SKILL MAINTENANCE IN SURGERY
Is learning on the job still viable?

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Melbourne, Australia.

Injury 2013.
Overview

Skill Maintenance In General Surgery:
• Evolution of Surgery
• Junior Staff:
  – Surgical Education and Training (SET)
  – Hospital Programs
• Fellows:
  – RACS, GSA and NZAGS
  – Resources
  – Simulator and Skills Training
• Challenges for Consultant Staff
Continuing Evolution of Surgery

- Surgical techniques developed over the last 25 years
  - Laparoscopic techniques
  - Linear cutting staplers
  - Non-tension hernia repair with mesh
  - Ligasure and Harmonic Scalpel
  - Haemostatic agents
  - Laparoscopic Gastric Bands
  - Sentinel Lymph Node Biopsy
  - Single Incision Laparoscopic Surgery
  - Etc.
Continuing Evolution of Surgery

• **Sub-specialisation: Case Load**
  – Colorectal Surgery
  – Gastrectomy
  – Breast Surgery
  – Thyroid surgery
  – Hepatobiliary-Pancreatic Surgery

• **Public expectation**
  – Highly trained
  – Experienced
Surgical Training

- Medical undergraduates
- Interns
- HMOs
- Surgical Education and Training (SET) Program
- Fellowship Programs
Learning is a lifelong process.
Surgical Training

- Principles of Adult Learning
- Cognitive:
  - Medical knowledge
  - Decision making
- Skills Training
  - Clinical Examination Skills
  - Technical Skills
- Non-Technical Skills
  - Communication
  - Research literature review and appraisal
Hospital Programs

• Aimed at Interns and junior Resident Medical Officers
• Alfred Hospital: Dedicated Education Officer
• Range of programs available:
  – Weekly Intern Education Program
  – Fortnightly HMO Education Program
  – After Dark Surgical Program
  – Vascular Anastomosis Workshop
  – Basic Clinical Sciences Program
  – Clinical Anatomy Program
Hospital Programs

- Aimed at Interns and junior Resident Medical Officers
- Alfred Hospital: Dedicated Education Officer
- Range of programs available:
  - Orientation Programs: Trauma, Neurosurgery and Cardiothoracics
  - Suturing Master Class
  - Return to Basics: a clinical skills education program
  - Junior Medical Staff Professional Development Program
  - SET Tutorial Program
Surgical Education and Training
RACS, GSA, NZAGS

- Courses
- Resources
  - Journal Library etc
- Simulation:
  - Laparoscopic Workshops
  - DSTC
- Assisted and supervised procedural experience
- Assessment
Surgical Education and Training

• Courses:
  – ASSET: Australian and New Zealand Surgical Skills Education and Training
  – CCrISP: Care of the Critically Ill Surgical Patient
  – FLS: Fundamental Laparoscopic Skills
  – CLEAR: Critical Literature Evaluation and Research
  – EMST: Early Management of Severe Trauma
  – DSTC: Definitive Surgical Trauma Care
  – MOSES: Management of Surgical Emergencies
  – TIPS: Training in Professional Skills
Skills Training

• Apprenticeship system complimented by skills training in simulation laboratories

• Skill simulation and training allows for:
  – Minimisation of patient involvement early on in skill acquisition
  – Skill to be practiced repeatedly
  – Student rather than patient focused approach
  – Training to be tailored to the specific needs of the student
  – Faster acquisition of skills due to eliminating the need for ad hoc or fortuitous training opportunities

• Facilitated through the RACS, as well as various universities and hospital throughout Australia and New Zealand

The Alfred
Surgical Supervision

• Supervised practice in an apprenticeship system
• Levels of supervision:
  – Trainee as Primary Surgeon
    > Surgeon Mentor Scrubbed
    > Surgeon Mentor in Theatre
    > Surgeon Mentor Available
  – Trainee as Assistant
    > Assisting Surgeon Mentor
Surgical Supervision

- SET Requirements:
  - Minimum of 100 major cases every 6 months
  - Minimum % as primary operator (based on year of training)
    - SET2: 20% then 25%
    - SET3: 30% then 40%
    - SET4: 50%
    - SET5: 60%
- Minimum of 600 major cases prior to sitting for Fellowship Examination
- Minimum of 800 major cases prior to presenting for Fellowship
Surgical Training Assessment

• Supervisors:
  – Head of Unit
  – Hospital Supervisor
  – Hub Supervisor

• SET1:
  – Mini Clinical Examination (Mini-CEX)
  – Direct Observation of Procedural Skills (DOPS)

• SET1-5:
  – Mid-term and End-of-Term Assessment
  – 9 core competencies of Surgeons
## SET RACS Assessment

### Technical Expertise

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<td>Safely and effectively perform appropriate surgical procedures</td>
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<td>- Fails to acquire appropriate skills despite repeated instruction or practice</td>
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<td>- Too hasty or too slow</td>
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<td>- Rough with tissue</td>
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<td>- Is inconsistent in retaining procedural knowledge/skills</td>
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<td>- Lacks attention to detail</td>
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<td>- Hesitant</td>
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<td>- Consistently demonstrates acquisition, practice, and retention of sound procedural knowledge, surgical skills and techniques for level of training</td>
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<td>- Excellent and specialist abilities in procedures and techniques</td>
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<td>- Excellent pre-operative preparation</td>
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<td>- Outstanding technician</td>
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<td>- Fluent and always in control</td>
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<td>- Meticulous</td>
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<td>- Slow in learning new skills</td>
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<td>- Lapses in dexterity</td>
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<td>- Demonstrates manual dexterity required to carry out procedures</td>
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<td>- Good hand-eye coordination</td>
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<td>- Extremely good at adapting skills for varying operative situations</td>
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<td>- Excellent surgical judgement</td>
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<td>- Ongoing weaknesses</td>
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<td>- Struggles to adapt skills to different contexts</td>
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<td>- Adapts their skills in the context of each patient and procedure</td>
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<td>- Seeks opportunities to learn new skills</td>
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<td>- Fails to improve skills and/or learn from experience</td>
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<td>- Maintains skills</td>
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<td>- Effective in learning new skills</td>
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<td>- Requires close supervision</td>
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<td>- ‘Near enough is good enough’ approach</td>
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<td>- Approaches and carries out procedures with due attention to safety of patient, self, and others</td>
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<td>- Outstanding clinician</td>
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<td>- Constantly aware and responds to patient, self, and team members</td>
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<td>- Excellent attention to detail</td>
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<td>- Has lapses in concentration</td>
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<td>- Needs to be prompted to assist effectively</td>
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<td>- Follows the operation with guidance from the operator</td>
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<td>- Anticipates the needs of the operator and responds accordingly</td>
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<td>- Occasionally acknowledges/ follows up on problematic performance</td>
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<td>- Ignores feedback</td>
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<td>- Consistently analyses their own clinical performance for continuous improvement</td>
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<td>- Learns from feedback from others</td>
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<td>- Accurate in self-appraisal</td>
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<td>- Excellent insight</td>
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<td>- Seeks and accepts criticism and responds appropriately</td>
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<td>- Aware of own skill limitations</td>
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Junior Medical Staff: In Summary

- Range of Programs:
  - University
  - Intern Programs
  - Hospital Residency Programs
  - RACS courses available to pre-SET trainees and SET trainees
  - SET Program
Junior Medical Staff: In Summary

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Fellows
Royal Australasian College of Surgeons

- Continuing Professional Development Program:
  - Outlines requirements for Fellows
- Audits of Surgical Mortality
- Morbidity Audit and Logbook Tool (MALT)
- Recent review of the College website:
  - Many non-technical resources available
  - No technical skills workshops or courses currently listed
Annual Scientific Workshop

RACS ASC 2013
Royal Australasian College of Surgeons
82nd Annual Scientific Congress
SKYCITY/Crowne Plaza Convention Centre
Auckland, New Zealand
6 - 10 May 2013

asc.surgeons.org
Annual Scientific Program

• Extensive Program
  – Lectures
  – Scientific Papers
  – Master Classes and ‘How I do it’ sessions
  – Trade display with innovative products available for review
  – Workshops
Other Resources

- Pod Casts: Eg RCSIs
Other Resources

- Pod Casts:
  - Eg RCSI
- You Tube
Other Resources

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- Industry
Other Resources

- Pod Casts: Eg RCSI
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- Journal online resources
Other Resources

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- Specialty Societies
Other Resources

- Pod Casts:
  Eg RCSI
- You Tube
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- Journal online resources
- Specialty Societies
- Specific Skills Training

International Association for Trauma Surgery and Intensive Care
Other Resources

- Pod Casts:
  - Eg RCSI
- You Tube
- Industry
- Journal online resources
- Specialty Societies
- Specific Skills Training
- Update Meetings
Surgical Simulation and Skills Training

Clinical Training and Evaluation Centre (CTEC)
- University of WA
- Cater for all medical and allied health professionals
- Cater for Pre-SET through to senior consultant level
Core Skills: Advanced Laparoscopic Colorectal Skills Workshop

Thursday 28th November 2013

The Core Skills: Advanced Laparoscopic Colorectal Skills Workshop is designed for Consultant Colorectal Surgeons and RACS Surgical Trainees, SET 4 – 5 in Colorectal Surgery.

This highly practical one day course aims to provide participants with the most efficient techniques for Laparoscopic Colorectal Surgery, including safe colon mobilisation and techniques for vessel control.

This course utilises fresh frozen cadavers which allows participants to practice their skills in a ‘Safe’ environment, as a prelude to training with mentorship in laparoscopic colorectal surgery.

This course will also feature case scenarios and discussion, whilst also allowing sufficient time for you to practice your skills.

At the conclusion of this course, participants will have gained knowledge and familiarity with two laparoscopic colorectal procedures: Right Hemicolectomy and High Anterior Resection.

COURSE CONTENT
The course focuses on the following tasks:

- Safe Laparoscopic colorectal dissection techniques
- Laparoscopic Right Hemicolectomy
- Laparoscopic High Anterior Resection (Left Hemicolectomy)

CONVENOR
Professor Marina Wallace

SUITABLE FOR
SET 4 – 5 Trainees and Consultants in Colorectal Surgery

CTEC works with professional associations and peak bodies to offer courses that contribute to the professional development of health-care professionals. Some of these bodies include RACGP O&P Program, ACCRM, ANZCA, RACS O&P Program. Click here to find out more.
Challenges for Consultant Staff

• Sub-specialisation and clinical case load
• Identification of need for training in specific areas:
  – Individual surgeons
  – Hospital administration
• CPD program does not emphasise ongoing clinical skill acquisition and maintenance
Challenges for Consultant Staff

• College-based Skills Training:
  – Only one regular skills-based training facility listed on RACS, GSA and NZAGS websites (CTEC)

• Hospital-based Skills Training:
  – Variable: Geographical and private v’s public sector

Access to skill simulation labs and established programs on a regular basis is limited to only a few facilities
Conclusions

• Adult education: well researched and established methods
• Programs exist for junior doctors: both non-technical and technical
• Many non-technical programs exist for consultant staff however skill training is lacking
• Skill programs for consultant staff are possible:
  – Recognise the need
  – Facilitation through College and Specialist Societies
  – Facilitation through private practice and public hospital system
Thank-you!

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