



ANAES ACP NEWSLETTER

DECEMBER 2019

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WORDS FROM ACADEMIC CHAIR



2019 has been a good year as we have made significant progress at the ACP level. In research, we published about 70 articles (with 7 articles in the Thomas Reuters Top 20%) and have received about \$900,000 in grant funding. Ban Leong and the WAN team have just showcased their new AI-powered system uSINE, which will improve the rate of accuracy of administering spinal anaesthesia. We are also proud of Shariq

who was awarded the Nurturing Clinician Scientist Scheme-Clinician Innovator category. On the education front, we continued to receive affirmation from our students and residents. Many of our passionate educators received accolades from the medical schools and the institution education offices. We are especially proud of Darren and the residency team for being awarded the Best Programme Director, Best ACGME-I Residency Programme and the Most Improved ACGME-I Residency Programme in SingHealth for 2019.

The ACP Clinical pillar has been tasked to look into the management and reporting of critical incidences across the ACP and has been diligently promoting quality and safety culture within the ACP. Many of our faculty now are involved in Quality Improvement projects and we are starting to see the results of their efforts. As for philanthropy, Yew Weng, Jo Tan and June have been ramping up efforts to engage donors and external collaborators. We have successfully launched the Senior Resident Talent Development Award and have identified the second recipient for the award.

As the year is drawing to a close, I would like to take the opportunity to thank you for your participation in all our academic initiatives. I look forward to your continued support as we aim to launch the ACP mentorship programme and the revamped professional development series in 2020.

Thank you.

A/Prof Soh Chai Rick

CONGRATULATIONS!

RESEARCH



▪ DR GOH QING YUAN

Awarded **SGH Research Grant** for his project “Validation of a host-response test (“AcuSept”) for sepsis in the intensive care unit.”

DEPARTMENT AWARDS

▪ KKH WOMEN’S ANAESTHESIA & KKH PAEDIATRIC ANAESTHESIA

Awarded NUS YLL Clinical Teaching Excellence Award

EDUCATION



▪ A/PROF TAY SOOK MUAY

Awarded the **NUS YLL Dean’s Award for Teaching Excellence** and **NUS YLL Special Recognition Award**



▪ DR PATRICK WONG

Awarded the **NUS YLL Special Recognition Award**



▪ DR JERRY TAN

Awarded the **NUS YLL Special Recognition Award**



▪ DR LIM SUAN LING

Awarded the **KKH Teacher’s Day Award**

Congratulations to the following medical students and their mentors who were awarded the SingHealth Medical Student Talent Development Award and the AM-Ethos Medical Student Fellowship.

Student Awardee & Mentor	Grant Type
Andrea Ang Mentor: Tay Sook Muay	SingHealth Medical Student Talent Development – Project
Vikaesh Moorthy Mentor: Sophia Chew	SingHealth Medical Student Talent Development – Travel
Yeap Cheng Teng Mentors: Sng Ban Leong & Alex Sia	AM-ETHOS Medical Student Fellowship
Zhang Junyi Mentors: Alex Sia & Sng Ban Leong	AM-ETHOS Medical Student Fellowship

INTERVIEW WITH A/PROF RUBAN OUR OUTGOING CHAIR, NOW CMB OF SGH



BY LUCY DAVIES

CHIEF RESIDENT, SINGHEALTH ANAESTHESIOLOGY RESIDENCY PROGRAMME

Destined to be a doctor, A/Prof Ruban actually grew up in the hospital quarters in his home town Malacca, a happy and carefree childhood, running around in the paddy fields. But a sense of duty and community was instilled from a young age - as a boy A/Prof Ruban was a boy scout, volunteered with the Red Crescent, and was the president of a few societies at school. There was fun too - playing competitive hockey... but also enjoying the odd game of football, badminton, squash. That's not all though – he also acted on stage, danced, even appeared on television!

A/Prof Ruban recalls when he first came to Singapore, leaving his family behind. The transition was not easy – making the switch from studying in Malay to English, trying to catch up with the Singapore students, all while having to live independently for the first time. The Singapore PSC (Public Service Commission) at the time decided to put up the Malaysian boys and girls in a block of old flats in Jurong, destined to be torn down, designating a few flats for them. Many units were boarded up, with a few rather unique neighbours. Taking the lift, for example, could be a dangerous experience. A/Prof Ruban recalls a time

when the lift door opened and standing there in the lift was a half naked, heavily tattooed man holding a parang!

Upon graduation from medical school, he remembers fondly how excited he was to finally start work and have his own patients, though he knew the hours would be long and the work tough. By the end of the houseman year when he bumped into one of the consultants who hadn't seen him in some time, he was asked why he had lost so much weight!

We ask him what medicine was like back in those days: "In those days!" he exclaims "I am still quite young!". A/Prof Ruban explains how he never intended to do anaesthesia – in fact he came out of medical school convinced that he was going to do O&G, even taking the part one (and passing). Then because he felt that acute medicine would be a very useful skill, he decided to do a posting in anaesthesia. Third day in anaesthesia in thoracic, he discovered just how thrilling it was, because the patient bled and bled and he was syringing in blood. He came out of it thinking it would definitely be an exciting discipline to go into (perhaps one of the reasons he eventually decided to do thoracic anaesthesia).

“Life is all about balance, what are the rocks, and what is the sand? What are the priorities to you? Pay attention to the priorities”

Surprisingly, he says it took him some time to make the switch from O&G to anaesthesia – though all the seniors at the time were trying to convince him to do anaesthesia. He took to the hills to think about it (literally a holiday trip to Fraser’s hill) but came back decide on anaesthesia. While we are on the subject of hills, we speak about A/Prof Ruban’s philosophy for life in general. “Life is all about balance, what are the rocks, and what is the sand? What are the priorities to you? Pay attention to the priorities”. When he was young he had very simple priorities: to be a good doctor, to always do the right thing, without considering how it will affect you (because often, doing the right thing may not be the easiest thing). “Figure out what guiding principles are important, what your priorities are. For example, family comes first. Things will keep changing – opportunities, challenges, but priorities rarely change.” Words from the wise we note. “But I am still young!” he repeats. And so from being a somewhat reluctant

convert to anaesthesia, 10 years ago, he became deputy head of the department and shortly after became PD (programme director), then head of the Anaesthesia Department, Division and ACP (Academic Clinical Programme) Chair and from there, deputy CMB (Chairman Medical Board), and now, CMB (He almost completed his term as ACP Chair, falling just a few months short.) But he has always been guided by his overarching principle “All along, I have felt that taking up these positions was the right thing to do.”



A/Prof Ruban with the ACP Zentangle masterpiece, created by faculty and residents at the 2019 ACP Retreat.

Through these last 10 years A/Prof Ruban doesn’t really feel he’s had to deal with any big challenges, in fact he seems to dislike the word challenge altogether “there are no BIG challenges, what seems like a big challenge may in fact be easier than a small challenge...how big or small a challenge really is depends on how you perceive it, and how it aligns with what you believe in. “



“Forming the ACP was the right thing to do—the different components of the ACP have already made such progress in such a short period of time”

Wasn't forming the ACP a big challenge we wonder? “Forming the ACP I felt was the right thing to do... in fact I have since come to see that it WAS the right thing to do – the different components of the ACP have already made such progress in such a short period of time. **Research has reached heights where it has never been before. Education once strong, is now stronger. Simulation – just bringing people together, has meant so much progress.”**

How then did he bring it all together? What is his leadership style? Convince, collaborate... not so much the command or control approach. “We used to do things individually without as much impact as what it is now, we are stronger together, and more people are involved in different aspects of how the hospital runs, than ever before”. To quote Sir Ken Robinson **“The real role of leadership is climate control, creating a climate of possibility”**. This really resonates with

Prof Ruban. “Fortunately” he says “we work in an environment with highly capable and highly talented individuals, and much of the leadership is to create the climate for people to thrive in, with just a little direction, the bottom line and of course the importance of support, services and resources.”

And so he moves on to the next big challenge – how does he feel about becoming CMB? (In the interview we laugh over the word challenge again, which Prof Ruban so dislikes). “Well,” he chuckles “Most people, when they see me, say congratulations... but others say, how did you get conned into taking on this role?” he goes on “Being CMB is big job, you can't even see the horizon of what is within your purview. You don't even know what you don't know – that is the scale of the work, I think. Prof Fong Kok Yong has simply done a tremendous job. **I will need all the help I can, all the wisdom of the people around me, and all the support.”**



HUMAN BIOMEDICAL RESEARCH ACT (HBRA)

SCOPE OF HUMAN BIOMEDICAL RESEARCH

Research will fall within the scope of the HBRA if it satisfies at least **ONE Purposive** element and **ONE Methodological** element of where it involves **Sensitive** research—*HBRA section 3*

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">PURPOSE</p>	<p><i>Any research that is intended to study —</i></p> <ul style="list-style-type: none"> (a) the prevention, prognostication, diagnosis or alleviation of any disease, disorder or injury affecting the human body; (b) the restoration, maintenance or promotion of the aesthetic appearance of human individuals through clinical procedures or techniques; or (c) the performance or endurance of human individuals,
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">METHOD</p>	<p><i>where the research involves —</i></p> <ul style="list-style-type: none"> (i) subjecting an individual to any intervention (including any wilful act or omission) that has a physical, mental or physiological effect (whether temporary or permanent) on the body of the individual; (ii) the use of any individually-identifiable human biological material; or (iii) the use of any individually-identifiable health information.
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">SENSITIVE</p>	<p><i>Any research that involves —</i></p> <ul style="list-style-type: none"> (a) human gametes or human embryos; (b) cytoplasmic hybrid embryos; (c) the introduction of any human-animal combination embryo into an animal or a human; (d) the introduction of human stem cells (including induced pluripotent stem cells) or human neural cell into an animal at any stage of development (including a prenatal animal foetus or animal embryo); or (e) any entity created as a result of any process referred to in paragraph (c) or (d).

How should Appropriate Consent be obtained?

Any appropriate consent must for the purposes of HBRA be obtained — HBRA Part 3, section 6

- (a) In writing;
- (b) From the research subject or tissue donor personally or otherwise obtained in accordance with section 7, 8, 9, 10 or 11;
- (c) After the information (*section 12*) has been provided and explained to the research subject or tissue donor or the persons authorized to give consent on the subject's or donor's behalf, AND
- (d) In the presence of a Prescribed witness (when not exempted).

HBRA Essentials Online Training

SingHealth researchers involved in human biomedical research will be expected to complete the upcoming **HBRA Essentials Online Training** in the SingHealth eLearning Portal.

Requirements of Appropriate Consent

- * On the 17 May 2019, MOH released the **Guidance on the requirement of Appropriate Consent** for the conduct of Human Biomedical Research (HBR) and handling of Human Tissue. The guidance document can be downloaded through the [CIRB's website](#)
- * The guidance document contains the various scenarios for HBR to obtain re-consent or continue without re-consent. Researchers have to check if the informed consent form contains the minimal requisite set of "core (and "situational", where relevant) information elements provided to the sub-
- * For submission of **Non-Compliance Report (NCR)** to the Institutional Review Board (IRB), please refer to the [ORIC Newsletter – Jun 2019 \(link here\)](#).
- * Please refer to the **Re-consent Guide** for the Investigators and CRCs to check if re-consent of subjects are required. You may find the worksheet through [ORIC's website \(link here\)](#).



FOR QUERIES AND MORE INFORMATION

Contact Office of Research Integrity and Compliance at oric@singhealth.com.sg

ORIC ROADSHOW SLIDES AND NEWSLETTERS can be found in [ORIC \(link here\)](#).

QUALITY IMPROVEMENT IN ANAES ACP

We take a look at the top 3 QI projects from ANAES ACP Academic Day 2019!

1st Prize

IMPROVING PERIOPERATIVE OUTCOMES IN SCOLIOSIS SURGERY - A 2 YEAR QI PROJECT IN A TERTIARY PAEDIATRIC CENTER

BY DR SHARON WAN
CONSULTANT
DEPARTMENT OF PAEDIATRIC
ANAESTHESIA, KKH

Aim of the Project



Optimize patients in a timely manner and reducing postponement of cases.



Improve start times and induction timings.



Decrease medication errors from dilution mistakes



Improving work processes for paediatric patients coming for scoliosis surgery starting from pre-operative preparation, intraoperative analgesic and physiotherapy care.



Decrease iatrogenic injuries

Interventions

DEVELOPMENT OF A SCOLIOSIS ASSESSMENT AND PREPARATION PATHWAY

A CORE GROUP OF ANAESTHETISTS AND AU NURSES FORMED

STANDARDIZED SCOLIOSIS ASSESSMENT FOR THE ANAESTHETIST

PRE-OP HUDDLE WAS ESTABLISHED FOR THE ENTIRE OT TEAM

POST-OP PAIN MEDICATION STANDARDIZED TO PCA KETAMINE & MORPHINE MIXTURE AS A BACKGROUND BASAL INFUSION

DEVELOPMENT OF A SCOLIOSIS CALCULATOR

AUDIT FORM FOR PRESSURE SORE PREVENTION AND RECORD OF INJURIES

A PATHWAY WAS SET UP BETWEEN CHILDREN'S PAIN SERVICE & PHYSIOTHERAPY DEPT

Results



Earlier recovery and discharge after scoliosis surgery



Anticipated obstacles include implementation of the postoperative pathway into hospital's electronic flow sheets



INTRODUCTION OF A SURGICAL CRITICAL CARE OUTREACH TEAM

BY DR JOLIN WONG
Consultant
Department of Surgical
Intensive Care, SGH

Aim of the Project

Accelerate access to critical care expertise by improving follow up of all patients referred to the surgical intensive care as well as those discharged from the unit



Interventions

The Surgical Outreach team was started in Singapore General Hospital in May 2018:



The team consists of consultant intensivists, senior residents and medical officers, as well as resident nurses trained in critical care.



Responds to all referrals to surgical intensive care and triages all patients either for admission to the intensive care unit or for continued management in the high dependency unit.

Provides critical care input and assistance for the patients who remain in the high dependency unit.

All patients referred to and discharged from the intensive care unit are subsequently reviewed by the outreach team for a minimum of 48 hours, or until the critical care issues are deemed to have resolved.

Results

From May to August 2018:



Follow up reviews of 104 patients discharged from ICU (100%)



61 patients referred to intensive care who remained in the high dependency unit (100%)



Total of 299 post discharge and 291 post triage reviews

ACUTE KIDNEY INJURY PATHWAY (AKIP) FOR EARLY DIAGNOSIS OF AKI AFTER CARDIAC SURGERY

BY DR RODERICA NG
Resident
SingHealth Anaesthesiology
Residency Program

Aim of the Project



1 in 3 asian cardiac surgical patients develop postoperative acute kidney injury (AKI)



Postoperative AKI detection rate was only 40%

Hazards of developing end-stage renal disease (ESRD) is 7 times higher for AKI patients vs non-AKI patients after cardiac surgery



Aim to renal risk stratify all cardiac surgical patients and increase the detection of post-operative AKI by double, and initiate patients on AKIP where steps to ameliorate AKI will be taken

Interventions

Fish-bone analysis identified the areas contributing to incompleteness of AKI detection & Plan-Do-Study-Act (PDSA) cycles were used for improvement. A multi pronged approach was used to increase AKI detection:

- RENAL RISK STRATIFICATION (TABLE 1)
- ROUTINE RENAL SCREENING (SERUM CREATININE AND ESTIMATED GLOMERULAR FILTRATION RATE)
- AKI CONSIDERED DETECTED IF RENAL REFERRAL WAS MADE

Results

- AKI detection **doubled** after routine renal screening and renal risk stratification
- Incidence of AKI is 3.7 times lower

OUTCOME

	BEFORE (N=78)	AFTER (N=84)
AKI Incidence	30.8%	8.3%
AKI Detection	41.7%	85.7%

INTERVENTIONS

Renal Screening	19.2%	44.0%
AKI Detection	-	97.6%

Table 1: Validated unique AKI risk score for the Asian Population

PRE-OPERATIVE VARIABLES

VARIABLES	SCORE
Age ≥ 65 years	2
History of hypertension	2
Anaemia	2
Estimated glomerular filtration rate < 60ml/min	1

INTRA-OPERATIVE VARIABLES

VARIABLES	SCORE
Red blood cell transfusion	1
Use of intra-aortic balloon pump	3
Cardiopulmonary bypass (CPB) time ≥ 12 min	2
Lowest haematocrit during CPB	1

TOTAL SCORE

14

Minimum score = 0
maximum score = 14
0-4 pts = low risk of AKI
5-8 pts = moderate risk of AKI
9-14 pts = high risk of AKI

EVENTS

SINGHEALTH DUKE-NUS SURGICAL & ANAESTHESIA CONGRESS 2019

The 2nd edition of the SingHealth Duke-NUS Surgical & Anaesthesia Congress was held on 20 and 21 September 2019. Highlights from the Anaesthesia track include a Plenary lecture by Prof Ian Curran entitled “In Pursuit of Excellence”, followed by the Perioperative Simulation Challenge (SIMChallenge). SIMChallenge is an annual medical simulation event involving multi-disciplinary teams of anaesthesiology, surgery residents and nurses in a friendly competition format. A Perioperative and Emergency Point of Care Ultrasound workshop was also organized in conjunction with this congress.



Photos from the congress: [HERE](#)

SINGHEALTH DUKE-NUS GALA DINNER 2019

The SingHealth Duke-NUS Gala Dinner 2019 was held in September at the Ritz-Carlton Millenia Singapore. Some 800 guests attended the event, with Senior Minister Teo Chee Hean as the guest-of-honor. At our ACP, we raised about \$120,000 from the sale of dinner tables and auction items, to fund our research, education and clinical initiatives. A big thank you to A/Prof Lim Boon Leng, Dr Teo Li-Ming, KK Women’s Anaesthesia, KK Paeds Anaesthesia, Dr Tan Kian Hian, Dr Bong Choon Looi, Dr Lin Xufeng, Dr June Goh, Dr Ong Yee Yian, Dr Sharon Wan, Dr Olivia Wijewaara for their contributions towards the event.



More photos from the event: [Please click Here.](#)

EVENTS

ACP RETREAT

This year, our ACP annual retreat was held on 5 October 2019 at Capella Hotel, Sentosa and the theme of the event was “Future Forward”. The programme include a medico-legal talk by Mr Tham Hsu Hsien, from Allen & Gledhill, break out sessions and discussions by all ACP pillars. We ended the event with a bonding session through Zentangle where an ACP masterpiece was created.



More photos from the event: [Please click Here.](#)

ACP COACHING WORKSHOP

A faculty development workshop, “Using coaching techniques to get better results from people” was held on Sat 17 August at Academia. 26 people comprising doctors, nurses, residents and administrators from SGH, KKH and CGH attended the half-day workshop which was facilitated by Ms Ashley Chiampo from New Global Mind and co-facilitated by Dr Farida Ithnin and Prof Hwang Nian Chih.



ACP NAME THE CAMPAIGN CONTEST

The ACP Philanthropy Arm has recently organized a “Name the Campaign” contest to get creative slogan and logo that best represents our philanthropy campaign. The ACP philanthropy arm raises money to support our academic initiatives and we are heartened to have received so many excellent ideas and creative pieces.

One of the entries used the morphine structure with the 4 cubes also symbolizing the four core principles of philanthropy, which are:

1. Humility
2. Clear Focus
3. Research—*informed strategy*
4. Continuous collaborations and learning



Another submission was an illustration of a pair of caring hands:

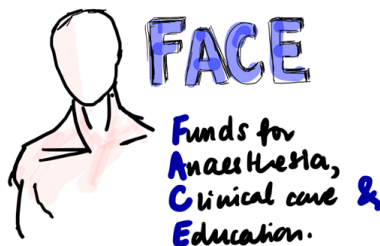


Giving Forward Towards Healing and Health

Another 'aspired to great heights':



The 4th entry put a 'face' to anaesthesia:



Another entry sought to put us at the apex. The **APICAL Campaign: Anaesthesia, Pain & Intensive Care Advancement & Leading-edge Campaign**. It was a vision statement which aimed for the best in our profession:

Through ground-breaking research, inspiring educational programs and state-of the-art equipment and facilities, or innovative clinical programs that advance your care and safety, we constantly work hard, so you can sleep better.

Our services go beyond the operation theatres, where we care for patients with acute and chronic pain issues. We are by your side in the Intensive Care Units, journeying with our patients from critical illness, back to health and independence. We take great pains, and care intensely, so you can sleep better.

By encouraging innovation and a can-do spirit, the APICAL campaign lifts the Anaesthesiology faculty to achieve their dreams. For you.

The APICAL Campaign. We strive for the apex, so you can sleep better

At the recent ACP retreat, a live voting session was conducted to determine the winner of the contest. We are pleased to share that the winning submission belongs to Dr Deborah Khoo and her masterpiece is as follows:



The ACP Philanthropy arm is working with the Vice-Chairs on the details of our campaign and can't wait to share with everyone once we have finalized it. Once again, thank you for your continued support!