

# Burns & Plastic & Reconstructive Surgery Metropolitan Clinical Services



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## SECTION 4 QUESTIONNAIRE RESPONSES

### **1. Do the demand projections in the CSF fit with your understanding of your specialty's future morbidity/mortality trends? If not, why not?**

It is agreed by all members of the working group that the numbers presented in the CSF are inaccurate and are not representative of the current workload of the specialty. Furthermore, it is felt that unless accurate figures are collected, meaningful assertions and recommendations with regard to the future morbidity/mortality trends cannot be made.

There are several reasons for the inaccurate data.

- The data presented does not include numbers of patients presenting to the specialty for management of hand and upper limb trauma and hand and upper limb elective surgery. In the public hospitals over 90% of these procedures are undertaken by Plastic and Reconstructive Surgeons. This represents over 50% of the work undertaken by our specialty in the public hospitals and it is our belief that contrary to the CSF masterplan, the number of admissions with these presentations is steadily increasing. We believe this may be the reason that the CSF data shows a decrease in the non-hand and upper limb admissions over the past five years.
- A large proportion of Plastic and Reconstructive Surgery patients are admitted due to trauma, cancer, including skin cancer, or chronic wound healing problems. These patients are often admitted under other specialties including General and Orthopaedic Surgery, Geriatric, General, Renal Medicine and Neurosurgery. These numbers are not reflected in the statistics for Plastic and Reconstructive Surgery.
- A large proportion of the demands for the Plastic and Reconstructive Surgery unit are on an outpatient basis through the need for rehabilitation and aftercare by both medical and allied health professionals. The figures gathered by the Plastic Dressing Clinics at RPH and SCGH together with the preliminary AHS statistics support the assertion that the numbers of admissions and the demand for our specialty services is increasing. Please see the Table below, which shows the trend data for these services at RPH and SCGH.



Table 1. Plastics Dressing Clinics and Outpatients attendances RPH and SCGH

| <b><u>PLASTIC DRESSING CLINIC ADMISSIONS TO RPH AND SCGH</u></b> |               |               |               |               |               |                  |
|--|---------------|---------------|---------------|---------------|---------------|------------------|
|  | 2000/2001     | 2001/2002     | 2002/2003     | 2003/2004     | 2004/2005     | YTD<br>2005/2006 |
| RPH-BURNS  | 547           | 1,345         | 2,083         | 2,830         | 3,543         | 2,033            |
| RPH PLASTICS   | 10,880        | 10,941        | 12,066        | 12,748        | 14,053        | 6,847            |
| SCGH PDC   | 9,293         | 10,174        | 11,108        | 12,087        | 12,242        | 7467             |
| <b>TOTAL</b>   | <b>20,721</b> | <b>22,461</b> | <b>25,258</b> | <b>27,666</b> | <b>29,839</b> | <b>16,348</b>    |

- There is a clear disparity between the quoted number of burn admissions over the last five years and the numbers recorded by the Burn and Plastic Dressings Units. This may be due to problems with data collection or DRG's.

Table 2 below show activity for Allied Health Workload for Burns and Plastic Surgical Patients from Royal Perth Hospital.

Table 2. Allied Health workload statistics for Burns and Plastic Surgery patients (incorporates inpatient, outpatient and external / community data) 2001-2005

| AH Burns and Plastics Services | No. of Pts | OOS   | Time   | OOS per Pt  | Time per Pt (mins) |
|--------------------------------|------------|-------|--------|-------------|--------------------|
| <b>2001</b>                    | 3107       | 17520 | 599126 | <b>5.64</b> | <b>192.8</b>       |
| <b>2002</b>                    | 3309       | 18893 | 678464 | <b>5.71</b> | <b>205.0</b>       |
| <b>2003</b>                    | 3068       | 18751 | 701184 | <b>6.11</b> | <b>228.5</b>       |
| <b>2004</b>                    | 3631       | 18782 | 655612 | <b>5.17</b> | <b>180.6</b>       |
| <b>2005</b>                    | 4482       | 20031 | 667208 | <b>4.47</b> | <b>148.9</b>       |

\* Disciplines included: physiotherapy, speech pathology, dietetics, occupational therapy, podiatry and social work.

Allied health staffing was increased for a large proportion of 2003 and the statistics reflect the long-term rehabilitation of patients injured in the Bali bombing in October 2002.

This table confirms the increased numbers of patients treated by Allied Health particularly exemplified in 2005 when compared to previous years. Efficiencies put into place during 2003 - 2005 have reduced number of average occasions of service and time required per patient. These efficiencies and service changes





achieved by Allied Health Services have been achieved without compromising discharge criteria, best treatment outcomes and return to function for patients. Given the rising trend in demand it is reasonable to assume that maintaining best patient outcomes will not continue to be achieved without a corresponding increase in available resources and additional FTE for Allied Health in this specialty area. Over time there will develop an increasing service demand and resource availability mismatch.

## **INPATIENT CARE**

### **2. What conditions, currently treated by your speciality as inpatients, could have been prevented by time and effective care?**

- Effective education, which is continuous and progressive beginning in early schooling, may have an impact on Plastic Surgery admissions including, burns, hand trauma and MVA associated injuries along with injuries involving the use of alcohol and drugs.
- Effective early management, particularly in country/regional areas, may reduce problematic burn wound admissions. This may be influenced by regular and ongoing education, surveillance and audit.
- There has been a trend towards drug related work and associated injuries observed clinically. This has implications for government policy with regard to legislation over cannabis use.
- Skin cancer prevention and education will have ongoing effects over the number of these admissions over decades.
- Pressure sores can be prevented and minimised by effective education and appropriate nursing care both in the hospital and community setting.
- Motor vehicle related admissions may be reduced if effective strategies to curb road traffic accidents are employed or appropriate legislation with regard to vehicle safety e.g. airbags is instituted.
- Geriatric patients frequently linger as inpatients because of the inadequate services available for geriatric rehabilitation in the outpatient setting.
- Patients are often admitted for long-term IV antibiotics. Appropriate outpatient facilities to administer drugs and apply dressings may reduce the need for inpatient management of these patients.





### **3. How should patients who have diseases or co-morbidities that extend beyond any one specialist medical group be best cared for?**

- Patients should be cared for by the specialty or admitting team, (except burns and spinal).
- By establishing specialty falls teams for the elderly, with a clinical pathway that manages all aspects of the admission and case management.
- Caring for wound patients on the specialty plastics unit.
- Focus on prompt and early consults/referrals to specialties.
- Recommended response times and technology to support consults/referrals.
- Nursing and health professionals initiate early and timely referrals as part of a clinical pathway.
- By establishing specialty outpatient clinics. For example: hands, breasts, skin cancer.
- Ensure each case (patient) is provided with a coordinator or case manager.
- Electronic and computerised communications systems (including central electronic medical records) for use between specialities and to consultants/registrar.
- Develop clinical pathways.
- Step down or Sub acute nursing/ rehabilitation facilities to manage non-acute medical issues and discharge (on or off site) once acute medical issues are managed.





#### **4. What would your specialty need to do differently to reduce total bed demand by 30% whilst maintaining/improving patients outcomes?**

- Develop strategies for multidisciplinary management through clinical pathways.
  
- Develop
  - Step down or Sub acute nursing/ rehabilitation beds or facilities
  - Intermediate housing/hotel for intensive rehab or specialty services
- Greater access to CAP and aged care beds, and faster consults from ACAT and Department of Geriatric Medicine.
  
- Greater use of GPs in follow up when appropriate.
  
- Telehealth and electronic media/communication services to:
  - Support early discharge to rural and remote areas (and replace PATS system)
  - Wound management
  - Reviews or ward rounds
  
- Resources to educate and consult with rural and remote therapists. e.g.
  - Therapists train in Perth on a residency/scholarship program.
  - Burns Management Program model is most appropriate i.e. team of senior therapists, nurses and doctors as the educators.
  - Provide a consultative Perth based Plastics services team to be on call for support to outer metro and rural services.
  - Education campaigns for health workers in the community and rural sector on immediate burns management-first aid and assessment etc.

Internet, intranet pages on the relevant services-protocols etc available on the net?
  
- Use of therapy in the home
  - Provided by specialist-trained staff.
  
- Increase Plastic specialty services provided by nursing, physio and OT in ED to reduce admissions.





- Have more specialty trained staff (registrars, consultants, therapists.)
- Increase the resources for same day admissions.
- Increase the ambulatory services for:
  - IV antibiotics
  - Plastic surgical patients (low level care that presently are overnight stays).
  - Burns early discharge programme services
  - Allied health services (including OT, Physio, social work, mental health).
  - BUT, develop transport services for acute patients to be maintained as outpatients.
- Alternatives to general anaesthesia for UL surgical patients.
- Develop strategies for compliance and attendance:
  - Transport
  - Education
  - Increase the services provided by social work and mental health

## **NON INPATIENT CARE**

**5. For patients in your specialty with chronic conditions, how many have easy access to:-**

- (a) Best practice guidelines?**
- (b) Regular follow up and monitoring/case management?**
- (c) Early medical intervention as required?**
- (d) Patient education and empowerment**

### **a) Best practice guidelines:**

- At RPH Plastic Surgery Dept- there are non- evidenced based procedure/diagnosis related patient care protocols, e.g. Protocols for Free Flap Surgical patients, Protocols for care of patient with Neck dissection etc. The Plastic Surgical unit are currently planning to re-develop procedure/diagnosis related patient care plans e.g. Care of pt. with Free Flap, care of pt. with Breast Reconstruction or Breast Reduction, care of pt. with facial fractures or fractured mandible or fractured zygoma





- RPH and PMH are in the process of reviewing best practice guidelines and developing patient education material relating to burns. However, they have few clinical pathways or protocols available in Burns and Plastic Surgery.
- Examples of conditions that may lend themselves to this type of management are tendon repairs, autologous breast reconstruction post-mastectomy and some lower limb skin grafts. Large numbers of RPH trauma patients also represent a large number of variances from the 'norm' and therefore would not be suitable to follow a clinical pathway. There are some protocols documented, but more could be done for these patients at this site.
- RPH has very few best practice guidelines as most conditions are multifactorial and variance is common, but it was identified that some broad protocols could be developed for some conditions/procedures.
- Fremantle Hospital has nursing management guidelines for various Plastic Surgery conditions and procedures, which have been developed in consultation with the nursing, medical and allied health staff. None are referenced. Nursing Practice Manual documents regarding care of the open and closed skin graft and care of the tissue flap are appropriately researched and referenced. The consensus was that the main difficulties with developing best practice guidelines and protocols were related to time constraints and staffing issues. It was also mentioned that development of these protocols on a "consensus basis" is difficult, as this approach requires a multidisciplinary opinion, clerical support, literature review and the collection of research data.
- SCGH have implemented guidelines for early allied health intervention and preventative and conservative management.

#### **b) Regular follow up and monitoring/ case management:**

- Some RPH outpatients are currently able to be reviewed by a Burns and Plastics specialist via Telehealth, which enables a virtual ward round, avoiding the need for the patient to travel long distances for a specialist opinion. This can include inpatients and outpatients at a regional centre.
- At RPH, the specialties of Burns and Plastics provide timely outpatient follow up with no waiting list for outpatient rehabilitation or hand therapy.
- SCGH have adequate access to regular follow up and monitoring, but do not have access to case management. This is especially a problem for multi-trauma patients and workers compensation cases. It was identified that there was no communication between internal and external services and between specialty groups. Another outstanding issue was that it was not easy to identify which specialty was responsible for certain patients after the initial injury is resolved or





repaired. Communication with medical staff with regard to which team is responsible for these patients is also difficult.

- Fremantle Hospital has no access to case management.
- The waitlists for outpatients at RPH are excessive and in some cases, can delay treatment. Treatment could be expedited by the provision of more operative time in either the tertiary or the secondary hospitals together with appropriate bed resources and ancillary services.
- In addition, at some centres, the non-attendance at outpatient clinics is high. This may be because the patient profile tends to be disadvantaged such as intellectually impaired or those with social issues (e.g. alcohol, drugs, violence/unemployment). An improvement in social support may improve patient attendance at outpatient follow-up, compliance and outcomes.
- The rotational system of medical staff at teaching hospitals represents a lack of continuity in the medical management of patients with chronic conditions. The establishment of better links with ongoing treating therapists may improve this.

### **c) Early medical intervention as required:**

- At SCGH, acute trauma patients have access to early medical intervention. Patients with chronic problems do not. (e.g. a patient with a Carpal Tunnel ) could wait for 12 months and as a result, could have a poor outcome from surgery. A suggestion was made for a centralised waitlist to be utilised so that Occupational Therapists and possibly other therapists could have access to patient information, enabling pre-operative assessments to be completed. The relevant information from the pre-operative assessment carried out by Allied Health could then be made available to the surgeons so that the waitlist may be adjusted/prioritised.
- It was recognised that there is a lack of education for GP's on timing of referral or prevention.
- Long waitlists at most centres delay treatment. This treatment could be expedited by the provision of more operative time in either the tertiary or the secondary hospitals coupled with appropriate bed resources and ancillary services.

### **d) Patient education and empowerment:**

- Patient education is primarily verbal in most centres, due to a lack of time and resources to develop teaching resources. Visual aids and documentation may be strategies that could be implemented in an attempt to improve patient empowerment. Support is also needed in the form of staff and funding to develop these tools. It was acknowledged there might be inconsistencies in the





education given to patients and that there was a general lack of written materials for education. Clinical Pathways and patient information booklets are used already at some centres for patient education.

- Due to the mechanism of injury and contributing factors for this profile of patients, education regarding the use of alcohol and drugs, violence and the management of chronic diseases should be implemented and supported.

## **6. What needs to be put in place to allow 20% of your specialty's current inpatients to be cared for in other environments e.g. day hospitals, outpatients, community, step down facilities?**

- Daily links to undertake virtual ward rounds of burns in the State, to provide advice regarding referral and transfer. Alternatively, there could be protocols for cost effective dressing and therapy at the outset of the injury, coupled with a review in the early point surgical phase to ensure optimal outcome without retaining the patient in the bed. This could be done through education and communication links with all care givers.
- More outpatient nursing and allied health services, that are flexible and comprehensive.
- Welltels / step down facilities with good access to specialised therapy services.
- Improved patient access to services (e.g. transport, accommodation, social work, Aboriginal liaison support).
- An increase in the number of group rehabilitation services.
- Expanded, fully equipped Plastic dressings clinics.
- Expanding and supporting the role of the nurse practitioner, including the coordination of patient care from the hospital to the community.
- Staff training to educate practitioners in the community.
- Information that is readily available on the Internet.
- Nursing and allied health initiated referrals to other services.
- Establishment of clinical networks.





## CLINICAL LINKAGES

### **7. What relationships does your speciality have with other specialities or services that the architects need to be mindful of, when designing/new refurbished hospitals including those where it makes clinical or economic sense to co-locate together?**

- The service requires ready access to operating rooms as most Plastic Burns patients require expedient surgical treatment. It will also require occasional use of ICU/HDU facilities. A well positioned Burns and Plastic Dressing Clinic is mandatory as the principal follow up is through such clinics. Ready access to therapy (hands-physio/OT) is also required and should be in close proximity as treatment /therapy frequently overlaps.
- Burns Outcome Centre facilities-research should be in vicinity of the Burns Unit.
- Burns and Plastic adjacent to each other and adjacent to:
  - ED
  - Trauma unit
  - Burns and Plastic Outpatient clinics
  - Gym /rehab facilities
  - Plastic surgery, burns personnel offices-plastic surgery offices
  - Cell tissue laboratory
  - Orthopaedics and Orthopaedic Clinics
  - Dept of Geriatric Medicine
  - Rehabilitation
  - Falls clinics / services
  - Hyperbaric Unit, MRI
  - Maxillo-facial laboratory
- Patients able to easily access radiology and pharmacy as adjunct to services
- Lymphoedema – private facilities (treatment room to disrobe) for measurement and education of patients
- Cancer –skin (dermatology referrals), breast (general surgery), head and neck (ENT).
- Medical – diabetes, vascular disease, renal (immunosuppressant related complications).





## **WORKFORCE**

### **8. With the knowledge that the health workforce is predicted to diminish in the future, how could**

- **Your role be done differently**
- **Some of your work be done in a different setting**
- **Elements of your role be done by another Health Care Worker**

### **while still achieving best clinical outcomes, efficiency and safety?**

- Essential to provide timely OR access-to reduce patient and surgeon morbidity.
- Medical safe working hours will require this.
- On call rosters to be rationalised with multi-site coverage and flexibility to move staff across sites.
- Consultant/registrar to have tertiary and secondary hospital joint appointments.
- Maintain funding for areas such as trauma and cancer. Redirect treatment for less acute conditions to private sector or community based services ensuring there is no disadvantage to any community group.
- Fully qualified surgeons who have the breadth of experience to make appropriate decisions should do surgery. Very straightforward conditions may be treated by appropriately credentialed GPs.
- Other health professionals could then deliver the protocols with oversight via direct and indirect telelinks as we move to a Burns Service of WA.
- Higher utilisation of rural training programmes, visitation programmes into these areas by metro health therapists, in conjunction with use of Telehealth would improve rural and remote follow-up.
- SDN role could become more specialised, so that she/he works only in Plastics. This would enable more involvement in the training of nursing staff by tertiary level advanced nursing experts at other centres. Plastics patients could then be cared for in a setting other than the tertiary hospital.
- If standard protocols are set up for the management of Plastics patients in certain situations and digital wound photography and Telehealth are used more widely, dressings may be done by nurses working in peripheral centres instead of those working in tertiary hospitals.





- Nurse Consultant or practitioner to liaise from the tertiary to community level (metro area) for burns and also another for plastic surgery-increase in outreach services.
- Consider opportunity for services to be available by therapists across the metropolitan health services on a rotational basis similar to that of the medicos, with suitable structure of pays/acknowledgement of level of experience. Current system this is not possible because of manner in which staff is employed at each health service. This limits spreading support and experience and training within each of the teaching hospitals, and for providing further support to satellite centres.
- This is specialised therapy input. We do not advocate that someone without the interest or training take over roles in burns or plastic surgery particularly hand trauma.
- Therapists currently supervise Therapy Aids to perform certain aspects of their workload. In order to achieve the outcomes currently attained, no part of the role or any new area exists which might be passed on to other health care workers due to the nature of the work.
  - More group therapy / rehabilitation.
  - Workforce
  - bar coding patients and treatment codes, administrative support for e.g. filing, typing, ordering, patient notes, lack of PC access,
  - electronic notes
  - electronic assessment devices
  - bar coding statistics
  - trained assistants for patient care, or technical skills
- Different setting
  - highly specialised with specialised equipment as can't achieve best outcomes
  - Only work training and supervision and legislation to cover supervision

## **9. What would you change to make the WA health system safer and to help retain existing staff?**

- There is a great wealth of clinical experience within the health system. However, the pressure to deliver evidence-based practice is not married with the time to:

1. Review practices





2. Review the likes of above
  3. Develop protocols of care and/or research protocols
  4. Undertake research/audits
  5. Examine outcomes and feedback into clinical practise
- To retain staff they need to be supported in delivering not what we do now the best they can but to be sure they are delivering worlds' best practice and to work in an environment that is stimulating and satisfying.

Specific solutions suggested:

**Career / Professional Opportunity**

- All disciplines must have access to funding and appropriate clinical backfill for access to regular professional development opportunities. This is the primary area that needs to be addressed to retain staff. Increased access to paid study leave.
- Development of financial incentives for higher-level training / recognition of postgraduate study. Support competency appraisals.
- Access to supported, funded research time. Clinical backfill and the time to think and plan projects.
- Facilitation of multidisciplinary / cross-discipline / multiple-site education. More sharing of skills and knowledge between units (e.g. Staff exchange programmes). More rotation of staff through different clinical units.
- Increase flexibility of shifts and casual work positions e.g. 9am to 3 pm casual staff support for rehabilitation staff. Enticements aimed at returning experienced therapists from parental leave to the workforce. Support of staff wishing to work in shared positions.
- Develop incentives for staff to remain at an institution or within a particular unit (e.g. 7 years for long service instead of 10).
- Embrace and develop the role of the nurse practitioner. Re-examine nursing career structure, to incorporate more competency based wage structure.
- Reinstatement of the Clinical Nurse Specialist and Nurse Manager Roles so that an expert clinician is available to all staff to ensure expert clinical skills and knowledge are acknowledged and utilised fully.
- Compulsory audit of departments/individuals/care plans in a non-threatening environment. Competency reviews by appropriate body. Appropriate appointments based on skill level for a speciality for all disciplines. Random spot audits.





## **Research**

- Streamline Ethics Committee approval (particularly need to enhance reciprocal approval for multi-centre trials – within WA, nationally, internationally).
- Development of evidence based standard protocols / guidelines for all types of patients and facilities. Regular audit and updating of protocols. Access to time and clinical backfill to prepare and write such documents.

## **Improved Workplace and Occupational Health and Safety:**

- Lifting teams should return. Current policies, which allow patients to lie in bed longer, lead to longer inpatient stay – whether in acute or rehab facilities. Prevent problems by increasing patient mobility with assistance. Reduce staff injuries with focussed staff and appropriate risk assessments.
- Consider staff regular (organised) gym / aerobics sessions aimed at health in the workplace.
- Ward based orderlies. Ward priorities attended too. Orderlies should be part of the ward / clinical team.
- Wheelchairs must be accessible on the acute wards.
- Equipment should be maintained and upgraded more regularly – use of new equipment technology and associated efficiencies. Consider rental of current technology instead of buying / maintaining.
- Support for junior medical staff especially when on call.
- Increase pay for unsociable shifts equivalent to the private sector with appropriate penalties. Appropriate pay for hours of work/overtime including allied health.
- Specific support for stress related issues.
- Work time to include closer supervision and support for training staff, RMO's and students.
- Childcare facilities for all staff.
- Zero tolerance of abuse-physical or verbal.  
Appropriate allocation of budget to fund the expected public perception of the health system.





## TECHNOLOGY/INNOVATION

### 10. What changes in the way clinical information is captured and exchanged between clinicians can you see working for your clinical specialty?

All suggestions relate back to the use of new technology to capture data, record it accurately, and access it easily and more efficiently. Improving these aspects of clinical information recording will be more efficient and provide the basis for effective workload, treatment and outcome reporting.

- Electronic Medical Records – paperless records and data collection – eliminate duplication, enhance accuracy, improve security / privacy. Integration of access to all systems – images, reports, investigations etc. Electronic assessments where possible. Automatic auditing-individuals, depts immediately accessible at any point in time.
- Data capture and workload statistics should be automated (e.g. bar coded) or minimised. AHS digitised. Clinical outcome measures should be automated – and therefore quantified. Electronic administration and reception.
- Clerical / data manager support to generate letters, reports and objective data queries for inpatient therapists.
- All forms, questionnaires etc digitised and recorded immediately via tablet PC or similar. Blue tooth / automatic download of digitised information / documents.
- Digital Wound Photography – assessment of images available, comparison of images. Access from any PC in the hospital. Digital cameras for patient recording. Monitoring for medico legal/teaching purposes.
- More availability of computers, tablet PC's and palm held computers to increase the efficiency of recording - perhaps standardised information recording systems
- Make use of computerised imaging systems to decrease workload and increase accuracy and speed of referrals - radiological images as well as life images.
- Increase use of Telehealth systems, email and videoconferencing.
- Electronic bar coding for ordering equipment, supplies and stores.
- Access to internet/Web site based education, information provision and monitoring through regulated sites.





## **11. What changes to the way that clinical decision support e.g clinical guidelines, are used in the course of your everyday work would improve the reliability, safety and appropriateness of clinical care?**

- There is consensus regarding the need for best practice guidelines or evidence based protocols within the specialty areas of Burns surgery and Plastic and Reconstructive surgery.
- These guidelines can be specifically targeted to medical, nursing and allied health staff and should be consistent and accessible across sites (incl remote sites) and accessible electronically.
- Active practitioners with Dept of Health logistical support should write them in clear and concise language. The protocols should be regularly updated and should lend themselves to auditing, either by individuals or by hospitals/ departments. The group recognises that this specialty deals with a heterogeneous group of conditions and variances will be common - however, this is probably more the reason for such guidelines to exist - and this should lead to improved consistency.
- Availability of guidelines should enhance the teaching of the specialty but not be seen as replacing the traditional teaching that relies on experience and clinical judgement.
- Currently there are few evidence-based protocols available in the specialty. First priority should be to develop/access protocols of conditions that result in high morbidity (e.g. burns) or occur frequently (e.g. hand injuries) and thus have the greatest impact on society as a whole.

## **12. What medical equipment or technology will be important to the way you practice in 10 years time?**

- Technology will enhance the assessment, operative care and subsequent rehabilitation of patients treated by these specialties. Digital technology with confocal microscopy will allow accurate assessment of the extent and depth of burns. Dermoscopy and artificial intelligence will allow the accurate diagnosis of skin lesions. Easily accessible clinical guidelines will permit the appropriate management to be instituted, documented and the result audited.
- Digital imaging will allow the remote assessment in real time for appropriate management or referral. The medical record will be electronic and tablet PCs will allow remote entry/ retrieval of data. Staff training will make use of virtual





imaging for surgical skill acquisition/ manipulative therapy and wound management simulations. Improved intraoperative imaging will allow more minimal access surgery, thus reducing morbidity. Surgical fixation systems will be resorbable; more use will be made of synthetic biologic products that enhance the healing environment allowing earlier return of function.

- Debridement systems that can chemically/ enzymatically differentiate between viable and nonviable tissues will be available. Similarly, gene therapy will be specifically targeted at malignant tissues either by topical treatment, infusion or intralesional injection. Immunotherapy will use antibodies combined with antineoplastic agents to neutralise malignant cells. Tissue generation will allow remote biological constructs that can be implanted and revascularised. Improved immunosuppressant's may allow significant homograft transplants with less morbidity.

### **13. What experience have you had in other health systems that should be imported into WA?**

- There is a need for the service to look at increased patient education in order to more rapidly progress patient discharge into the community. This should include development of outpatient and home care services.
- Increased use of computer technology for computer based case notes/use of PDAs, in conjunction with use of a computer based referral system.
- Enhanced role of clinical specialist therapist, i.e., postoperative management of patient.
- Rationing of healthcare. Procedures/treatments of questionable benefit should not be funded.
- Ensure department/clinics are performing to satisfactory standards. Assist to achieve or disband if not achieving preferred outcomes – to ensure more efficient and effective throughput.

## **PREVENTION**

### **14. For your speciality, what common conditions should have a more aggressive prevention strategy implemented. Do you have suggestions for doing this?**

- Community education campaigns – radio, TV and other media for:
  - Skin cancer
  - Burns
  - Alcohol abuse
  - Drug abuse





- Physical abuse
  - Diabetes
  - Smoking (prevention of)
  - Occupational health and safety issues in industry
  - Home safety
- Falls prevention programs for elderly people.
  - Pressure prevention – standards across health system (risk assessment tools, pressure prevention guidelines, education for patients and staff).
  - Alcohol and Drug rehabilitation, in conjunction with psychiatric care, in close proximity to tertiary hospitals to enable easy access in the post-op phase and prevent long waiting time for patients requiring psychiatric treatment and hospitalisation.

## TEACHING/RESEARCH

### **15. Given the answers, above, how do we ensure that teaching and research still have their appropriate priority?**

- Overtime has productively been linked to service provision - this is short sighted. Teaching and research are not hobbies; they are essential skills, which need to be a focus in the future for all core health practitioners in the tertiary health centre. In order to ensure we deliver the best possible clinical care we need to be in a situation to “defend” that clinical care as evidenced based practice (EBP).
- EBP is rapidly becoming a routine expectation. To facilitate its delivery needs rigorous literature review, rigorous audit, development of clinical care protocols, communication of the process and protocols i.e. teaching followed by an ongoing process of audit and protocol revision. With the anticipated changes in manpower the development of an individual care plan based on a well-articulated protocol will become essential. Therefore those in the tertiary centres need to be involved in this process and therefore financial resources need to be considered.
- The concept of teaching/education could change. The drive for care is the home and personal responsibility, which means we need to develop educational materials for individuals, communities as well as health care professionals and those destined to remain in the tertiary facility. Such educational material needs to be communicated i.e. taught again with time implications. Whilst it is necessary to formally support clinical staff with combined rules of service, research and teaching it has to be understood that support would be sought from other professionals to facilitate e.g. EBP with multidisciplinary teams including





epidemiologist, health economic, clinical trial expertise. There has been interesting work done looking at EBP and it's implementation, which hinges on communication and time therefore funding to do so.

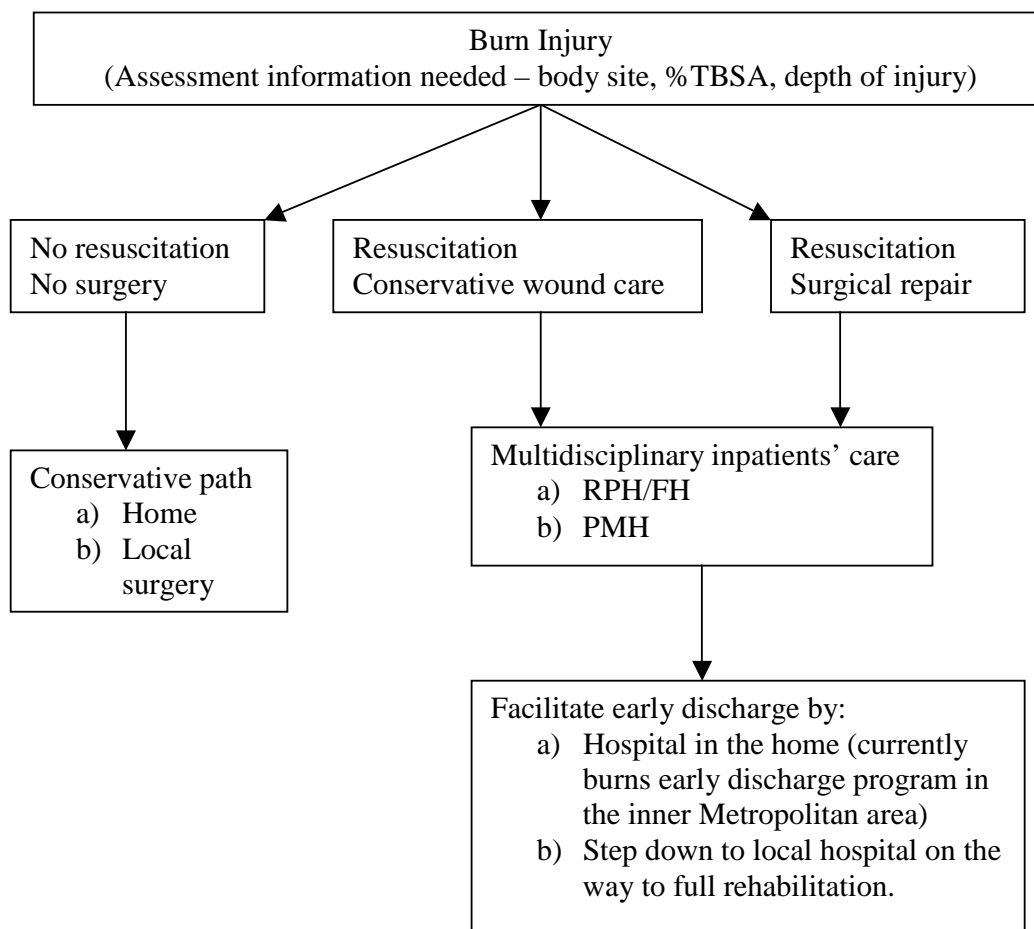
- Strong links with universities and tertiary centres would be fostered as a move is made towards clinical service being embedded in research to facilitate ongoing audit and EBP review.



## OTHER

16. Any other additional key clinical planning issues relevant to your specialty

### Strategies for the Burns Service of WA for the future



Burns patients can be considered in 3 groups:

- a) Inner Metro – can access tertiary facilities directly
- b) Outer Metro
- c) Rural/Remote

Group b) and c) require simple routine links to the tertiary facilities.

#### Proposal to include:

- Daily ward rounds to include virtual facility to review all burn patients statewide initially. With digital images progress to increased use of telelink.



- Daily ward rounds to include initial assessments and protocol guidance and those patients returning to home post care in the tertiary centre.
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- Education is key. The burn management program is in its 11th year and will need expansion to reach both metro and rural care givers and local training and telelinks for education.

Education of patients to facilitate them taking responsibility to do e.g. own dressing changes needs protocol development and developments of educational material.

- The tertiary centres are the source of the EBP; therefore research in clinical outcomes feeding back into initial care protocols is essential to maintain excellence of care and as such needs to be considered in the makeup of the multidisciplinary team. e.g. to include support on data analysis, Cochrane reviews, data linkage and health economics etc.
- Audit to focus prevention campaigns and for protocol development and implementation assessment.

#### **Estimate:**

≈ 200 patients in adult or paediatric facility each year.

200 paediatrics → ≈ 70 surgical    therefore ? 130 ≈ 60 resuscitation  
200 adults → ≈ 100 surgical        therefore ? 100 ≈ 50 resuscitation

Therefore, 60 paediatrics and 50 adults could be treated remotely with facilities in place, i.e.:

- Protocols
- Education
- Telelinks/Email

Audit and Review

