrastructure in order to provide the best outcome for patients and the community.

1.1 Aim

The aim of the Rural Surgery Futures is to guide the development of public sector surgery (both planned and acute) in rural NSW for the next 5-10 years.

1.2 Developing Rural Surgery Futures

Over 400 health professionals have either attended one of the consultation meetings or directly contacted the Rural Surgery Futures team.

The hospitals visited were Wagga Wagga Base, Griffith Base, Queanbeyan District, Goulburn Base, Bateman's Bay District, Bega District, Moruya District, The Maitland Hospital, Gunnedah District, Narrabri District, Moree District, Inverell District, Armidale Rural Referral, Tamworth Rural Referral, Manning Rural Referral, Coffs Harbour Base, Port Macquarie Base, The Tweed Hospital, Murwillumbah District, Lismore Base, Grafton Base, Bathurst Base, Orange Health Service, Dubbo Base, Broken Hill Base and Shoalhaven.

There are 92 rural hospitals in NSW providing surgical services. 80% of surgical activity is provided by 20 of these rural hospitals (Appendix A).

The consultation meetings were successful in engaging with a broad range of hospital staff and provided valuable information which informed the recommendations in this report. The consultations brought out the complexity and interdependencies of the issues involved and highlighted that whilst a few issues may be considered in isolation, many were part of broader system issues.

Over 200 clinical and management staff from all over the state completed the Rural Surgery Futures survey. This provided the steering committee with significant information about the issues and challenges that many clinicians and managers are currently facing, their priorities for change and their aspirations and visions for the future. A more detailed summary of the survey results can be found at www.archi.net.au/e-library/delivery/surgery/surgery-futures.

1.3 Surgery Futures – Greater Sydney

Surgery Futures was undertaken in 2010 to guide the development of surgical services across the breadth of Greater Sydney (including Central Coast and Illawarra) over the next decade. Its primary aim was to better position both the Department, Local Health Districts and surgical services professional bodies to undertake informed and strategic clinical service and site specific planning for surgery.

The recommended directions for the future development of surgical services that emerged throughout the project included the development of high volume short stay centres, greater separation of emergency and planned surgery and the development of specialty centres. Many of the initiatives and enablers have applicability in the non-metropolitan setting. The recommendations of the Surgery Futures report and the Rural Surgery Futures report should therefore be considered as companion pieces.

2 Regional Surgical Networks

The major recommendation for the future sustainability of rural surgical services is the development of Regional Surgical Networks. The Network model has a regional resource centre – usually a major Base hospital - that networks with surrounding district hospitals. The Network provides the services required by the local community with an agreed sharing of services.

The Regional Surgical Networks can facilitate the timely movement of patients to services that will best meet their complex needs beyond the local hospital and/or LHD boundaries. The Networks can also facilitate the sharing of innovations and clinical practice improvements and enable rapid spread. They provide better opportunities for training, research and the maintenance of clinical skills.

Better utilisation of operating theatre capacity by networking within or across the LHD could deliver real benefits. In most Districts, there is available capacity identified in some facilities that can alleviate operating theatres at full capacity in neighbouring facilities. Accessing this available capacity will require implementation of more innovative models of regional networked care that are resourced and supported to work between local facilities.

The Networked model of care would rely on the provision of surgeons from the larger to the smaller facility and can be designed as an outreach shared care arrangement where appropriate. The requirement for a networked model is that adequate numbers of surgeons - and potentially other staff - are provided at the larger hospital to accommodate the networked surgery load and to avoid frequent withdrawal or reduction in the surgical service at the smaller facilities if their staffing is inadequate. Specialists are more likely to be attracted to a Regional Network of surgical services where the quantum of surgery is more extensive than available in any independent facility.

There are other benefits to the development of Regional Surgical Networks particularly when there is close proximity to a viable private hospital. It provides the regional network a potential advantage for attracting surgical staff and thus providing a more sustainable public surgery service. One public hospital had commenced negotiations with the local private hospital provider to undertake shared recruitment of a surgical specialist. This will result in sharing the costs of recruitment as well as a joint appointment between the two facilities.

2.1 Regional Surgery Networked Model

The Regional Surgery Networked Model is built on a structure that will generally consist of:

- One major non metropolitan hospital being the regional resource centre
- One or more District Hospitals and/or Community Acute – Surgery Hospitals (Appendix B)

The sharing of the weekend trauma/orthopaedic service between Armidale and Tamworth is an example of service networking that creates a critical mass to support an after-hours on call roster by orthopaedic surgeons in the two towns. This approach ensures continuous service provision for both communities.

An LHD that does not have a major non metropolitan hospital can still develop a functional Regional Surgery Network consisting of:

- District Hospitals that work as a combined service to essentially fulfil the role of a regional resource centre. The shared surgical service recognises specific facility roles.

Eurobodalla Health Service is a good example of a local network model. There is a local arrangement primarily between Bateman's Bay Hospital and Moruya Hospital whereby there has been agreement and implementation of a networked model in which surgery service provision is shared across facilities. Key components of this model include:

- Separation of same day and day only so that this is undertaken at Bateman's Bay only;
- All emergency surgery and obstetrics is undertaken at Moruya;
- On call and cover arrangements after hours between the facilities;
- Portability for staff; and
- Investment in post acute rehabilitation beds is at Moruya.

Within some LHD's there may be more than one local surgery network which is reflective of the distances between facilities and the need to provide access to appropriate surgical services within local communities.

Local surgery networks need to provide surgical services that fit within a comprehensive clinical service plan for the regional surgery network model.

An outreach shared care arrangement can promote safe practice and improved patient experience. It is characterised by a visiting surgeon who consults and operates in a rural hospital and the pre and post operative care is managed by

local clinicians, often the patient's General Practitioner, a General practice proceduralist or other LHD surgeon. Alternatively, the local General Practitioner proceduralist would work in conjunction with a visiting surgeon and manage the patient's post operative care.

Recommendations

1. ***That functional surgical networks be developed by each LHD, to enable the effective sharing and deployment of interventional resources (i.e. human, technological, physical and financial resources).***
2. ***That each LHD reviews the role delineation and staffing profile of rural hospitals in view of the development of networked services.***

2.2 Interhospital Transfers

Throughout the consultation, it was evident that location has a significant impact on how easily patients can access specialist surgical services including both consultation and procedures.

There are conditions for which access and referral services work well; e.g. major trauma, major burns and acute spinal injuries. However, when a patient requires a higher level of surgical care, the referring clinician may have to make multiple telephone calls sometimes over many hours to find a bed. This increases the time to definitive care, increases the chance of an adverse outcome for the patient and is a highly inefficient system.

Clinicians in referral hospitals require a good working knowledge of the capabilities of the rural facility and the clinical expertise available in the town when being requested to take a rural patient. There is a need to have formalised networks and partnerships between rural LHDs and major tertiary referral centres that are sustained and supported for the long term.

Relationships between Base hospitals, Rural Referral hospitals and tertiary referral hospitals is very variable. Rural clinicians in some locations have great difficulties in achieving an admission for their patients. Rural clinicians reported they were required to make multiple calls, keep repeating the reason for transfer and the patient's history to a variety of often junior registrars in the referral hospitals before eventually having the patient accepted for transfer.

There were many examples of delayed patient transfers for acute treatment or delayed repatriation of patients due to a lack of understanding of each hospital's capabilities, as well as a lack of understanding of what ancillary services were available within the local community.

Some major referral hospitals did not understand that a local hospital could not undertake a simple procedure on a complex patient due to lack of equipment or lack of clinical support; e.g. no intensive care unit (ICU) / high dependency unit (HDU).

Access to specialist clinics in major referral hospitals was also seen as a barrier to people receiving timely access to surgical procedures. Significant delays were reported, particularly if the specialist did not provide outreach services in the local town.

Recommendations

3. ***That each LHD establishes formal agreements and documented processes with tertiary referral centres to facilitate timely and appropriate specialist consultations and interhospital transfers.***
4. ***That each LHD establishes a guide to local facilities and clinical capabilities and ensure they are widely disseminated within referral hospitals and are regularly updated.***

2.3 Surgical Audit and Peer Review

Surgical audit is a systematic, critical analysis of the quality of surgical care that is reviewed by peers against explicit criteria or recognised standards. The audit results are used to further inform and improve surgical practice with the ultimate goal of improving the quality of care for patients (1). The frequency of audits and the level of clinician contribution are variable across hospitals.

In addition, there did not seem to be a system to facilitate the participation of GP proceduralists in audit processes. Formalised partnerships between hospitals within a LHD would provide an opportunity to undertake more robust surgical audit and peer review locally.

Recommendations

5. ***That LHDs develop intra-LHD networks to support and assist all proceduralists to participate in clinical audit and peer review.***

3 Clinical Service Planning

The consultations and responses from the survey highlight the importance of robust, transparent and inclusive clinical service planning. The reorganisation of health services in NSW into Local Health Districts presents an ideal opportunity to ensure clinicians and other key stakeholders are engaged in the planning processes, consider how clinical services work together and clearly define the role of individual hospitals within the District. There was a genuine interest and desire from clinicians to participate and contribute to the planning and delivery of local health services.

3.1 Clinical Service Delineation

While the hospital delineation defines the level of various services considered appropriate for each hospital, the level of health services that the local population should receive is not clearly described. It is important that services should be described based on population size, distance from Base or Rural Referral hospitals as well as the level of hospital service delineation.

Issues also raised in the consultations included the restriction that hospital role delineation placed on each single facility. Enhancement of resources should be made to accommodate the networked provision of service rather than viewing each facility individually. There is considerable inequity of access to equipment pool funding, especially in networked systems, as resources are directed to facilities with a higher role delineation irrespective of actual need.

Recommendations

6. ***That MoH provides a description of the level and type of health services appropriate for the local populations served by regional surgical networks.***
7. ***That MoH reviews the current approach to role delineation of facilities to improve recognition of the networked service model when making capital and equipment allocation decisions.***

3.2 Clinical Service Plans

Clinical service planning provides an opportunity to ensure that services are appropriate for the local community and evolve in response to changes in population, disease prevalence and changes in models of care and technology. Despite this, there were few non-metropolitan hospitals that had a current, contemporary clinical service plan. This has consequences for service and

infrastructure development, equipment replacement and investment as well as workforce recruitment and retention.

Many clinicians were uncertain of the future role of their service or hospital. Thus, clinicians are potentially making decisions about their long-term work plans and their private practice without the requisite service planning.

While there were regional differences in terms of the appropriate processes for involvement in planning, most clinicians expressed a preference to be involved at the stage when different options were being developed rather than when solutions were on the table.

Clinical service planning should inform capital planning, be built on appropriate models of care that reflect NSW Health policies and guidelines, network and population perspectives, and reflect contemporary best practice. Clinical service planning should be undertaken prior to the development of capital and master plans and be reviewed at least every five years.

Clinical service planning requires specialised skills and LHDs require the resources to undertake contemporary and best practice planning. It is important to build the capacity of staff and teams over time to undertake clinical services planning on a regular and ongoing basis.

A rolling program across NSW of formal clinical service plan development and review would increase certainty for the LHD as well as provide an effective process for ongoing clinician engagement.

Rural communities in New South Wales rightly expect access to high-quality health care as close as possible to where they live. Rural communities are passionate and committed to their local hospitals. Communities need clarity about what types of health services are available and how and where they can access them.

Community awareness and understanding of what is safe and appropriate to provide locally and what is best provided at another facility is an important part of any repositioning of rural surgical services.

Recommendations

8. ***That MoH provides appropriate resources to assist LHDs to undertake detailed clinical service planning. This includes guidelines for service planning, access to funds to purchase expert planning services and staff to coordinate regular service planning activities.***
9. ***That MoH ensures that clinical service planning occurs on a regular basis. Each LHD should have a plan that is no older than 5 years.***
10. ***That LHDs ensure that clinicians (including resident and visiting specialists as relevant), the Division of General Practice / Medicare Local, the Rural Clinical Schools as well as other key clinical personnel are fully involved in planning.***
11. ***That LHDs engage relevant community groups in the development of appropriate local and networked surgical services.***

4 Rural Workforce

Many rural staff expressed major concerns about the significant perioperative workforce shortages, difficulties in attracting and retaining specialists, deficient succession planning, the impact of long working hours, on-call demands and a lack of tertiary hospital support. Stakeholders reported that insufficient numbers of specialist surgical, obstetric, anaesthetic, perioperative nursing, allied health staff and GP proceduralists are being trained for non-metropolitan NSW.

The Divisional Group of Rural Surgery identified that between 2006 and 2010, the number of specialist surgeons has grown by 7 per cent to 177. During the same period, there have been 18 retirements and 30 new surgeons who have commenced practice, nearly half of whom are International Medical Graduates. Thus, recruitment of Australian graduates is not keeping pace with workforce requirements (2).

Managers also expressed a high level of frustration with current recruitment processes. Difficulties with the mandated electronic system e-Recruit and lack of feedback mechanisms were causing significant delays with the result that potential staff members were choosing to find positions elsewhere.

Rural specialist and perioperative staff wish to remain and practice in non-metropolitan NSW. However, it is the opinion of many staff that there is inadequate emphasis on resolving rural staffing issues.

4.1 Hospital Management

The functional stability of hospitals relies on there being robust local administration. Many hospitals in non metropolitan NSW have frequent changes in their senior management ranks including the general manager. Very few hospitals had a Director of Medical Services and those that existed were often filling short term locum positions. This posed significant problems for senior medical staff as local decision making was considerably delayed and undertaken without local knowledge by distant administrators.

Recommendation

12. ***That LHDs ensure stability of hospital administration by the recruitment of General Manager, Director of Medical Services and other senior hospital management roles.***

4.2 Rural Specialists

A key underpinning of the health system in rural NSW is a reliance on a highly specialised workforce with procedural skills suitable for rural practice. There are concerns about the adequacy of the future supply of specialists with procedural qualifications and skills. According to the University of Melbourne Foundation Chair in Rural Health, Professor David Simmons, only 12 percent of medical specialists work in rural areas and this workforce is ageing (3). Action needs to be taken to ensure the workforce needed for rural areas is being trained.

Although there is a desire from medical students and junior resident doctors to remain in rural areas post-graduation, current vocational training programmes are metropolitan-based. A revised postgraduate training scheme based in rural centres, with appropriate attachments to metropolitan hospitals as required for specialty training, would assist in attracting and retaining postgraduate trainees interested in a rural practice and lifestyle. In addition, increased numbers of advanced trainee posts in regional centres were identified as necessary to maintain and support the rural specialists.

Succession planning was also identified as a major issue by specialists. Employment processes that would allow for new specialists to be employed prior to the specialist in the position leaving was seen as being an effective mechanism to ensure skills transfer, minimise the transfer of higher loads to remaining specialists and build sustainability, continuity and confidence in the service.

There was considerable support for the establishment of a number of funded rural Fellowship positions. This is seen as a method to entice and prepare new specialists for rural practice by taking up a one or two year Fellowship position.

Recommendations

13. ***That MoH negotiates with the NSW State Committees of the relevant Colleges to establish rural based training centres in an appropriate number of major rural referral hospitals.***
14. ***That MoH establishes a number of funded Rural Fellowship specialist positions, in consultation with regional networks, particularly in anaesthetics and surgery.***
15. ***That MoH negotiates with the NSW State Committee of the College of Surgeons, the establishment of a number of training positions in rural hospitals as the trainee's principal hospital affiliation.***

4.3 GP Proceduralists

Many rural communities rely upon the GP to provide emergency and obstetric care services and perform surgical and anaesthetic procedures. Unfortunately, the number of rural GP proceduralists is declining at a concerning rate.

This has been largely due to fewer options available for GPs to receive surgical training, too few funded training positions and a lack of a career pathway with recognised qualifications. The shortage of GP Proceduralists has in turn resulted in unnecessary referrals to out of town specialist general surgeons for procedures that could have been performed by the local GP.

At present, the uncertain career pathway is a major drawback. Inadequate support for procedural GPs was also identified as a concern. Consideration should be given to adapting a more flexible and supportive model equivalent to the Rural Generalist Pathway (RGP) initiated in Queensland to supply the quantum of capable medical workforce that rural and remote communities need (4).

The RGP, a Queensland Health funded initiative, is a fully supported, incentive-based career pathway for junior doctors wishing to pursue a vocationally registered career in Rural Generalist Medicine. The recognition of Rural Generalist Medicine as a medical discipline in its own right provides attractive remuneration and career opportunities for those medical officers with aspirations of working in rural and remote Queensland as a Rural Generalist.

In NSW the Health Education and Training Institute (HETI) coordinates the management of the General Practitioner Training Programs. The aim of the these programs is to provide opportunities for GPs to acquire additional skills in procedural general practice that will enable them to practice in rural NSW. (5)

Recommendation

16. ***That statewide training programs be commissioned for future and current GP proceduralists under the auspices of HETI and the relevant specialist colleges. This training should be funded and lead to a robust and transportable qualification with recognised academic standards leading to a well defined career pathway.***

4.4 Perioperative Nursing

Access to ongoing education and training is a major priority for many clinicians in rural practice. There is a general lack of opportunity for clinicians to undertake continuing education in rural areas without significant cost and inconvenience.

While on-line courses in NSW are offered for perioperative nurses, access to post graduate perioperative Nurse Educators was almost non-existent in non-metropolitan NSW and only a small number of hospitals had a Clinical Nurse Educator. Lack of this resource is leading to diminished staff satisfaction and has potential to compromise patient safety. The establishment of a Perioperative Nurse Educator for networked hospitals within each LHD will assist in informing and developing perioperative services, education and training.

The perioperative Clinical Nurse Consultant role (Appendix C) has been previously implemented in some Area Health Services and this role needs to be created within new LHDs to both compliment and support perioperative Nurse Educators.

Recommendations

17. ***That LHDs appoint Perioperative Clinical Nurse Consultants supported by Clinical Nurse Educators in each regional network of hospitals to support ongoing training and education of perioperative nursing staff.***
18. ***That LHDs ensure that perioperative staff have internet access for educational purposes.***

4.5 Allied Health

Allied health services are a vital part of any successful surgical program. Failure to provide adequate access to allied health leads to longer lengths of stay and impacts on patient recovery, and ultimately increased costs to the system as patients stay longer and are more likely to be re-admitted in an unplanned way. In both the hospital workshops and survey results, it was evident that planning for allied health services to support the surgical program was often overlooked or seen as “an easy target” for cost savings.

Recruitment and retention and access to ongoing education and training were also noted as requiring more attention. However, there are models in NSW for the recruitment and retention of allied health staff that that are working well (Appendix C).

Recommendations

19. ***That LHDs ensure an appropriate level of allied health staff are appointed and that their regional numbers and responsibilities are defined.***

4.6 Incentives for Rural Practice

Recruitment of new staff including surgeons, anaesthetists, nurses and allied health professionals was an issue for almost every service. For many rural towns, the ability to recruit and then retain experienced staff is often dependent on being able to accommodate the requirements of the partner and family. Availability of good quality schools and employment for the partner are large draw cards and more likely to lead to long-term commitment to both the town and the hospital.

Over the years, there have been a number of different employment contracts offered by local health administrations to attract clinicians. These have increased the complexity of staff remuneration as clinicians move from hospital to hospital across the LHD. There are examples where clinicians working at two or more hospitals in the same LHD are under separate award arrangements. These “special” remuneration arrangements are causing a degree of consternation among clinicians.

There is also significant disparity between award conditions for nurses, doctors and allied health staff in NSW compared to other states. Significantly higher remuneration and better employment conditions are available elsewhere and is leading to loss of staff, particularly across the Queensland and Victorian borders.

Recommendation

20. ***The MoH undertakes a review of the remuneration of anaesthetists, surgeons, obstetricians, ED specialists, GP proceduralists and other rural based staff to incentivise their rural attachment and remove any barriers that may diminish the efficient use of available resources.***

4.7 Credentialing

Credentialing refers to the formal process used to verify the qualifications, training, experience, professional standing and other relevant professional attributes of medical practitioners for the purpose of forming a view about their competence, performance and professional suitability to provide designated safe, quality health care services within specific organisational environments.

The most critical issues are the duplication of process and length of time both within and across services. Examples identified in rural locations included:

- separate processes between adjacent towns; and
- separate credentialing requirements for different clinical services.

There is a review of credentialing processes being undertaken by the MoH which aims to provide a more efficient and safe credentialing and appointment process for practitioners. The two main deliverables for this project will be a central Information Technology system containing standardised information regarding a senior medical practitioner's verified credentials, scope of clinical practice and clinical appointments and a standardised statewide process for recruiting and credentialing of practitioners.

Recommendation

21. ***That MoH develops a safe and more efficient state-wide credentialing system.***

4.8 Locum Services

Locums are an essential part of surgical landscape within the rural NSW health system. Resources do not allow for staffing levels that would mitigate expected and unexpected periods of absence or higher clinical demand. Clinical locums therefore constitute a valuable addition to the surgical workforce.

The use of locums is variable across the state, ranging from long-term usage across many specialties to the filling of temporary rostering gaps. The cost of employing locums is increasing and significant resources could be released if the use of locums was managed more carefully. In some instances, clinicians were choosing not to take up permanent positions as they were earning much more as a locum and were able to secure ongoing work. Thus, the remuneration of locums acted as a disincentive to obtaining permanent employees. On the other hand, there were long-term locum clinicians who expressed a desire to gain full time employment but were not offered a permanent position as one was

not available (or employment would exceed the NSW Health staff profile despite being more cost efficient).

Patients should be able to expect the same standards whether a locum or a permanent member of clinical staff provides the care. Some locum staff reported poor orientation to available services, being required to undertake emergency surgery as their first operating list in a hospital, and not understanding the capability of either the facility or the staff with whom they would work. Some locum staff had limited clinical skills and permanent staff often reported instances of not having an understanding of the capability of the locum.

Recommendation

22. ***That each LHD ensures that resources for locum employment are used more effectively and permanent positions are promoted wherever possible.***

5 Infrastructure

Asset management is seen as key to ensuring that equipment is well maintained and replaced when no longer fit for the purpose. However, it is evident that asset management is a struggle in many rural hospitals.

In order to establish a robust asset management system, LHDs need to:

- be able to estimate whole-of-life cycle costs and operating costs associated with the investment in surgical equipment;
- have a system to determine replacement of medical equipment assets and business case principles to consider additional medical equipment asset purchases as part of promotion of a business planning culture.

NSW Health has an asset management framework that is currently being reviewed and will assist LHDs in creating more robust and responsive mechanisms for both the investment in and replacement of key surgical assets.

5.1 Equipment

The process for including clinician input to the prioritising of equipment requirements was very varied across the state. There was concern that higher cost equipment was prioritised when additional funds became available, leaving routine and low cost items lower down the priority list despite being past the useful life date.

There are many examples of where equipment was deemed past its useful life and was replaced at a Base hospital, but then “gifted” to a smaller hospital with little biomedical support to maintain the older piece of equipment.

The deployment of robust and objective prioritisation and decision-making processes in relation to investments in surgical equipment is variable across rural NSW. Clinicians in general were unaware of how prioritisation occurs and many others did not know that there had recently been significant Commonwealth funds made available to surgical services for equipment.

The adoption of new technologies was not a clear process for many clinicians. Firstly, there was no process for dissemination of new technologies that are now common practice in city based hospitals (e.g. holmium or green light laser). Secondly, there was no process for identifying and funding the introduction of those technologies that would significantly improve surgical practice in a rural or regional setting.

There is a perception that rural and regional hospitals are the last to benefit from new established technologies. This is impacting on the ability to offer

contemporary and evidence based care in some instances, as well as impacting on the ability to recruit new surgeons to the area.

Access to new technologies by specialists will allow local GP proceduralists and general surgeons to maintain viable practices within their community. The Surgery Futures Report recommended that a fund be established to identify and seed-fund surgical technologies that will improve patient outcomes and / or create efficiencies. Rural clinicians support the establishment of this mechanism as a matter of priority.

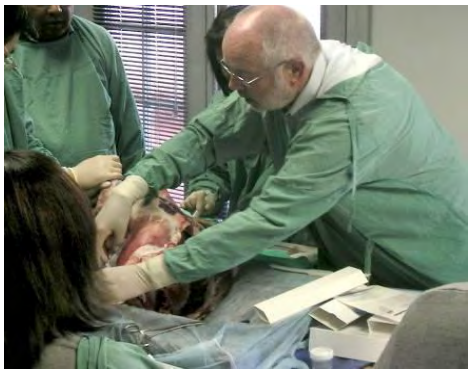
Recommendations

23. ***That LHDs improve Asset Management processes and procedures to maintain, determine the useful life of and replace key surgical assets.***
24. ***That LHDs implement transparent and inclusive processes and procedures to ensure clinicians are engaged in the prioritisation of equipment purchase and replacement.***
25. ***That LHDs develop detailed and transparent processes for adoption and dissemination of new clinical practices and surgical technologies within the regional surgical network.***
26. ***That MoH establishes a technology fund that specifically assists non-metropolitan LHDs and clinicians to adopt contemporary and efficient surgical technologies.***

6 Rural Clinical Schools

The future of rural surgery largely depends on the attraction of the next generation of surgeons. The consultation found that rural surgeons and other clinical staff consider that the Rural Clinical School model is having a positive impact on attracting rural students and doctors. However, in a number of larger regional centres the need to increase the numbers of rural registrars was identified. The principle is supported that wherever possible, learning and education should be delivered in a rural setting.

The Rural Clinical Schools are well placed to bring innovative models of teaching to the fore. The Rural Clinical School at Wagga Wagga for instance has demonstrated significant innovation in providing access to simulation resources and encouraging multidisciplinary practice.



(Laboratory based simulation training at a Rural Clinical School)

There are also examples where the Rural Clinical School is integrated vertically and horizontally with the local health services; e.g. the Rural Clinical School in Dubbo. The close integration of Rural Clinical Schools with LHDs is essential to attract appropriate specialist staffing to rural hospitals and to improve local educational and training opportunities.

Recommendation

27. ***That relevant LHDs establish links with relevant Rural Clinical School(s) to explore how to optimise learning and training opportunities for vocational trainees.***

7 Other Clinical Services

7.1 Services for Morbidly Obese Patients

As the rate of obesity continues to increase, there is a need to assist LHDs and hospitals in ensuring that services can respond to caring for morbidly obese patients when they require surgery.

There is considerable variability in service provision for patients with high Body Mass Index (BMI) in many non-metropolitan hospitals. Most rural hospitals have the equipment required for morbidly obese patients. However, transfer of morbidly obese patients between hospitals often meets with long delays as there are few ambulances in NSW that can cater for morbidly obese patients.

A comprehensive approach to bariatric surgery would provide more certainly for patients and staff particularly if it covered:

- assessment and management of the morbidly obese through a multidisciplinary clinic;
- assessing appropriate morbidly obese patients for all options of surgery; and
- providing bariatric surgery at specified regional centres.

Recommendations

28. ***That the NSW Ambulance Service increases the number and considers the location of suitable ambulances for the transportation of morbidly obese patients in non metropolitan NSW.***

29. ***That MoH leads the development of a state wide plan for the management of the morbidly obese patient within NSW hospitals.***

7.2 Surgical Services for Children

There has been a gradual reduction in surgery for children undertaken in rural hospitals, resulting in more routine cases being undertaken by the specialist paediatric centres. The reasons for this are varied and include limited access to anaesthetists who are skilled and experienced in anaesthesia for children and lack of dedicated children's facilities. Throughout the consultation process, many surgeons expressed a desire to be able to undertake more routine surgery for children locally. This is clearly an area that warrants further exploration, particularly for day surgical procedures.

The relationship between the paediatric hospitals and surgery services across rural NSW is important in ensuring that children have the best access to surgery

in a timely manner. There should be clear agreement about what surgery for children can be undertaken locally, what minimum volumes are required and what opportunities for improvement exist within the current system.

In order for this to occur, the Sydney Children's Hospitals Network (Randwick and Westmead) and John Hunter Children's Hospital in conjunction with the broader surgical community develop models of care that both encourage participation by rural surgeons and anaesthetists and support them through outreach, on call or other service models.

Recommendation

30. ***That the Sydney Children's Hospitals Network (Randwick and Westmead) and John Hunter Children's Hospital lead the development of a state-wide plan for surgery for children which considers where and what surgery for children should be performed, paediatric anaesthesia and ongoing support, education and skills maintenance.***

7.3 Radiology Services

Many rural hospitals rely on the private sector to provide their radiological services. There were many instances of radiology services being either inadequate to support an increase in activity or current contracts with private providers not being specific enough to respond to new and flexible models of care. While the imaging reporting was generally not a problem, of concern was some radiological services not being available; e.g. ultrasound or not being on call when the hospital provided 24 hour emergency surgery. The lack of interventional radiologists was commonly reported. Radiology is a critical aspect of surgery and contracts and service agreements need to support the surgical service rather than radiology availability restricting available surgery or causing the unnecessary transfer of patients.

7.4 Pathology Services

As with radiology, the availability of pathology is critical to providing a high quality and safe surgical program. Many pathology services were provided by the private sector but the quality of the service was very variable. There were a number of concerns raised about the turn-around time and quality of pathology reports. A number of hospitals did not have access to cytology and frozen sections. Understanding what resources are required onsite and what can be effectively provided centrally or privately will assist LHDs better manage contracts with private providers.

Recommendations

31. ***That LHDs review their contract with radiology and pathology services and ensure the range and quality of contracted services meets the needs of the hospitals and regional networks.***

32. ***That The Royal Australian and New Zealand College of Radiologists The Royal College of Pathologists establish non metropolitan training positions particularly within the regional surgical network.***

7.5 Critical Care Services

The provision of ICU and HDU directly impacts on the type and complexity of surgery that can be performed at an individual site. As LHDs increase networking across sites, critical care services require regular review and the location and level of critical care support reassessed.

The consultation identified examples of unfilled ICU Director positions, ICU / HDU services being driven principally by local clinician input, facilities where ICU / HDU were no longer available due to staffing shortages (medical and nursing) and facilities where surgical cases were transferred out due to lack of staff and resources within ICU / HDU.

Recommendation

33. ***That MoH develops a rural ICU / HDU plan that recognises the need for consistent ICU / HDU services to support the delivery of surgical services.***

8 Population Overview

For LHDs to plan surgical services there needs to be an awareness of population current and projected for the next 5-10 years.

8.1 Projected Shifts in Population

Table 1: Projected shifts in population across rural and regional NSW to 2021/22

Local Health District	2009 (ERP)	Projections		% change 2009-16	% change 2009-21	2009 pop. % age 65+	2016 pop. % age 65+	2021 pop. % age 65+
		2016	2021					
Hunter New England	877,029	915,385	950,056	4%	8%	16%	19%	21%
Northern NSW	294,583	314,957	331,839	7%	13%	18%	22%	24%
Mid North Coast	208,667	228,291	242,397	9%	16%	20%	24%	27%
Southern NSW	197,656	216,995	231,286	10%	17%	16%	19%	22%
Murrumbidgee*	294,704	296,991	301,364	1%	2%	16%	19%	21%
Western NSW	272,472	270,822	272,461	-1%	0%	15%	18%	21%
Far West	32,337	29,783	28,329	-8%	-12%	17%	20%	23%
Total	**7,134,421**	**7,603,502**	**8,008,299**	**7%**	**12%**	**14%**	**16%**	**17%**

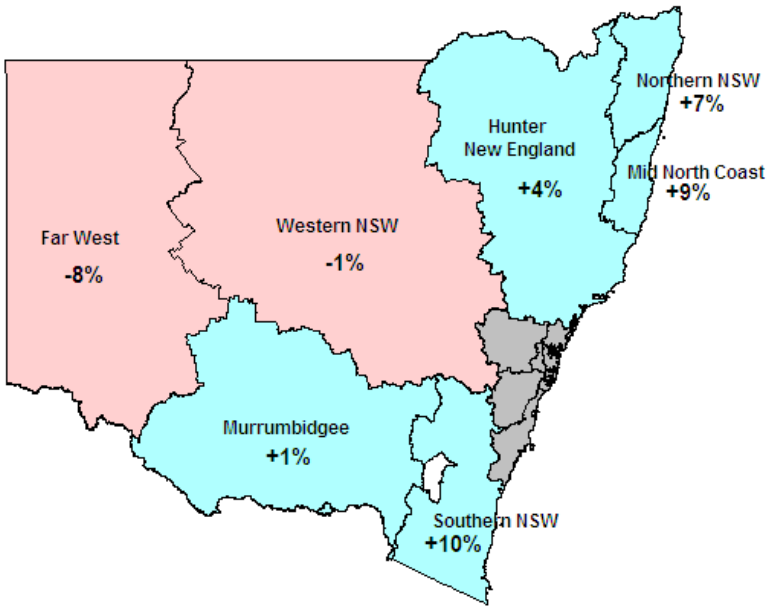
* Murrumbidgee inc Albury LGA

Sources: NSW Health Population Projection Series 1.2009. Department of Planning & Statewide and Rural Health Services and Capital Planning Branch, March 2009 and ABS Estimated Resident Population, Statistical Local Areas, New South Wales, June 2009 Release

The population projections indicate that Southern NSW LHD will have the largest projected increase in population over the next 10 years however Mid North Coast will have the largest percentage of age 65s and over.

The current projection for changes in population across rural NSW is variable with growth predominately in the Northern and Southern areas.

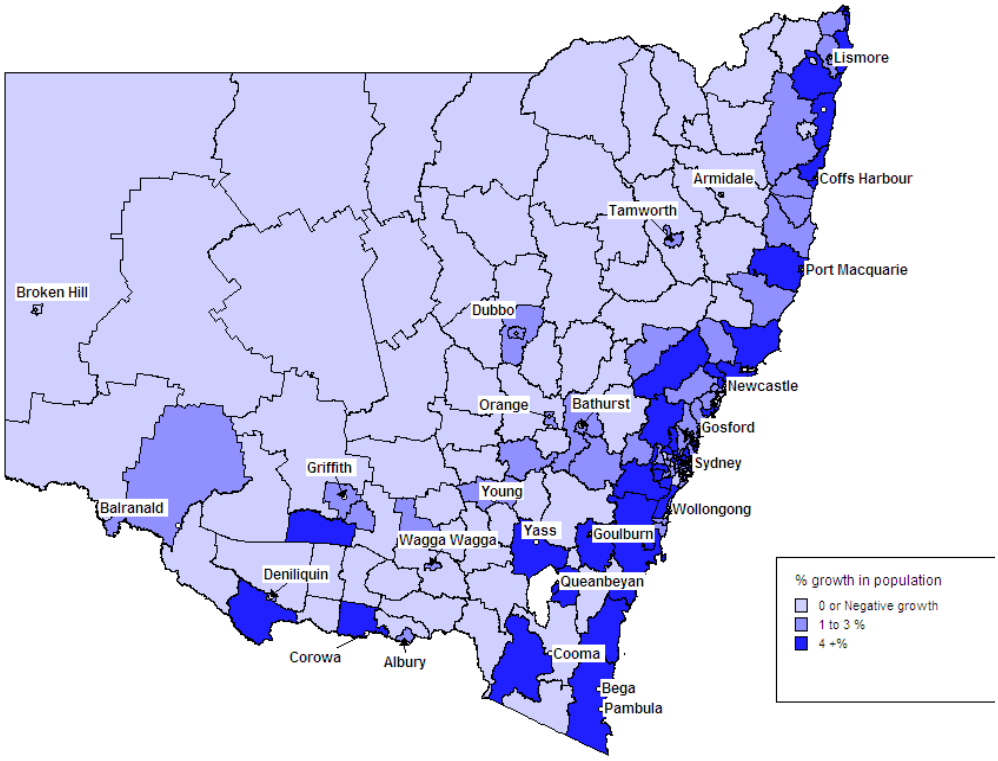
Figure 1: NSW Rural Local Health Districts – projected change in population (all ages) 2009 to 2016



Source: NSW Health Population Projection Series 1.2009. Department of Planning & Statewide and Rural Health Services and Capital Planning Branch, March 2009 and ABS Estimated Resident Population, Statistical Local Areas, New South Wales, June 2009 Release

The concentration of population and especially the growth in population is predominantly in the Local Government Agencies in the East of the state and is reflective of the population shift towards the coast and coastal fringes.

Figure 2: NSW Statistical Local areas and rural/regional centres– projected change in population (all ages) 2009 to 2016



Source: NSW Health Population Projection Series 1.2009. Department of Planning & Statewide and Rural Health Services and Capital Planning Branch, March 2009 and ABS Estimated Resident Population, Statistical Local Areas, New South Wales, June 2009 Release

SECTION 2

9 Local Health District Specific Issues

As the consultation forums revealed, there are common issues that impact on rural surgery and are shared across non-metropolitan NSW. These state-wide issues have been discussed in Section 1 with appropriate recommendations for their improvement or resolution. There are a range of surgical issues that are specific to each District which are discussed in this section.

9.1 Far West Local Health District

Covering an area of 118, 000 square kilometres the Far West Local Health District (FWLHD) extends from Tibooburra in the North to Balranald in the South, Broken Hill in the West and Ivanhoe in the East.

The current population of 21,500 is expected to decrease by 12 percent over the next 10 years.

There are 7 health facilities of which only Broken Hill Base Hospital delivers the majority of surgical services across the district. It is the major rural referral centre and provides a range of inpatient and outpatient services.

Whilst the LHD is able to provide general medical, surgical, maternity, palliative care and rehabilitation services, patients requiring complex procedures or access to critical care services must travel out of the district. The location of FWLHD will place significant pressure on services due to the difficulty in attracting and retaining a skilled workforce and thus is currently reliant on a high number of locum anaesthetists and surgeons.

The major impact for the FWLHD is the relative remoteness from most of NSW and the comparatively small capacity of services outside of Broken Hill in respect of surgery. There are long standing established patterns for surgical referral and support for Broken Hill to both

South Australia (Adelaide) and NSW (Dubbo and Sydney). The Royal Flying Doctor Service (RFDS) has a base at Broken Hill and this provides a co-ordination point for many retrieval and transfer services.

Major issues

There is a need to strengthen links between Broken Hill and the major tertiary centres that support Broken Hill (i.e. Royal Adelaide Hospital and Royal Prince Alfred) through ensuring regular rotation of junior medical staff and the opportunity for enhancing telemedicine / telesurgery support.

There are difficulties in recruiting specialist perioperative nursing staff, as is apparent in other rural LHDs. There is an opportunity to consider incentives to potential employees to assist in attracting staff to this relatively remote LHD.

9.2 Hunter New England Local Health District

Hunter New England Local Health District (HNELHD) covers a geographical area of over 130,000 square kilometres. Hunter New England LHD is one of the most populous LHDs outside of the Sydney Metropolitan areas and provides a broad range of health care services for approximately 840,000 people, which includes approximately 20 percent of the State's Aboriginal population. The population of Hunter New England is expected to grow by 12 percent over the next ten years. The current population is serviced by 15,000 staff with 1,500 medical officers in the region.

Hunter New England is the only Local Health District with a major metropolitan centre (Newcastle / Lake Macquarie), and has a mix of several large regional centres, small rural centres and remote communities on the border. Hunter New England is divided into four acute hospital networks.

As the population increases over the next ten years, the demand for surgical services will be expected to grow.

HNELHD benefits from being a continuation of the previous Area Health Service and is supported by central planning resources, clinical network and streaming models and a stronger tradition of relationships between facilities than some other LHDs.

Major issues

There appears to be inconsistency in the relationships with NSW universities (particularly medical schools) and this results in strong relationships in some parts of the LHD and very weak relationships in others. The structuring of surgical joint appointments and their operation in practice warrants some further exploration, as does the allocation and supervision of students. This equally applies to allied health students for whom there seemed to be very variable programs, with little support other than from onsite allied health clinicians. There

is clear evidence of investment by the universities (e.g. simulation facilities) and commitment from clinicians of all disciplines to invest in students for the future.

Networking of local hospitals is of particular importance in HNELHD – the District is one of the largest and has good examples of where at a local level facilities are trying to work together (e.g. Armidale, Inverell and Glen Innes; Taree, Gloucester and Forster Private Hospital). There was strong enthusiasm from clinicians in all sites to be involved in clinical service planning for the future and a desire to contribute. However, there was also a sense that planning was done somewhere else and there were few opportunities for clinicians to be involved in shaping the future development of services from the bottom up. HNELHD is well placed to capture and harness this energy.

Many of the smaller surgical services depend on GP proceduralists and GP anaesthetists. Due to the large number of these facilities within HNELHD, there is a specific need to consider the current output from the GP training programs and options to increase GP proceduralists in the future. There was some evidence of succession planning, but in many cases the greater likelihood was that specific surgical services could cease when key retirements occurred. Networking that involves rotation of surgeons may address this to some extent, but the distances involved between smaller facilities mean that there will always be a need for proceduralists if surgical services are to continue. Implementation of a Queensland style GP training scheme in HNELHD was strongly advocated by both local clinicians and administrators.

Differential incentives for the employment of clinicians (all disciplines) is problematic for facilities in HNELHD as favourable incentives are being offered in adjoining LHDs and also in Queensland. This results in loss of staff from the District and creates a significant recruitment and retention issue. In common with consultation in other non-metropolitan areas, there was strong support for consistent incentives for non-metropolitan employment to encourage recruitment and retention.

9.3 Mid North Coast Local Health District

The Mid North Coast Region is located between Sydney and Brisbane and extends from the Clarence Valley in the North to the Great Lakes area in the South. The Mid North Coast Local Health District (MNCLHD) covers an area approximately 26,324 square kilometres.

The current population is 313,700 and is expected to grow by 10 percent over the next ten years. Most of the population growth is expected to occur in the region spanning from Coffs Harbour to Port Macquarie. The Mid North Coast has the oldest population in NSW, with approximately 20 percent of the population aged over 65 years. Port Macquarie has the highest proportion of older people, with approximately 25 percent of the population aged over 65 years. The older population is expected to increase rapidly as a result of an ageing existing population and retirement migration. The increase in population will increase the pressure for surgical services in these areas, particularly in more densely populated regions such as Coffs Harbour and Port Macquarie.

MNCLHD has two large facilities that have developed relatively independently and a small number of other facilities providing surgical services. There has been some development of local networks (e.g. Coffs Harbour, Bellingen and Macksville; Port Macquarie, Wauchope and Kempsey); however there is real opportunity to maximise the use of surgical capacity in the smaller facilities. This would both offset the pressures on the larger facilities prior to the completion of future capital developments and provide the opportunity to implement / build on surgical models of care – fast track, separation of planned and emergency and moving non-surgical procedures out of theatres.

Major issues

Recruitment of staff was primarily an issue in Coffs Harbour, as the more favourable incentives provided to medical staff at Port Macquarie and Lismore (in the Northern NSW Local Health District) significantly impact the facility. The

same issues regarding loss of staff to Queensland was identified, but generally recruitment was not considered a significant problem in MNCLHD. Clinicians were keen to contribute to a clinical service planning process that would enable a view of the future to be articulated and thus help in targeting recruitment.

Implementation of the NSW Inter-facility Transfer Process for Adults Requiring Specialist Care (6) at Coffs Harbour Base Hospital was considered challenging. Previously the primary and established referral pattern for tertiary support was to metropolitan Sydney. Introduction of this policy has redirected workload to JHH which was identified as problematic.

9.4 Murrumbidgee Local Health District

The Murrumbidgee Local Health District (MLHD) resides within one of NSW's highest food producing regions. The current population of 251,975 is expected to grow by 3 percent over the next ten years.

Griffith Base Hospital offers 114 beds with specialist medical services, intensive care, surgical and renal dialysis.

Wagga Wagga Health Service (WWHS) is the largest referral hospital within the Murrumbidgee LHD, and is consequently the busiest rural referral hospital in NSW with approximately 18,000 admissions, 800 births and 7,000 operations each year. The current services provided by this facility include medical, surgical, maternity, paediatric, community health and rehabilitation. Wagga Wagga dominates the surgical services profile for the MLHD. WWHS is supported by a very strong Private Hospital including a stand-alone Day Surgery Hospital. Most surgeons consult, and many operate in surrounding District Hospitals. Proximity to the ACT and the traditional flows of surgical patients from smaller facilities to Canberra hospitals will continue to impact the provision of surgical services within the District

Major issues

The majority of surgeons are employed as VMOs or surgical locums rather than GP proceduralists or staff specialists. This creates a surgical workforce in which there are few incentives for the development of a strong surgical team approach and leads to real challenges for after hours roster cover and post operative care. The lack of experienced perioperative nursing staff has resulted in the need to use agency staff and this further impacts on the development of a cohesive surgical team.

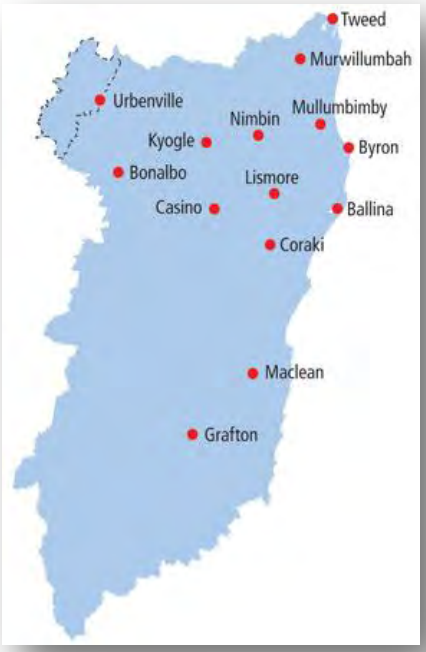
Both Wagga Wagga and Griffith have been the subject of surgical reviews from facility and workforce perspectives and there are concerns by clinicians and administrators that the infrastructure at Wagga Wagga is outdated and inadequate for the provision of the perioperative services that are now required.

The lack of optimal utilisation of theatre facilities at other sites (e.g. Griffith) creates further pressures on Wagga Wagga.

One of the strengths of the Murrumbidgee LHD is the integration of the rural clinical school with the hospitals across the region and the GP proceduralist training that it provides.

9.5 Northern NSW Local Health District

The Northern NSW Local Health District (NNSWLDH) covers an area of 18,911 square kilometres. The region is below the Queensland border, and has a population of approximately 297,892. The population is expected to increase by 11 percent during the next ten years. The region has net out-migration of young adults, resulting in an age distribution with relative small numbers of people aged between 20 and 40 years. The population of people aged over 65 years is approximately 15 percent, which is expected to increase over the next ten years.



Facilities in the LHD include Ballina, Bonalbo, Byron, Casino, Coraki, Grafton, Kyogle, Lismore, Maclean, Mullumbimby, Murwillumbah, Nimbin, Tweed and Urbenville. Of these facilities, six provide surgical services.

Lismore Base Hospital is the region's largest referral hospital and undertakes approximately 8,100 surgical procedures annually.

Major issues

NNSWLHD has specific challenges due to its location on the border with Queensland and the high growth that exists to the north between the border and Brisbane. There are natural flows of patients across the border in both directions, but the lack of any formalised agreements between the various facilities in respect of inter-hospitals transfers makes surgical services harder to access for some patients. As the funding arrangements for inter-state transfers are generally resolved at a State level, this mitigates against local practical arrangements being developed.

Payment and award conditions / incentives vary between hospitals within the LHD and this affects the ability of surgeons to travel between hospitals for work. To overcome the shortage of medical staff there is a reliance of surgical locums which does not lead to a sustainable model of surgical care for the future. The ageing of both the medical and nursing staff workforce is creating a situation in which succession planning is becoming an urgent priority.

Lismore and Tweed are the largest facilities and can support junior medical staff rotations but other facilities do not have sufficient numbers of junior medical staff.

Whilst there was a lot of discussion about working more in a network system, there was considerably more development of the concept possible. Theatre and bed capacity exists in some of the smaller facilities. However, these are not being used either due to low staffing numbers, lack of allied health support or lack of medical staff support to ensure safe and adequate out of hours medical cover.

9.6 Southern NSW Local Health District

The Southern NSW Local Health District (SNSWLHD) includes Bega Valley and the Eurobodalla Shire. The current population of 202,600 is expected to rise by 14 percent in the next ten years. Nearly half the residents are aged over 40 years and above.

The Eurobodalla Shire is serviced by Bateman's Bay Health Service, which works closely with Moruya Health Service. These Health Services provide acute and primary care to approximately 37,000 permanent residents within the Eurobodalla Shire. Moruya is supported by visiting medical officer specialists and GPs.

In 2009-2010, there was an increase of approximately 4.6 percent of surgical procedures compared to 2008-2009. An increase of 7 percent was seen in emergency procedures.

Major issues

SNSWLHD has particular challenges for the provision of surgical services as the District has borders with the ACT and metropolitan Sydney.

This poses a particular challenge for Queanbeyan Hospital, as the travel time to major facilities in Canberra is less than 30 minutes. There are significant surgical waiting list issues in the ACT and a net outflow of surgical patients from NSW having surgery in the ACT. There is significant capacity at Queanbeyan to provide surgical services, with less than 50 percent of the theatre capacity being utilised due to lack of available commissioned beds. There is an opportunity to develop formalised arrangements between the LHD and ACT that would benefit the availability and provision of surgical services for the catchment population.

Goulburn Hospital also faces particular challenges as it is located less than 90 minutes from major tertiary facilities in Canberra and Sydney. The major growth corridor for Sydney is to the South West over the next 20 years and this will result in the metropolitan Sydney population growth moving closer to Goulburn. Goulburn is also an ageing facility that requires significant investment in infrastructure (some theatre redevelopment is currently scheduled for 2012). The third challenge for Goulburn is succession planning and the potentially imminent retirement of key surgeons which could have significant impact on the surgical profile at the hospital.

The Bateman's Bay and Moruya (Eurobodalla) network is a good example of how local services can plan from the bottom up to develop a shared surgical service that recognises specific facility roles. Eurobodalla is essentially operating as a single service and when viewed from this perspective provides a similar span of service to Goulburn or Bega

The majority of student placements across the SNSWLHD are from Australian National University. Current NSW intern quotas mean that many of these students who would potentially return and work in these facilities are not able to take up intern places. This issue warrants further consideration as once students from the ANU rural clinical school have gone elsewhere for internship it is less likely that they will return and stay in these rural areas.

9.7 Western NSW Local Health District

There are three regional base hospitals in the Western NSW Local Health District (WNSWLHD), which are Orange, Bathurst and Dubbo. Five district procedural hospitals are located at Parkes, Forbes, Cowra, Mudgee and Bourke. These district procedural hospitals provide maternity services and limited surgical services. There are also eighteen multi-purpose services and fifteen community hospitals. The LHD currently employs approximately 5,700 staff where five percent are medical staff comprising of specialists, career medical officers (CMOs), registrars, residents and interns. The LHD also has existing contracts with approximately 430 visiting medical officers (VMOs), where half are specialists and the other half are GPs. The majority of staff are employed across Orange, Bathurst and Dubbo Base Hospital, and medical services at the other hospitals are facilitated by GPs and other visiting medical specialists.

The current population is 216,100 and is expected to grow by three percent over the next ten years.

Major issues

Administration of the waiting list is an issue which many staff brought up during the consultations. It was suggested that the waiting lists be held centrally, rather than coordinated by clinicians. This would give all patients easier and equal access to surgery when required, rather than waiting for an appropriate spot to open up. The benefit of having a centrally coordinated waiting list would make it easier for surgical staff to coordinate equipment necessary for surgery, particularly if the equipment has to be borrowed from another facility.

The local health district, in consultation with facilities should communicate to the community what services are available so that any disappointment from patients is not directed towards staff. Facilities in this LHD require new guidelines to increase partnerships between each of these larger hospitals in the LHD. For instance, Bathurst Base Hospital has capacity to undertake more surgery such

as ENT, which can increase bed space at Orange Health Service. Bed-block at smaller hospitals decrease efficiency, which keep patients held up at the larger facilities and take up bed spaces from other patients waiting to be admitted.

The presence of universities in the LHD opens up an opportunity for them to increase their liaison with the facilities in the region. For instance, for medical, nursing and allied health students could increase their presence at the larger and smaller facilities, which could encourage them to return to the region post-graduation. Universities in collaboration with professional Colleges could set up programs for professional education, to encourage potential staff to base themselves in this LHD. Hiring staff, particularly nursing staff is difficult and their shortages increase strain on other staff as well as nursing staff.

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11. Appendices

Appendix A: Hospitals that account for 80% of the Surgical Procedural activity

NSW rural & regional public hospitals (supply) 2009/10 Surgical and procedural activity

Threshold for 80% of all surgical & procedural activity Source: Flowinfo V10.0

Hospital	Surgical (n seps)	Surgical (% of column)	Procedural (n seps)	Procedural (% of column)	Surgical + Procedural (n seps)	Surgical + Procedural (% of column)	Cumulative percent
John Hunter	15,536	16.70%	2,162	6.10%	17,698	13.70%	13.70%
Coffs Harbour	5,316	5.70%	3,069	8.60%	8,385	6.50%	20.30%
Wagga Wagga	5,880	6.30%	2,091	5.90%	7,971	6.20%	26.40%
Lismore	5,040	5.40%	2,148	6.00%	7,188	5.60%	32.00%
Orange	4,651	5.00%	1,848	5.20%	6,499	5.00%	37.10%
Tweed Heads	4,702	5.10%	1,287	3.60%	5,989	4.70%	41.70%
Tamworth	4,285	4.60%	1,466	4.10%	5,751	4.50%	46.20%
Dubbo	4,004	4.30%	1,293	3.60%	5,297	4.10%	50.30%
Port Macquarie	4,053	4.40%	1,091	3.10%	5,144	4.00%	54.30%
Maitland	4,086	4.40%	622	1.70%	4,708	3.70%	58.00%
Manning	3,068	3.30%	1,402	3.90%	4,470	3.50%	61.40%
Grafton	1,958	2.10%	1,031	2.90%	2,989	2.30%	63.70%
Bathurst	1,889	2.00%	1,090	3.10%	2,979	2.30%	66.10%
Newcastle Mater	1,626	1.70%	1,008	2.80%	2,634	2.00%	68.10%
Belmont	2,152	2.30%	480	1.30%	2,632	2.00%	70.20%
Goulburn	1,653	1.80%	939	2.60%	2,592	2.00%	72.20%
Armidale	1,694	1.80%	470	1.30%	2,164	1.70%	73.80%
Bega	1,627	1.70%	434	1.20%	2,061	1.60%	75.40%
Murwillumbah	1,624	1.70%	421	1.20%	2,045	1.60%	77.00%
Batemans Bay	978	1.10%	1,006	2.80%	1,984	1.50%	78.60%
Broken Hill	1,211	1.30%	624	1.70%	1,835	1.40%	80.00%

Appendix B: NSW Peer Group Definitions

Peer group definitions		
A1a	Principal Referral Group A	Acute hospitals, treating 25,000 or more acute casemix weighted separations per annum, with an average cost weight greater than 1 and having more than 1 specialty service.
A1b	Principal Referral Group B	Acute hospitals, treating 25,000 or more acute casemix weighted separations per annum, with an average cost weight greater than 1 and 1 or fewer specialty services.
A2	Paediatric Specialist	Establishments where the primary role is to provide specialist acute care services for children.
A3	Ungrouped Acute	Establishments whose primary role is the provision of acute services of a specialised nature for which there is insufficient peers to form additional peer groups. Limited comparisons can be made with other hospitals in either A1 or A2.
B1	Major Metropolitan	Acute hospitals, treating 10,000 or more acute casemix weighted separations per annum, but having less than 25,000 acute casemix weighted separations or an average casemix weight of less than 1.
B2	Major Non-Metropolitan	Acute hospitals treating 10,000 or more acute casemix weighted separations per annum that are located in rural areas providing acute specialist and referral services for a catchment population from a large geographical area.
C1	District Group 1	Acute hospitals, treating 5,000 or more, but less than 10,000 acute casemix weighted separations per annum.
C2	District Group 2	Acute hospitals, treating 2,000 or more, but less than 5,000 acute casemix weighted separations per annum, plus acute hospitals treating less than 2,000 acute casemix weighted separations per annum but with more than 2,000 separations per annum.
D1a	Community Acute with Surgery	Acute hospitals, treating less than 2,000 acute casemix weighted separations per annum, and less than 2,000 acute separations per annum, with less than 40% non-acute and outlier bed days of total bed days and greater than 2% of their acute weighted separations being surgical.
D1b	Community Acute without Surgery	Acute hospitals, treating less than 2,000 acute casemix weighted separations per annum, and less than 2,000 acute separations per annum, with less than 40% non-acute and outlier bed days of total bed days, and less than 2% of their acute weighted separations being surgical.
D2	Community Non-Acute	Non-acute hospitals, treating less than 2,000 acute casemix weighted separations per annum, and less than 2,000 acute separations per annum, with more than 40% non-acute and outlier bed days of total bed days.
F1	Psychiatric	Establishments devoted primarily to the treatment and care of inpatients with psychiatric, mental or behavioural disorders. Centres of non-acute treatment of drug dependence, developmental and intellectual disability are not included here. This group also excludes institutions mainly providing living quarters or day care.
F2	Nursing Homes	Establishments which provide long-term care involving regular base nursing care to chronically ill, frail, disabled or convalescent persons or senile inpatients.

		They must be approved by the Commonwealth Department of Health and Family Services and / or licensed by the State, or controlled by government departments.
F3	Multi-Purpose Services	Multi-Purpose Services (MPSs) which provide integrated acute health, nursing home, hostel, community health and aged care services under one organisational structure, as agreed between the Commonwealth and State Governments. MPSs provide a range of services which are negotiated with the community, the service providers and the relevant Departments.
F4	Sub Acute	Establishments that primarily provide sub-acute services, but are not specialist palliative care or specialist rehabilitation establishments.
F5	Palliative Care	Establishments with a specific function of providing palliative care to terminally ill patients.
F6	Rehabilitation	Establishments with a primary role in providing services to persons with an impairment, disability or handicap where the primary goal is improvement in functional status.
F7	Mothercraft	Establishments where the primary role is to help mothers acquire mothercraft skills in an inpatient setting.
F8	Ungrouped Non-Acute	Establishments whose primary role is the provision of non-acute services, but for which there are insufficient peers to form an addition peer group. Limited comparisons can be made within this peer group and with other non-acute facilities.

Appendix C: Successful Recruitment and Retention Programs

Case Study 1

Physiotherapy Rotational Program: A partnership between John Hunter Hospital, Newcastle and Moree District Health service

The physiotherapy department at Moree Community Health services the acute hospital and community of Moree and surrounds. There are two full time physiotherapy positions funded within the service. These positions remained unfilled for a period of approximately 2 years leading up to 2006 until an agreement was formed between the Area Professional Director of Physiotherapy for Hunter New England Local Health Network Judith Henderson and the Mehi Cluster Manager David Quirk.

A rotational program was implemented in order to staff the department. Physiotherapists in their second year of postgraduate work at John Hunter Hospital and Royal Newcastle Centres were given the option of nominating Moree as a 3 month rural rotation within their program. If this was not a preferred option for staff, negotiations were made to consider other preferences if this rotation was completed. Other incentives such as accommodation for the period of secondment and travel reimbursements also supported staff in their choice to work rurally. Potential staff were invited to visit the site for a day at the end of the preceding year in order to become familiar with the rural setting and what was on offer here.

Following the success of two initial three month trials in 2006 and 2007, a more permanent flow of staff was commenced in February of 2008 and the department has remained open since this time with two physiotherapists. This has provided the Health service with a full complement of Allied Health to support the multidisciplinary team and Primary Health Care in the community. Having a registered Australian Physiotherapist in the area also allowed a registered overseas paediatric physiotherapist to work in Moree with such success that she was also asked to provide a locum service to Kaleidoscope at the John Hunter Children's Hospital. In 2007- 2008, this service was also able to extend outreach services to Narrabri, Warialda and Inverell until increased service provision at these sites was implemented.

The physiotherapy department is now well established and offers the following services Monday to Friday; Acute inpatients, outpatients, emergency department, cardiopulmonary rehabilitation program and domiciliary visits. The service is also working in partnership with the Barwon Division of General Practice to establish other programs in the community such as Heartmoves and a Medicare funded diabetic exercise group. The department has been able to support student placements for tertiary physiotherapy students from the

University of Newcastle as well as year 10 work experience students from locals interested in health professions. The feedback from staff rotating to Moree has been very positive. The service has a high rate of referrals from local medical officers as well as specialists from rural referral and major hospitals. Local residents now do not need to travel to access a service.

Case Study 2

The Perioperative Clinical Nurse Consultant (CNC) for Southern NSW and Murrumbidgee LHD

This role provides support, education and leadership for 18 rural Operating Suite sites. Many Operating Suites do not work on a full time basis (some only once a month) with staff having responsibilities in other areas of the hospital including Emergency Department or ward nursing. For some their work in other areas is more prevalent than their perioperative work creating a unique situation in regards to education and training.

> *A large component of my job is education and finding ways to get education to the perioperative staff. We have limited perioperative educators across Murrumbidgee and Southern NSW LHD's (one in each of the 3 larger sites and 2 part-time educators which cover 7 other smaller sites) and staff have limited access to perioperative focussed education. A number of methods are utilised including face to face, full day focussed sessions, working with staff while they complete an elective list and by distance through a perioperative Staffnet site, other electronic media and telephone. With the help of the perioperative CNE, I am looking forward to a co-ordinated and regularly offered education program for all our staff.*

The role of Area Perioperative CNC is an important and necessary role providing support and leadership including:

- Area wide policy and procedure development and implementation.
- Coordinated approach to the introduction of new NSW Health policy directives and new legislation.
- Standardisation of forms and clinical products to enable cost savings and achieve greater consistency in practice.
- Professional leadership, clinical expert and mentorship for all perioperative staff.
- Development and implementation of clinical competency assessment tools and self-assessment tools.
- Formal reviews of Perioperative and Sterilisation services including the

development of action plans and assistance with implementation when required.

- Development and maintenance of the Perioperative Staffnet page which disseminates all perioperative information including policy, procedure, Policy Directives and legislation, Area Perioperative Orientation Program, all audit tools, educational PowerPoint presentations and meeting minutes.
- Membership on a variety of NSW Health, NSW Health Support committees and other professional bodies to ensure a rural perspective is taken into consideration whenever policy, procedure or legislation is developed.

I am passionate about rural nurses and cannot praise them enough for the fantastic job that they do with limited resources in personnel, education and support. I am very fortunate to love what I do (even the travelling!!) and cannot thank all the managers and perioperative staff I work with enough for being so supportive of this position – even putting up with all my emails and requests for information! With this co-ordinated approach, I feel we have achieved great things and can see this type of position, along with more perioperative CNE's, being of significant benefit within other LHDs.

Kindly provided by Deborah Burrows – Area Perioperative CNC Murrumbidgee and Southern LHDs

Appendix D. Implementation Plan

Changes to surgery across Rural NSW will be achieved through multiple initiatives at a Departmental, Local Health District and hospital level. Implementation of the Rural Surgery Futures plan will require a commitment at all levels of NSW Health; from clinicians, managers, planners, funders, professional groups, colleges and the community. This implementation plan provides guidance, proposes realistic timeframes, and assigns accountability.

Actions Required		Accountability
Within 3 months		
Perioperative Nursing	That LHDs ensure that perioperative staff have internet access for educational purposes.	LHD
Within 6 months		
Regional Surgical Networks	That each LHD reviews the role delineation and staffing profile of rural hospitals in view of the development of networked services	LHD
	That functional surgical networks be developed by each LHD, to enable the effective sharing and deployment of interventional resources (i.e. human, technological, physical and financial resources).	LHD
Interhospital Transfers	That each LHD establishes formal agreements and documented processes with tertiary referral centres to facilitate timely and appropriate specialist consultations and	LHD

Actions Required		Accountability
	interhospital transfers.	
	That each LHD establishes a guide to local facilities and clinical capabilities and ensure they are widely disseminated within referral hospitals and are regularly updated.	LHD
Hospital Management	That LHDs ensure stability of hospital administration by the recruitment of General Manager, Director of Medical Services and other senior hospital management roles.	LHD
Allied Health	That LHDs ensure an appropriate level of allied health staff are appointed and that their regional numbers and responsibilities are defined.	LHD
Surgical Audit & Peer Review	That LHDs develop intra-LHD networks to support and assist all proceduralists to participate in clinical audit and peer review.	LHD
Clinical Services Planning	That MoH provides appropriate resources to assist LHDs to undertake detailed clinical service planning. This includes guidelines for service planning, access to funds to purchase expert planning services and staff to coordinate	MoH

Actions Required		Accountability
	regular service planning activities.	
	That MoH ensures that clinical service planning occurs on a regular basis. Each LHD should have a plan that is no older than 5 years.	MoH
	That LHDs ensure that clinicians (including resident and visiting specialists as relevant), the Division of General Practice / Medicare Local, the Rural Clinical Schools as well as other key clinical personnel are fully involved in planning.	LHD
Rural Workforce	That MoH establishes a number of funded Rural Fellowship specialist positions, in consultation with regional networks, particularly in anaesthetics and surgery.	MoH
	That MoH negotiates with the NSW State Committee of the College of Surgeons, the establishment of a number of training positions in rural Hospitals as the trainee's principal hospital affiliation.	
Perioperative Nursing	That LHDs develop an appropriate role and job description and appoint Perioperative Clinical Nurse Consultants supported by Clinical Nurse Educators in each regional network of hospitals to support ongoing training and	LHD

Actions Required		Accountability
	education of perioperative nursing staff.	
Asset Management	That LHDs implement transparent and inclusive processes and procedures to ensure clinicians are engaged in the prioritisation of equipment purchase and replacement.	LHD
Within 12 months		
Clinical Services Delineation	That MoH provides a description of the level and type of health services appropriate for the local populations served by regional surgical networks.	MoH
	That MoH reviews the current approach to role delineation of facilities to improve recognition of the networked service model when making capital and equipment allocation decisions.	MoH
Clinical Services Planning	That LHDs engage relevant community groups in the development of appropriate local and networked surgical services.	LHD
GP Proceduralists	That statewide training programs be commissioned for	MoH

Actions Required		Accountability
	future and current GP proceduralists under the auspices of HETI and the relevant specialist colleges. This training should be funded and lead to a robust and transportable qualification with recognised academic standards leading to a well defined career pathway.	HETI
Incentives for Rural practice	The MoH undertakes a review of the remuneration of anaesthetists, surgeons, obstetricians, ED specialists, GP proceduralists and other rural based staff to incentivise their rural attachment and remove any barriers that may diminish the efficient use of available resources.	MoH
Credentialing	That MoH develops a safe and more efficient state-wide credentialing system.	MoH
Locum Services	That each LHD ensures that resources for locum employment are used more effectively and permanent positions are promoted wherever possible.	LHD
Asset Management	That LHDs improve Asset Management processes and procedures to maintain, determine the useful life of and replace key surgical assets.	LHD
	That LHDs develop detailed and transparent processes for	LHD

Actions Required		Accountability
	adoption and dissemination of new clinical practices and surgical technologies within the regional surgical network.	
Rural Clinical Schools	That relevant LHDs establish links with relevant Rural Clinical School(s) to explore how to optimise learning and training opportunities for vocational trainees.	LHD
Services for Morbidly Obese	That the NSW Ambulance Service increases the number and considers the location of suitable ambulances for the transportation of morbidly obese patients in non metropolitan NSW.	NSW Ambulance Service
	That MoH leads the development of a state wide plan for the management of the morbidly obese patient within NSW hospitals.	MoH
Surgical Services for Children	That the Sydney Children's Hospitals Network (Randwick and Westmead) and John Hunter Children's Hospital lead the development of a state-wide plan for surgery for children which considers where and what surgery for children should be performed, paediatric anaesthesia and ongoing support, education and skills maintenance.	NSW Children's Hospitals Network

Actions Required		Accountability
Radiology & Pathology Services	That LHDs review their contract with radiology and pathology services and ensure the range and quality of contracted services meets the needs of the hospitals and regional networks.	LHD
2013		
Rural workforce	That MoH negotiates with the NSW State Committees of the relevant Colleges to establish rural based training centres in an appropriate number of major rural referral hospitals.	MoH
Asset Management	That MoH establishes a technology fund that specifically assists non-metropolitan LHDs and clinicians to adopt contemporary and efficient surgical technologies.	MoH
Radiology & Pathology Services	That The Royal Australian and New Zealand College of Radiologists The Royal College of Pathologists establish non metropolitan training positions particularly within the regional surgical network.	The Royal Australian and New Zealand College of Radiologists The Royal College of Pathologists

Actions Required		Accountability
Critical Care Services	That MoH develops a rural ICU / HDU plan that recognises the need for consistent ICU / HDU services to support the delivery of surgical services.	MoH