

**RURAL SURGERY**

**RS01  
THE VALUE AND EFFECT ON CLINICAL OUTCOMES OF  
PAEDIATRIC SURGICAL SUPPORT TO SMALLER CENTRES**

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**Purpose** Until 1996 the South Island of New Zealand had limited access to specialist paediatric surgical services. The establishment of a comprehensive paediatric surgical outreach service has allowed children to receive specialist advice and treatment close to home. This study outlines the structure of the service, its effect on the smaller hospitals and on patient outcomes.

**Methodology** Trends in the referral patterns and effects on outcome for indicative conditions (including hernia, undescended testis, pyloric stenosis, Hirschsprung disease) were analysed.

**Results** Since 1996 there has been a steady increase in the number of children being treated by the service in all the region's public hospitals. Regular clinics and day surgical lists are held according to local demand, and organised locally. Audit has demonstrated improvements in clinical outcome.

**Conclusion** The advantages of a well-organised and funded paediatric surgical outreach service include: 1. improved access to quality treatment for children close to their home; 2. fewer complications of surgery and less unnecessary surgery; 3. better identification of cases that require transfer; and 4. better support to the rural surgeon and paediatrician who still have to cope with acute paediatric surgical problems.

**RS02  
BEST PRACTICE MANAGEMENT OF INTUSSUSCEPTION  
IN RURAL CENTRES: HOW TO MINIMISE MORBIDITY  
AND MORTALITY**

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**Purpose** In recent years there have been a number of refinements in the management of intussusception (INT) that have led to an increase in the success rate of enema reduction, and reduced morbidity. This study proposes guidelines for the management of children with suspected INT in centres that do not have a specialist paediatric surgeon.

**Methodology** Analysis of clinical indicator data for INT and review of the outcomes of treatment in the South Island of New Zealand have been used to develop an algorithm for use in regional centres.

**Results** INT reduced non-operatively has a lower morbidity and costs less to treat than those requiring surgery. In the region reviewed, management guidelines appear to have contributed to an overall success rate of enema reduction using Barium improving from 25% to 75%, and with air enemas from 75% to 86%. Discussion of cases between the rural centre and tertiary centre has become the norm.

**Conclusion** In smaller centres, an initial enema (barium or gas) should be performed if the child is in reasonable clinical condition. Sick infants, and those in whom an initial enema has failed, are best transferred to a paediatric surgical institution. Good communication is an essential element in developing and implementing clinical pathways that improve outcomes for children with INT.

**RS03  
VASCULAR SURGERY IN A RURAL PRACTICE – THE CASE FOR**

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Centralisation of principal vascular services to tertiary centres has great merit in enabling adequate specialist numbers to provide an acute service with appropriate support facilities. Demand on this vascular service is expected to increase almost 100% with the aging population over the next 20 years. The demography of the population of New Zealand and Australia is such that providing vascular services only in tertiary centres has great potential to

disfranchise many patients living in rural areas. Unless the overall provision of service is excellent, providing an excellent service for only part of the population is untenable.

A purely centralised, regional service will have difficulty providing satisfactory care for elderly infirm patients, with limited mobility, who live in rural areas. General Surgeons with no vascular training, working in provincial or rural hospitals cannot be expected to spend the significant time required to triage patients with possible peripheral vascular disease simply to refer them on to vascular surgeons in distant tertiary centres. Many aspects of vascular surgery, relating both to patient assessments and operative procedures do not require tertiary facilities and have historically been competently performed by general surgeons. There are also occasions when our colleagues in other specialities require urgent interventional support for vascular complications. There remains a need in smaller centres for general surgeons with some vascular training to provide this local service supported by, and supporting, colleagues in tertiary centres.

**RS04  
CONSTRAINTS OF MULTIPLE TRAUMA MANAGEMENT IN  
DISTRICT HOSPITALS**

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**Purpose**

- To enumerate difficulties and shortages in small hospital in the management of Multiple Trauma.
- To find the correctable errors in our management plan on 37 cases encountered in a space of 24 months.
- To discuss two cases of multiple injury needing plastic surgery.

**Methodology** Surgical Team has the leader role in trauma management in this hospital. Over last two years 37 cases of trauma we treated some needing transfer to tertiary centres.

**Case 1** 54 yr Caucasian man, driver of a 4 WD had head on crash at 110 K; he had severe facial, mouth and Cervical Spine injuries (C 1–C 2 rotatory subluxation, confirmed by CT) with profuse bleeding in mouth. BIBA in ED after 2 hrs with hypovolumic shock. Rapid sequence intubation done by anaesthetist and repair of severe tongue laceration done.

**Case 2** 16 year old Cyclist youth crashed on the back of a parked truck at approximately 70 K. Sustained severe laceration lower lip and tongue, fracture mandible with superior displacement of mandibular condyle in to brain. Fibre-optic intubation was done by the anaesthetist. Needed a 3 hours repair of face and tongue.

**Results** Most of cases confirmed that in the areas of Airways, Resuscitation and Spine care, Haemostasis, Suture and Wound Care, Rapid interventions and Transfer, we perform not too low comparing the general Australian standard of a big centre. But the outcome is very subjective to the training & skill of the team working.

**Conclusions** Primary care of multitrauma patients in small hospital is very much subjective to the skill of the on duty team. Training for rural surgeons should have a multidisciplinary curriculum.

**RS05  
CRAFT GROUP AUDIT FOR RURAL SURGEONS**

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**Aims** To establish a prospective audit of surgical outcomes in regional and rural surgical practice and a strategy for recognising and managing outliers identified through audit.

**Methods** Support Scheme for Rural Specialist Funding (SSRS – Round 6) was obtained. Five major centres: Geelong, Ballarat, Bendigo, Wagga Wagga and Lismore agreed to participate in a prospective audit from September 06 to March 07. Various individual surgeons and smaller centres also offered to provide audits of their individual practice (Broome, Bathurst, Wangaratta, Kalgoorlie, Alice Springs). Five operations were audited: colorectal cancer surgery, breast cancer surgery, thyroidectomy, inguinal hernia repair and laparoscopic cholecystectomy. Indicators included mortality, unplanned re-operation, anastomotic leak, recurrent laryngeal nerve damage, bile leak,

postoperative pain for >2 months requiring analgesia or referral to a pain clinic after hernia repair, and the same indicators as the breast cancer audit. Anonymity of surgeons and patients was maintained.

**Results** At the time of abstract submission all five major sites had appointed project officers. Each centre is contributing about 40+ cases per month. By early December Geelong had collected thyroids (21), laparoscopic cholecystectomy (78 – 2 conversions), breast cancer (17 – 8 mastectomies), adult inguinal hernia repair (38), colorectal surgery (50 – 13 right hemi, 14 anterior resections).

**Conclusion** It is hoped that the existence of rural surgery craft group audit will provide indicators to assess the outcomes of any individual surgeon who chooses to contribute and compare their performance.

#### RS06

##### INTRODUCTION OF LAPAROSCOPIC RESECTIONAL COLORECTAL SURGERY TO NAIVE HOSPITALS

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**Purpose** Laparoscopic resectional colorectal surgery (LRCS) was introduced to Australia in the early 90's but gained widespread acceptance only recently. Most published studies demonstrating safety, benefits and acceptable outcomes are from centres with established colorectal units with extensive experience in LRCS. Hospitals looking to introduce this technique realise a long learning curve exists and hence the introduction of LRCS may initially result in a drop in standard of care. It is prudent to ask how and can LRCS be safely introduced to LRCS naïve hospitals.

**Methods** During introduction of LRCS, surgeons and theatre nurses undertook additional training courses and were encouraged to undertake initial cases with support from a colleague. Clinical pathways were introduced for post operative care.

A well established colorectal database was used to prospectively gather data. All LRCS cases during the initial 9 months were included. Comparison is made with non LRCS from the same period, data from the previous year and published studies.

**Results** 95 LRCS cases were studied representing 57% (95/166) of resectional colorectal cases. Of 14 surgeons performing colorectal procedures, 5 undertook LRCS at 2 hospitals previously naïve to LRCS. Favourable results were demonstrated relative to non LRCS performed in the same period compared over major clinical indicators (death, anastomotic leak, return to theatre, unplanned ICU admission, re-admission). Improvements were observed in length of hospital stay and ICU days.

**Conclusion** We believe this series demonstrates that LRCS can be rapidly, safely and effectively introduced to a LRCS naïve health service.

#### RS07

##### LAPAROSCOPY IN GYNAECOLOGY AND SURGERY: PRACTICE REVIEW USING AUDIT OF ERRORS FOR IMPROVING SAFETY

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**Purpose** In 2005 a joint study by RANZCOG and United Medical protection identified laparoscopic surgery as a key contributor to medical indemnity claims from 1991–2001.

The Support Scheme for Rural Specialists, an initiative of the Australian Government Department of Health and Ageing, funded the development and implementation of a 12 month laparoscopy audit quality framework to:

- Profile laparoscopy adverse events in rural Australia.
- Identify opportunities to improve practice or patient safety.
- Provide rural specialists with a supported CPD activity and opportunity to work collaboratively with colleagues.

**Methodology** Rural Australian Fellows of RACS, RANZCOG and ANZCA were invited to participate. After introductory risk management videoconferences, participants audited their laparoscopy over two months using the developed audit tool. Submitted data was analysed and participants received individualised feedback (protected by Qualified Privilege). Follow-up videoconferences in February 2007 will discuss the data and implications for practice and patient safety.

**Results** Additional funding was granted to meet overwhelming interest from rural specialists. Analysis of data (underway at time of abstract submission) indicates the audit tool effectively profiled laparoscopy and adverse events which may not be captured by other reporting systems. The results of the audit will be presented.

**Conclusions** The audit tool is a valuable multidisciplinary resource with great potential applicability. Encouraging specialists to work collaboratively to complete audits may be of benefit to patient safety, particularly where the audit is emphasized as a quality process rather than a counting exercise.

#### RS08

##### THE NEW ZEALAND MOBILE SURGICAL SERVICE: 5 YEARS ON THE ROAD

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**Purpose** Out of the ashes of a radically pruned Health service the "Surgical Bus" (SB) has risen to redress some of the loss of access to surgery suffered by rural New Zealand (NZ). The mobile surgical service has also contributed towards several of the other stated goals of provision of equitable access healthcare to rural NZ. This study examines the performance of the SB over its first 5 years.

**Methodology** Mobile Surgical Services (MSS) has prospectively collected data on the SB. Assessment has been made of number and type of procedure, length of stay and complications. Services for children, services for Maori, social benefits, upskilling for rural staff, training gains through telepresence surgery and cost were also reviewed.

**Results** 6500 procedures have been performed in the 5 year period 1 March 2002 to 28 February 2007. 6% of patients had complications with 2% having infection.

Children (15 yrs of age or younger) made up 40% of patients treated and 26% were Maori. The SB has traveled 50,000 Km/year, has visited 21 rural centres and has had 9 different specialty services contributing. There have been 145 Telepresence sessions undertaken.

**Conclusion** The SB has significantly improved specialist surgical services to many rural areas in NZ over the last 5 years. This is in line with Government health policy of equitable access.

#### RS09

##### TO SPRINT OR TO STROLL THAT IS THE QUESTION. EVOLUTION OF SURGICAL SERVICES IN A REGIONAL CENTRE. A THREE YEAR REVIEW

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**Purpose** Mackay Base Hospital is a regional hub for the North of Queensland's Centre.

There is a definite demographic growth in this region due to the mining industry. The study aimed to identify if this was reflected by a similar growth in the surgical services' volume and diversity and to recognise the challenges that face this process.

**Methodology** Between 2004 and 2006 analysis was done to prospectively collected data banks relevant to both operative and endoscopic procedures. This was compared to other productivity factors like numbers of surgical, anaesthetic and nursing staff respectively. The advent of new technology and utilisation of experience in advanced laparoscopy was also assessed.

**Results** In spite of a general trend of lack of permanent surgeons &/or other support services, the number of all surgical procedures were either seen to increase (operative) or maintain a high plateau (scopes). There was an increase in incidence of all major cancers in the region, namely Skin, Colon and Breast respectively. There was a statistical inclination toward Laparoscopy mainly for Appendicectomy, Acute cholecystectomy, Bile duct explorations, Fundoplication and selected Colorectal procedures. Trauma surgery reflected a similar pattern of increase though the referrals to tertiary centres remained selective.

**Conclusion** The application of advanced surgical techniques may be restricted by available resources and local experience, nevertheless perseverance (while reasonably recognising these limitations) gives a long term outcome that is quite encouraging and compatible to other established centres.

**RS10P**  
**'SURGICAL TRAINING FOR THE OVERSEAS TRAINED DOCTORS', STILL AN UNCHARTED SEA**

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**Purpose** To show that a little has been done to optimize the surgically trained work force in Australia.

**Methodology** Personal experience, media reports, the very sad & unfortunate Bundaberg incidence and its aftermath and conversation with a few hundred OTDS prepared me for this submission. The number of OTDs is increasing in rural areas of Australia and New Zealand. There are many hospitals which can not run a single day without these doctors.

Training these doctors is without a doubt an important part of health authorities' commitment towards community. Unfortunately general public has little chance to know the facts about the OTDs. Many doctors with their skills are lost in the convoluted pathways of career building in the existing practice.

This is a waste and needs to be addressed immediately.

OTDs are under scrutiny by many areas, but no one care about their concerns and needs.

RACS could identify those who are partially trained and accommodate them in the necessary level.

**Results** Increasing need of rural surgeons under the present circumstances dictates that OTD surgical trainees be streamlined. The situation is unique and easiest solution in foreseeable future is very clear.

**Conclusions** Surgically trained OTDs should be assessed and trained by RACS only. Training should be decentralised to smaller hospitals.