



RPA
INSTITUTE OF
ACADEMIC SURGERY

Education and Training Annual Report 2019/20

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1. Executive Summary

The purpose of this report is to provide a summary of the surgical education and training provided within the facilities of the Institute of Academic Surgery (IAS) at Royal Prince Hospital (RPA) within Sydney Local Health District (SLHD) for the financial year period 2019/20.

Education and training in one of the four main portfolios of the IAS along with research; innovation, value and thought; and surgical partnerships.

The focus of the IAS facility, which houses a microsurgery laboratory, a simulation theatre and a technical skills laboratory, is to be a welcoming environment that facilitates multi-disciplinary and multi-specialty surgical education and training with staff and students from across the local RPA campus and SLHD frequently using the space along with external partners and industry.

In 2019/20, a total of 171 training events were held in the IAS including a total of 1624 attendees. This resulted in the average delivery of 14 training events per month to 135 people. Almost 90% of both training events and attendees in 2019/20 were internal to RPA and SLHD. The COVID-19 pandemic had a considerable impact on the facility, with the final course for the financial year run on 12 March thus decreasing the overall activity for the year.

The departments utilising the IAS most frequently in 2019/20 were medical students from the University of Sydney; along with general surgery trainees and RPA Women & Babies including neonatal intensive care, midwifery, obstetrics and gynaecology.

The delivery of surgical education and training at the IAS would not be possible without the ongoing commitment and dedication of the many clinical teams and individual staff involved. Their contribution to ensuring the highest level of education and training is provided to our participants is greatly appreciated.

The provision of surgical education and training is a critical component of the IAS. The breadth and depth of the educational courses being delivered and developed is a tribute to the collaborative and innovative approach of the IAS team.

2. Introduction

2.1 Purpose of report

The purpose of this report is to provide a summary of the surgical education and training provided within the facilities of the Institute of Academic Surgery (IAS) at Royal Prince Hospital (RPA) within Sydney Local Health District (SLHD) for the financial year period 2019/20.

3. Governance

3.1 Education and training portfolio

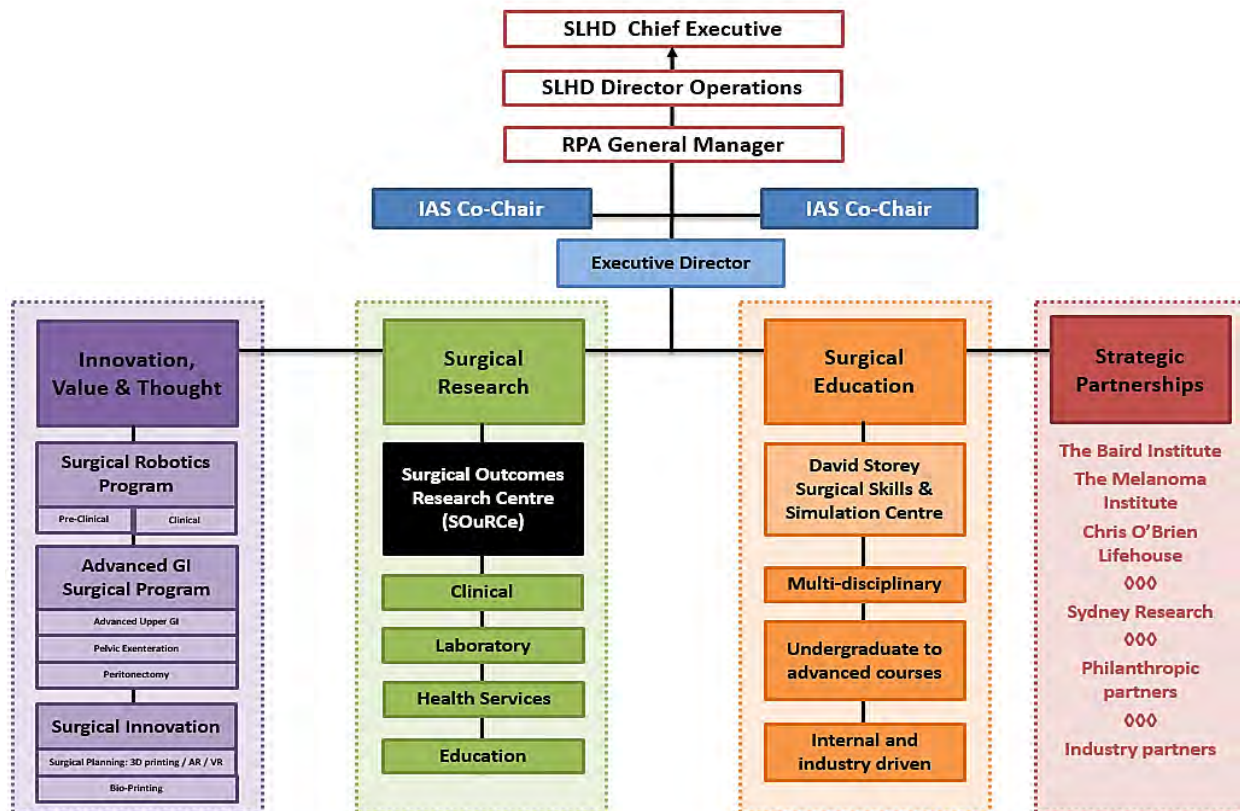
The IAS was established in 2014 to become the primary hub of surgical research and education at RPA and aims to be at the forefront of leading surgical practice and patient care. The IAS is a collaboration between SLHD and the University of Sydney, with a commitment to ensuring a vibrant academic presence across the campus.

The education and training portfolio is one of the four main portfolios of the IAS along with research; innovation, value and thought; and surgical partnerships.

In May 2016, the IAS opened the doors to its new facility on the corner of Missenden Road and Carillon Avenue. The facility houses tutorial and meeting rooms, a 3D printing laboratory, a microsurgery laboratory, a simulation theatre and a technical skills laboratory with an anatomical licence. The facility also has hot-desk space for those conducting research to utilise for their work.

The focus of the IAS facility and overall education and training portfolio is to be multi-disciplinary and multi-specialty in nature with staff and students from the local RPA campus and SLHD frequently utilising the space along with external partners and industry.

The IAS governance structure is outlined **below**.



3.2 Staffing

The delivery of surgical education and training at the IAS would not be possible without the ongoing commitment and dedication of the many clinical teams and individual staff involved. Their contribution to ensuring the highest level of education and training is provided to our participants is greatly appreciated.

The list of key staff involved are outlined in **Table 1**.

Table 1.	
Management	
Professor Paul Bannon	Co-Chair IAS
Professor Michael Solomon	Co-Chair IAS
Ms Kate McBride	Executive Director IAS
Associate Professor Christopher Young	Executive Director, Surgical Education IAS
Associate Professor David Storey	Director, Surgical Education IAS
Associate Professor Jonathan Hong	Deputy Director, Surgical Education IAS
Dr Sarah Whereat	Education Support Manager
Dr Jean Wong	Surgical Superintendent RPA
Mr Trevor McGowan	Facility Coordinator IAS
Ms Rosa Fung	
Mr Trent Cameron	Facility Coordinator RTI
Mr Kai Cheng	Surgical Innovation Research Officer IAS
Ms Lucy Mackenzie	Manager Surgical Partnerships IAS
Ms Melissa Berry	Administrative Officer IAS
Anaesthetics	
Associate Professor Timothy Brake	Staff Specialist Anaesthetics & Pain Management

Dr Ryan Downey	Staff Specialist Anaesthetics
Breast Cancer Oncoplastic, Endocrine and General Surgery	
Dr Nipu Jayatileke	VMO Breast Cancer Oncoplastic, Endocrine and General Surgeon
Gastrostomy Training Program	
Dr Sharon Carey	Head of Department, Dietetics
Ms Michelle Harrison	Project Officer, Dietetics
Intensive Care	
Dr Timothy Southwood	Staff Specialist Intensive Care
Dr Matthew Morgan	Staff Specialist Intensive Care
Sydney University Surgical Society	
Mr Gareth Crouch	President of SUSS
Miss Chantel Arce	Secretary of SUSS
University of Sydney – Medical School	
Ms Susan McKenzie	Procedural Skills Coordinator Stages 3 & 4
Urology	
Dr David Esinger	Urology – Head of Department
Dr Scott Leslie	VMO Urologist
Women and Babies	
Dr Angela McGillivray	Staff Specialist Neonatologist
Dr Tracey Lutz	Staff Specialist Neonatologist
Dr Adrienne Gordon	Staff Specialist Neonatologist
Ms Kate Griew	Manager Clinical Governance & Practice Development
Ms Catherine Price	Midwifery Educator, CEWD
Ms Rebecca Riley	Clinical Nurse Educator Newborn Care
Ms Kristen Bennie	Clinical Nurse Educator Newborn Care
Microsurgical Skills	
Associate Professor Sydney Ch'ng	Research Lead, Plastics & Reconstructive Surgery
Mr Zane Wang	Medical Laboratory Scientist, Transplant Institute

4. Education and Training Activity

4.1 Overview

Education and training is a core component of the work of the IAS. Despite the impact of COVID-19, a total of 171 training events were held in the IAS including a total of 1624 attendees. This resulted in the average delivery of 14 training events per month to 135 people.

With the primary focus of the IAS facility being to deliver education and training opportunities to our local hospital and health district staff, almost 90% of both training events and attendees in 2019/20 were internal to RPA and SLHD.

The monthly activity for training events and attendees to the IAS in 2019/20 is outlined in **Figure 1 & 2**.

Figure 1. Monthly Training Events in IAS 2019/20

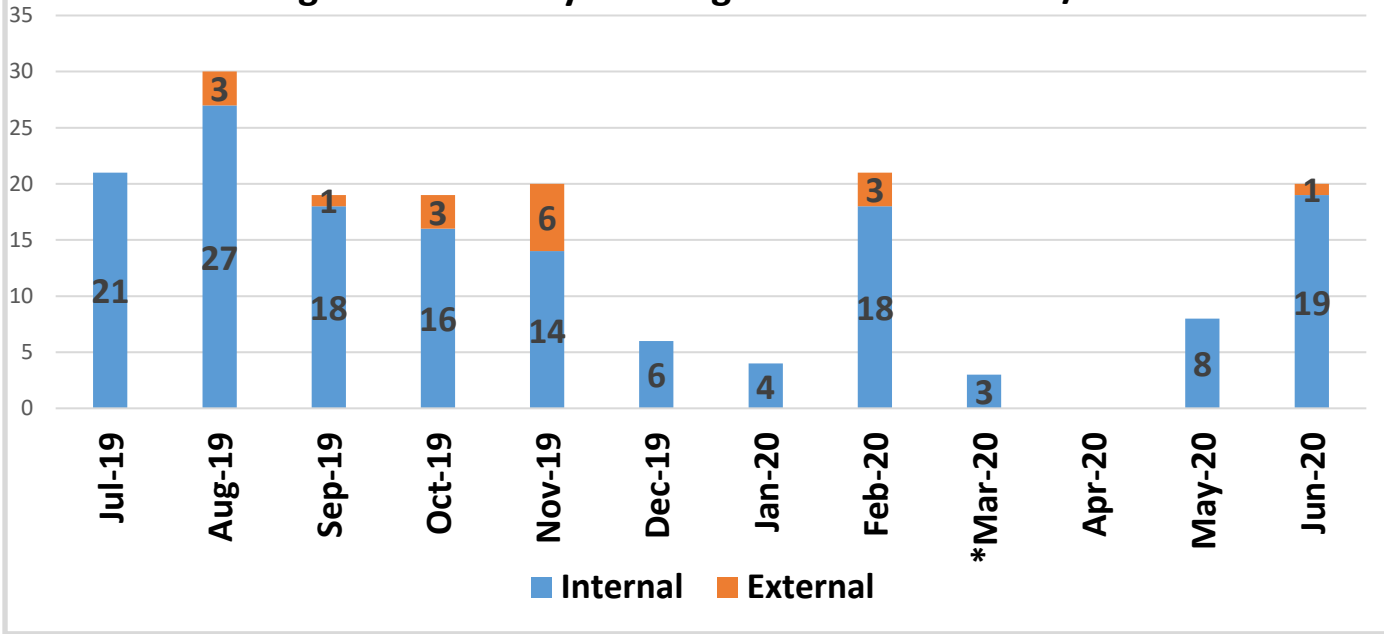
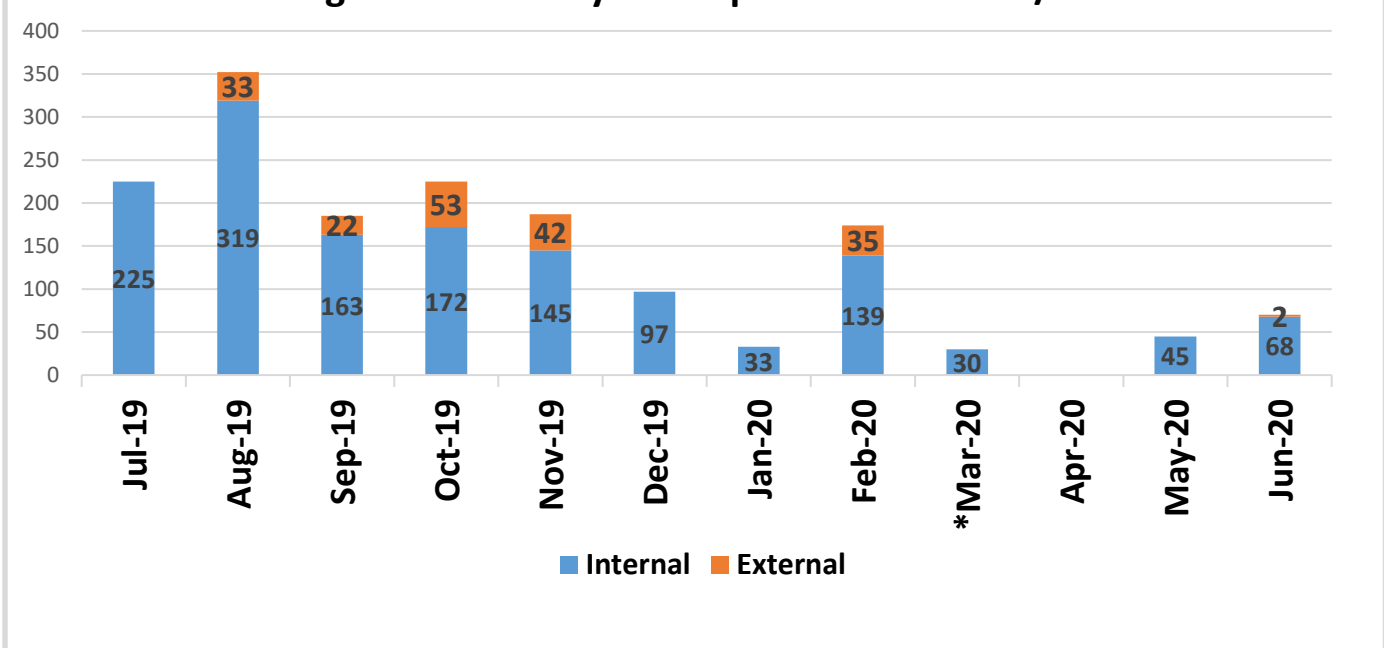


Figure 2. Monthly Participants in IAS 2019/20



*COVID-19 pandemic started in March 2020

In comparison to 2018/19, November has moderate increase in the number of training events (n= 20). August has the most number of participants (n=352) with March and April have the least number of participants (n=30).

The monthly activity for training events and participants to the IAS in 2019/20 compared with 2018/19 is outlined in **Figure 3 and Figure 4** respectively.

Figure 3. Comparison of Monthly Training Events

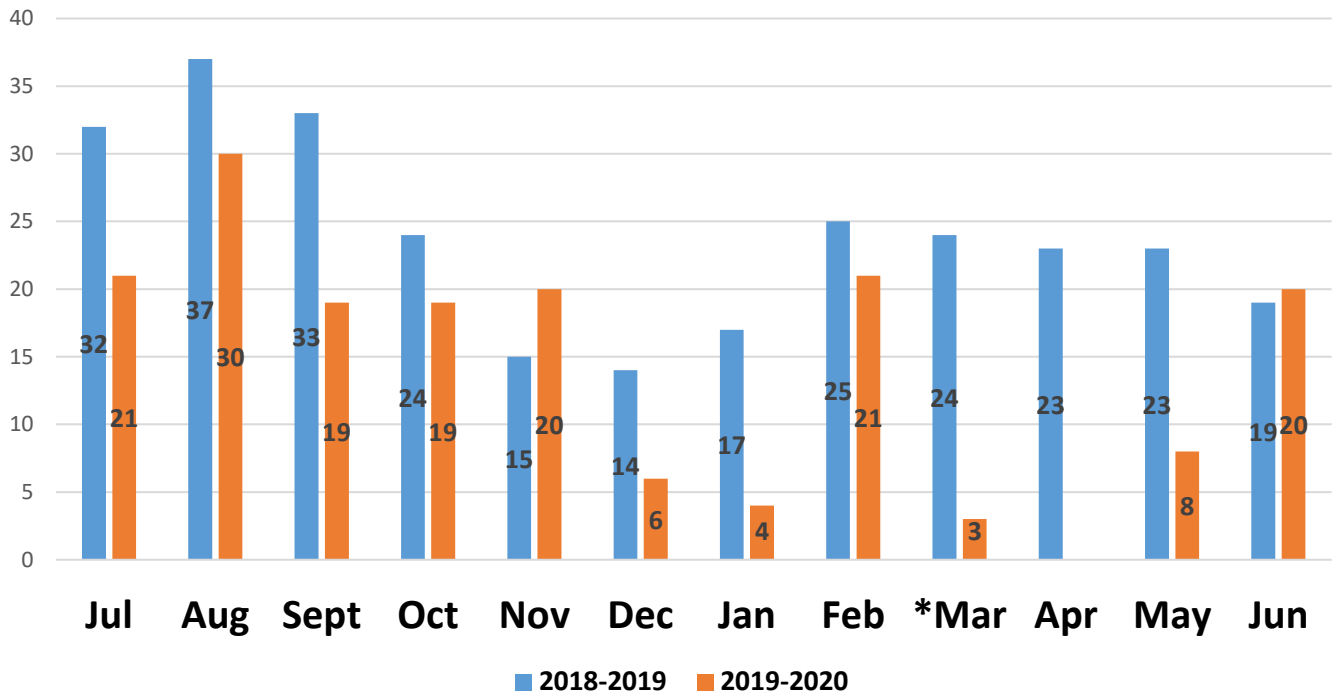
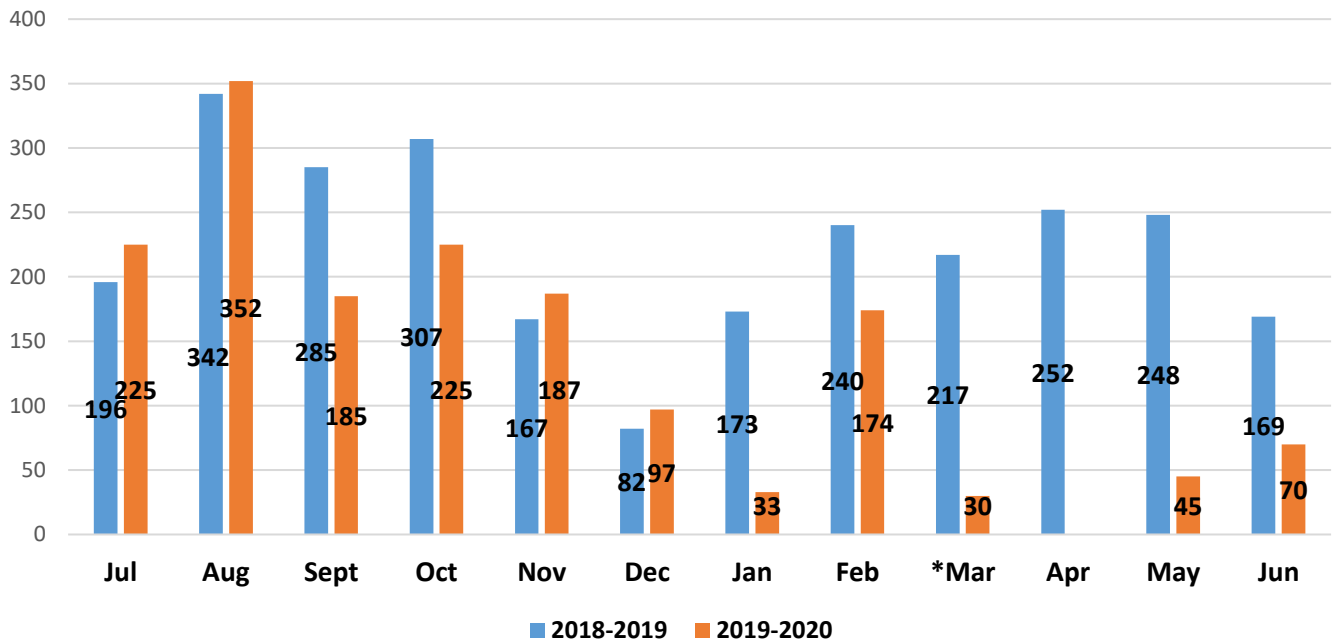


Figure 4. Comparison of Monthly Participants in IAS



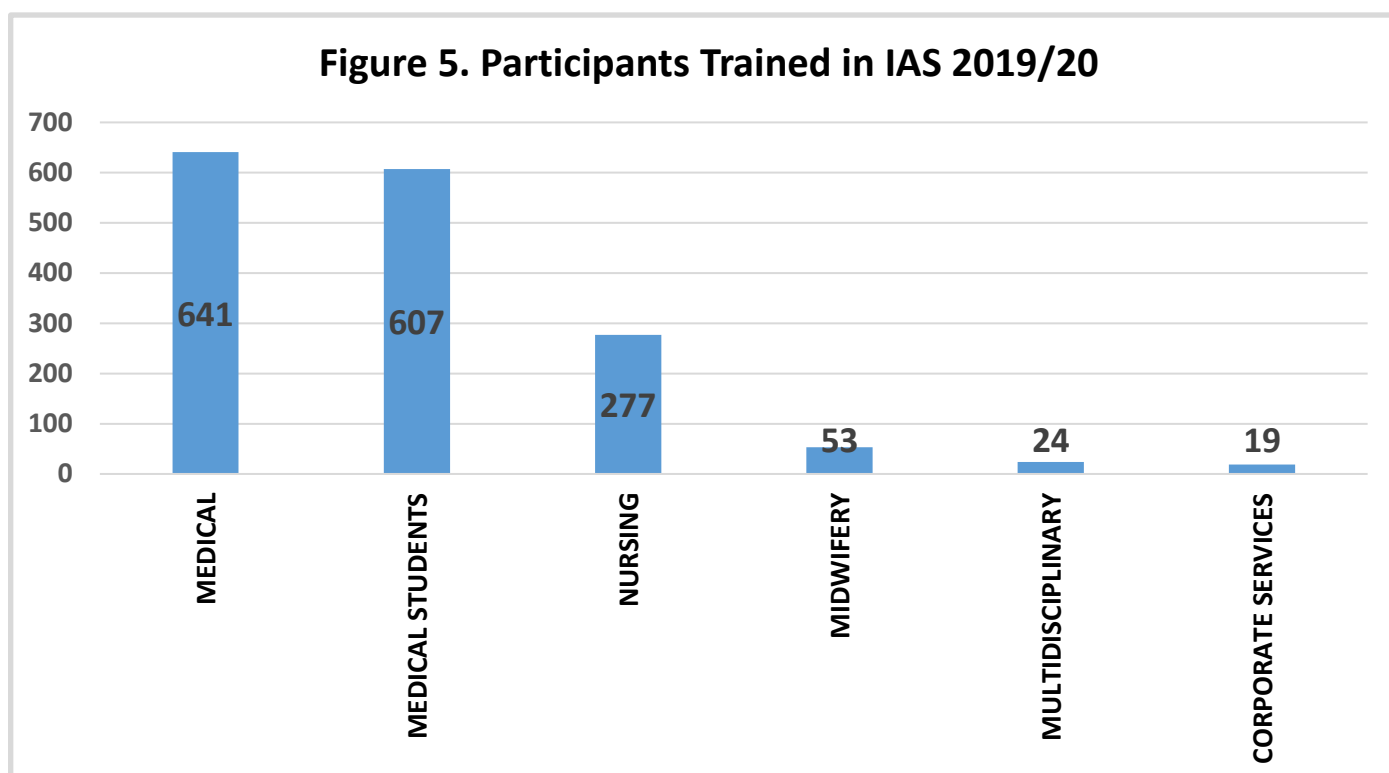
*COVID-19 pandemic started in March 2020

4.2 User Groups

Training events at the IAS ranged from a single person attending to develop their own technical skills utilising the surgical skills laboratory, through to departmental multidisciplinary team simulations and advanced training events with attendees from interstate and external health care facilities.

The IAS prides itself on providing multidisciplinary education and training, which was evident in the range of disciplines that utilised the IAS facilities in 2019/20 with the largest user group being medical staff from RPA. Medical participants attended the most number of courses in the IAS (n=641) and corporate services had the least amount of participants (n=19).

The range of user groups is outlined in **Figure 5**.

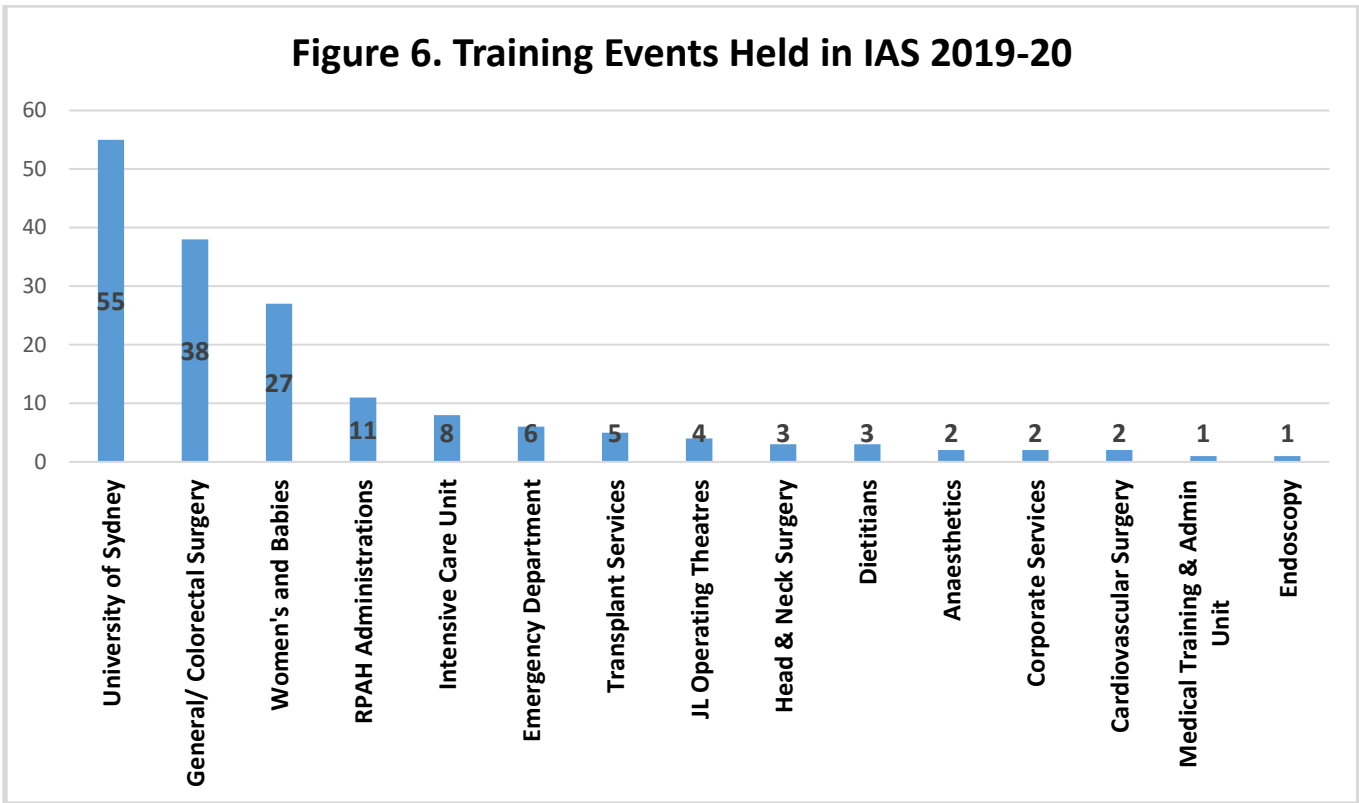


The IAS has collaborated with a variety of different departments at RPA including from surgical, medical, nursing and allied health domains. Utilisation of the IAS facilities by departments continues to expand and the IAS is confident that more departments will continue to request access to the IAS facilities for education and training purposes.

The departments utilising the IAS most frequently in 2019/20 were medical students from the University of Sydney (n=55); along with general surgery (n=38) and RPA Women & Babies (n=27) including neonatal intensive care, midwifery, obstetrics and gynaecology.

The full list of departments running courses in the IAS in 2019/2020 is outlined in **Figure 6**.

Figure 6. Training Events Held in IAS 2019-20

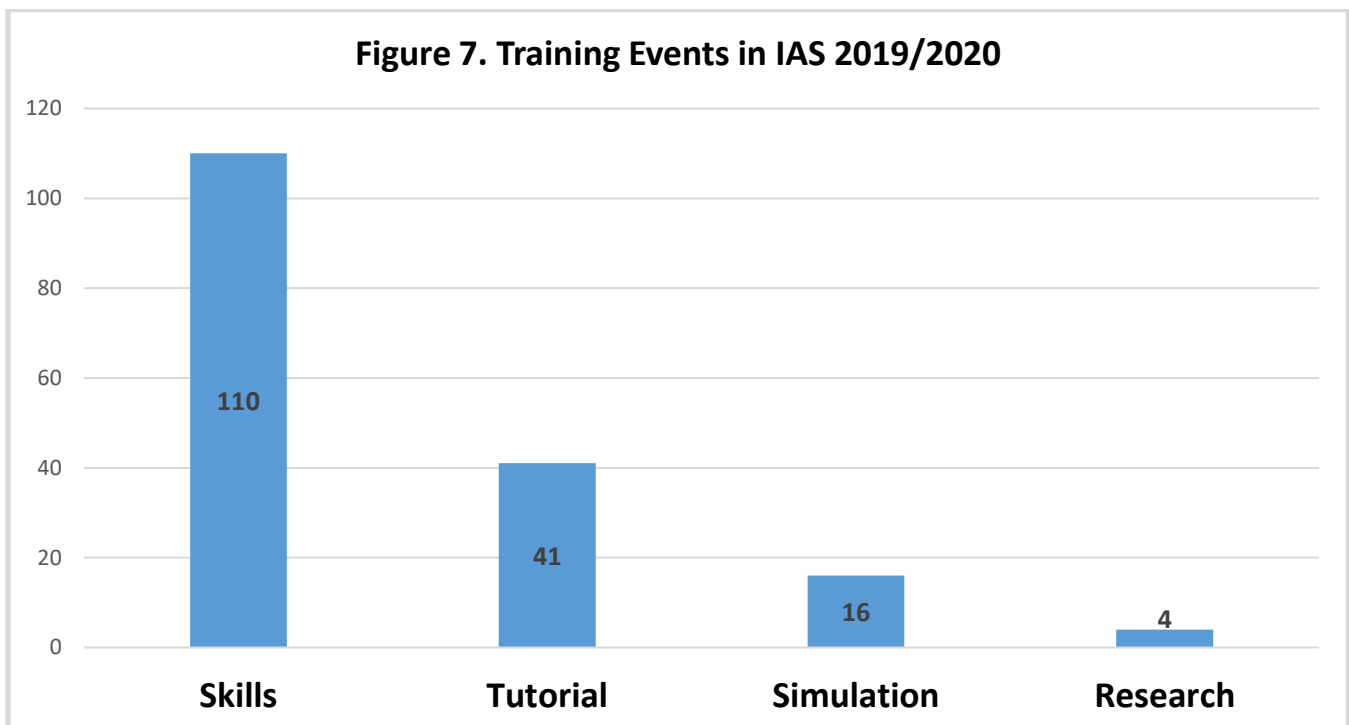


4.3 Types of Training Courses

The IAS provides different types of training modalities to suit the requirements of education programs whether they are skills acquisition training, simulated learning environments, tutorial sessions or a combination of these modalities. The majority of training provided in the IAS in 2019/20 was skills acquisition training with 110 training programs (64%) delivered to 957 attendees (58%).

The full list of training methods delivered in 2019/20 and the number of attendees is provided in **Figure 7**.

Figure 7. Training Events in IAS 2019/2020



4.4 Training Events and Highlights

Despite the impact of COVID-19, the IAS continued to design, facilitate and coordinate successful education and training programs in 2019/20, working collaboratively with a range of stakeholders to advance the knowledge, skills and capacity of the participants coming into the IAS.

4.4.1 Take-home suture and knot-tying pack for trainees



The suture and knot tying packs were designed by Associate Professor David Storey for trainees to practice their suturing and knot-tying skills at home during the COVID-19 lockdown period when the IAS facilities were closed due to physical distancing requirements

4.4.2 Urology Surgical Teaching Session



Dr Scott Leslie from the urology department, in conjunction with Associate Professor David Storey and Karl Storz, have been developing a model that can be used for cystoscopy and ureteral cannulation training.

The stations included,

- Cystoscopy / pyeloscopy to retrieve a kidney stone,
- Uretero-ureteral anastomosis,
- Uretero-ileal anastomosis (conduit), and
- DRE - enlarged prostate with prostate cancer at the right base.

4.4.3 Perioperative New Graduate Nursing Self-Directed Education Sessions

The education session is aimed at the perioperative new graduate nurses. The curriculum includes non-technical skills, operating room setup, prepping and draping the surgical field, scrubbing, gowning and gloving, instrumentation handling techniques and laparoscopic instrument handling. The session is designed to be self-directed so participants can undertake tasks as they advance.



5. Course Development

5.1 Developments in surgical education and training

5.1.1 Sydney South-West Surgical Skills Network (SSW-SSN) - 'Essential Surgical Skills' Online Course by IAS education team

Due to the impact of COVID-19 in early 2020, The 'Essential Surgical Skills' online course was developed and released in May 2020. The course design is based on the content of previous face to face sessions and currently supported on the CEWD Moodle online platform. 346 pre-SET surgical trainees across the state have enrolled in the online course, which is a self-directed module with the aim that the trainees will continue to practice and build up their surgical skills. The Moodle online platform prepares the junior medical officers (JMOs) and surgical resident medical officers (SRMOs) to the Royal Australasian College of Surgeons (RACS) Standards by using RACS Core Competencies.



FUNDAMENTALS OF SURGERY COURSE

PART I - Elementary Surgical Skills

Welcome to the Elementary Surgical Skills module, the first of five modules which form the Fundamentals of Surgery e-Learning Course.

- I. Elementary Surgical Skills
- II. Foundational Surgical Skills
- III. Specialty Specific Surgical Skills
- IV. Professional Development Skills
- V. Collaboration and Feedback Hub

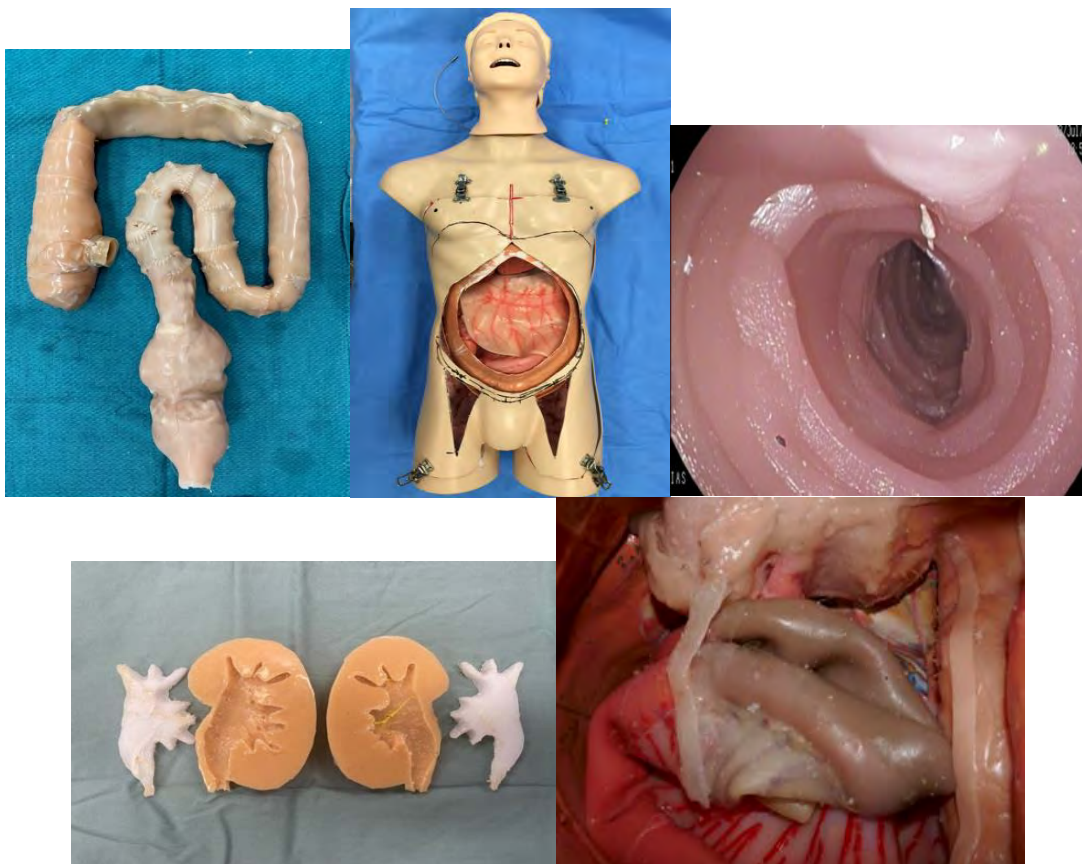


5.1.2 Development of Surgical Silicone Models

The IAS has developed a series of bespoke models for surgical training to improve the fidelity of training models and enable highly specific and specialised training outcomes to be achieved. The IAS models can be used for training and competency assessment.

In 2019/20, A/ Prof David Storey developed a range of surgical training models in the shape of abdominal cavities with vascular, gastrointestinal and genitourinary structures, creating a more realistic space than conventional surgical trainers. These structures allow surgical trainees to practice on procedures including:

- Gastrointestinal endoscopy
 - Upper GI endoscopy for PEG insertion
 - Open or laparoscopic choledochoscopy
 - Passage of a side viewing duodenoscope and initial placement of an ERCP cannula
 - Small bowel enteroscopy
 - Rectal examination, fibre optic sigmoidoscopy and colonoscopy including examination of the terminal ileum.
- Urogenital techniques, including cystoscopy, ureteral cannulation, hysteroscopy and cannulation of the Fallopian tubes



5.2 Future Courses and Training Development

The IAS team are continually working both internally and with other teams to develop and plan new courses for delivering cutting-edge and innovative surgical education and training. In 2020/21, new courses and education plans were under development and these are outlined below:

5.2.1 Inter-professional Simulation (IPS) Training Program

In collaboration with the RPA Medical & Training Administration Unit and Nursing department, the IAS education team is developing a range of simulation scenarios to improve clinical awareness and facilitate communication between medical staff and nursing staff when approaching critically ill patients. The IPS program will involve simulation scenarios for the medical and nursing staff to practice their problem-solving techniques, clinical skills and collaboration of care in a supportive environment.



5.2.2 Perioperative nursing education – continuing professional development program

The IAS will continue to support the ongoing perioperative nursing education. The aim of this program is to develop and maintain their continuing competence and enhancing their professional practices. The program will involve interdisciplinary simulation sessions, surgical specialties' tutorial sessions, surgical specialties' skill trainings and emergency management in operating theatres.

6. Conclusion

The provision of surgical education and training is a critical component of the IAS. The breadth and depth of the educational courses being delivered and developed is a tribute to the collaborative and innovative approach of the IAS team.

Due to COVID-19 pandemic occurred since March 2020, most of the training and education programs are postponed and programs are being developed to smaller groups. Despite of the disappointment of training programs not going ahead, it was still a great opportunity to communicate and establish connections with some of the department education leads within the SLHD. The future direction of the education and training will continue to develop surgical training programs, and provide the opportunities for inter-professional and interdisciplinary collaboration.