

# Anesthesiologi

- Malaysian Society of Anaesthesiologists
- College of Anaesthesiologists, Academy of Medicine of Malaysia



## Message from the President of the MSA

*Professor Dr Marzida Mansor*



Malaysian Society  
of Anaesthesiologists



College of  
Anaesthesiologists, AMM

Dear Colleagues and Friends,

I guess it is never too late for me to wish everyone Happy New Year 2020 and welcome to a new decade - a decade that that may pose many new challenges as well as promising us a whole new beginning. We shall strive for the best for a better future and a good way to predict the future is to create it. It is my honour and privilege to serve as your President. My term started since the last Annual General Meeting in April 2019. My thanks go to the members for the confidence and trust in me. I will do my level best to continue to contribute to our beloved Society. I would like to thank my previous predecessor, Dato' Dr Jahizah Hassan, and her Executive Committee, without whom I will not be here today. Obviously, I am having some big shoes to fill.

I am delighted to share with you the activities and events that have taken place since I took office.

### **MALAYSIAN SOCIETY OF ANAESTHESIOLOGISTS ANNUAL GENERAL MEETING 2019**

The AGM was held on a Sunday, 28<sup>th</sup> April 2019 at the Le Meridien Hotel, Kuala Lumpur. A CME symposium was conducted by Dr Rajbans Singh who spoke on Healthy Aging and Dr Gunalan Palari who spoke on Aeromedicine. During the AGM, we put forward the proposed amendments to the constitution, to allow the Society communications with regards to AGM and related matters to be changed to electronic communication (e-mail). However, it was not put to vote because of feedback from members to look into some of the wordings as well as timelines.

### **MSA / CoA ANNUAL SCIENTIFIC CONGRESS 2019**

The Congress was held on 4<sup>th</sup> to 7<sup>th</sup> July 2019 at the Ipoh Convention Centre, Ipoh, Perak. The theme of the Congress was "Anaesthesia: Challenges in 2020s". The Congress was officiated by the Y Bhg Dato' Dr Ding Lay Ming, Perak State Director of Health. The Congress was a resounding success with about 800 delegates. Professor Gracie Ong was conferred as a MSA Honorary Member at the Opening Ceremony. I wish to thank Dato' Dr Jahizah Hassan who was the Organising Chairperson for her hard work and leadership and Dato' Dr Wan Rahiza Wan Mat who was the Scientific Chairperson for an up-to-date and stimulating scientific programme.

The next ASC will be held in the Shangri-La Hotel, Kuala Lumpur from 26<sup>th</sup> to 29<sup>th</sup> March 2020. Please mark your calendar as we promise to bring you another exciting scientific programme with prominent local and foreign speakers from around the world and a fun filled congress that promotes collaboration and networking.

### **EXTRAORDINARY GENERAL MEETING**

The Extraordinary General Meeting was called on 6<sup>th</sup> July 2019 during the ASC. The following were the reasons for the constitutional amendments that needed to be tabled urgently at the meeting:

1. In the past few years, the ASC has been conducted in the second half of the year to prevent our ASC from clashing with the April/May M. Med in Anaesthesiology examination and to facilitate members to collect CPD points for the year.

In order to allow the date of ASC to be tied in together with the date of AGM of MSA as requested by members, it was proposed that the Annual General Meeting shall be held before the end of 31<sup>st</sup> October instead of 31<sup>st</sup> June every year.

2. In the effort to avoid unnecessary wastage of paper, save on printing and postage and to expedite members receiving all communication in a timely fashion, it was proposed that the Preliminary Notice of the Annual General Meeting asking for motions for discussions at the meeting, proposed amendments to the Constitution and other matters to be included in the Agenda, shall be sent to members via an electronic communication/email by the Secretary not less than 21 days before the date of the Annual General Meeting.
3. It was also proposed for members to allow the use of electronic platform and teleconferencing facilities to conduct the business of the Society. Many outstation members as well as members within Klang Valley have expressed that occasionally, despite prior arrangements made, an urgent issue cropped up at the place of work that prevents them from attending the meeting in person.

The proposed amendments were passed by members and they were recently approved by the Registrar of Societies (ROS).

#### **NATIONAL ANAESTHESIA DAY ON 16<sup>TH</sup> OCTOBER 2019**

The Malaysian Society of Anaesthesiologists (MSA) with close cooperation from the World Federation of Societies of Anaesthesiologists celebrated National Anaesthesia Day 2019 with the theme "Let's Go Green". The WFSA theme was "Resuscitation - Saves Lives In!".

The WFSA has joined hand with the International Liaison Committee on Resuscitation (ILCOR), the European Resuscitation Council and their "World Restart a Heart Day" campaign, to raise awareness about the crucial role of anaesthesiologists in resuscitation.

The WHO-WFSA International Standards for a Safe Practice of Anaesthesia, at the same time highly recommend that emergency resuscitation medication must be immediately available as well as other resuscitation equipment.

Many hospitals across the country conducted various activities to commemorate this day and I thank them for showing great enthusiasm in ensuring that the National Anaesthesia Day celebrations were celebrated with dynamism and vigour every year.

At the national level, the anaesthesia day was celebrated on a grand scale. The event was organised by the Department of Anaesthesiology and Intensive Care, Hospital Kuala Lumpur in collaboration with eight other MOH hospital in the Klang Valley. As a result, the celebration saw a tremendous

## **Editors**

Dr Shahridan Mohd Fathil (Editor-in-Chief)

Dr Gunalan Palari

Dr Shairil Rahayu Ruslan

Dr Noorulhana Sukarnakadi binti Hadzarami

## **Contents**

Message from the President of the MSA	1 - 3
Anaesthesia Fees	4 - 5
Welcoming the New Anaesthesiologists 2019 May / November 2019	6
MSA/CoA Annual Scientific Congress 2019	7 - 8
<b>National Anaesthesia Day Celebrations</b>	
• National Anaesthesia Day Carnival 2019	9 - 10
• Hospital Tengku Ampuan Afzan, Kuantan, Pahang	11
• Hospital Sultan Abdul Halim, Sungai Petani, Kedah	12
• Hospital Raja Permaisuri Bainun, Ipoh, Perak	13 - 14
• Hospital Melaka, Melaka	15
• Hospital Enche' Besar Hajjah Khalsom, Kluang, Johor	16
• University Malaya Medical Centre, Kuala Lumpur	17 - 18
• Hospital Wanita dan Kanak-Kanak, Kota Kinabalu, Sabah	19
<b>Continuing Professional Development Activities</b>	
• Anaesthesia Crisis Simulation Workshop	20
• ASPA East Cost Peri-Operative Paediatric Life Workshop	21
• Basic Airway Course	22
• BAIPC 2019	23
• Ultrasound Guided RA Training Programme	24 - 28
<b>Patient Blood Management</b>	29 - 32
<b>Personal Experiences / Travel</b>	
• Field Anaesthesia	33 - 36
• "My Heart Fell in Kyorin"	37 - 38
• Antarctica - The Last Pristine Wilderness	39 - 41
• "Because It's There"	42 - 44
• Anaesthetizing The Ocean Masters	45
Message from the President of the College of Anaesthesiologists, AMM	47 - 48

good turn out. Dato' Dr Haji Bahari bin Dato' Tok Muda Haji Awang Ngah, Director of Medical Development of the MOH, officiated the event at the Forest Research Institute of Malaysia (FRIM). I would like to thank Dr Melor Mansor and Dr Azizan Ghazali for organising what had been an educational, healthy and enjoyable event. At this event, we launched MSA Year Book 2019. I would like to congratulate Dato' Dr Wan Rahiza Wan Mat and Dr Azarinah Izaham, the Editors of this book, for compiling some very interesting and high-quality articles written by our very own MSA members. We also saw the launching of the Patient Information sheet or pamphlets on Labour Analgesia. This is the effort by the Obstetric SIG headed by Dr Mohd Rohisham Zainal Abidin and supported by Abbvie.

### **96<sup>TH</sup> KOREAN SOCIETY OF ANAESTHESIOLOGISTS ANNUAL SCIENTIFIC MEETING 2019**

Participation in the Korean Society of Anaesthesiologists Annual Scientific Meeting has become an anticipated event for Malaysian anaesthesiologists especially among the young trainees and anaesthesiologists as the meeting provided travel grants worth USD 1000 each to young trainees and anaesthesiologists whose abstracts were accepted for presentation at the Congress. Following the signing of the MOU between the MSA and the KSA in 2017, this will be the third time that the MSA participated in this Annual Scientific Meeting which was held from 31<sup>st</sup> October to 2<sup>nd</sup> November 2019 in Paradise City, Incheon, Korea. The meeting was attended by 3000 delegates from all over the world. There were altogether 27 participants from Malaysia. One of the highlights of the meeting was when Dr Ng Poh Nee from Malaysia won the first prize for abstract presentation under the case report category. I would like to thank Dr In Cheol Choi, President KSA, Dr Kim Tae-Yop, Director of Academic Affairs and Dr Il Ok-Lee, Immediate Past President of the Korean Society of Anaesthesiologists, for the opportunity provided for Malaysians to present papers abroad and for their unmatched kind hospitality.

### **21<sup>ST</sup> ASEAN CONGRESS OF ANAESTHESIOLOGISTS**

Dato' Dr Yong Chow Yen has attended the above congress as well as the CASA Board Meeting in her capacity as the Hon Secretary of the MSA. The next ASEAN Congress would be held on 10<sup>th</sup> & 11<sup>th</sup> September 2021 in Halong Bay, Vietnam. The newly elected chair of CASA is the President of the Vietnam Society of Anaesthesiologists. Malaysia will host the ASEAN Congress in 2031 (after Vietnam, Philippines and Myanmar - every two years). The Singapore Society will host a site for CASA in its website and will provide the link to the CASA member societies and vice versa. Dato' Dr Jahizah

Hassan and Dr Raveenthiran Rasiah attended the congress as invited speakers.

### **LOCUM ANAESTHESIOLOGISTS AND ANNUAL PRACTISING CERTIFICATE**

The Malaysian Medical Council has replied to the letter from the MSA pertaining to locum anaesthesiologists and their place of practice in their annual practising certificates. The MMC's reply has stated that the doctors can list as many practising hospitals as they like and the MMC would help to expedite matters. However it was not stated whether additional place(s) of practice could be added any time and what will be the process and how long would it take. The MSA will be writing to the MMC for further clarification.

### **MEETING WITH MEDICAL PRACTICE DIVISION, MINISTRY OF HEALTH MALAYSIA (MOH) WITH REGARDS TO ANAESTHETIC FEES**

There had been two meetings between the MSA and the CoA representatives with MOH to address the complaints made by members regarding anaesthetic fees. The first meeting was on 18<sup>th</sup> October 2019 and the second meeting was on 20<sup>th</sup> November 2019. As a result, 12 issues have been discussed and the proposal submitted to the Director of the Medical Practice Division, MOH. The write-up on the issues and solutions proposed is published in this issue of Berita Anestesiologi. While waiting for the reply from MOH, we have been informed about the deregulation of the current 13<sup>th</sup> Fee schedule and the 5<sup>th</sup> Edition of the MMA Fee Schedule. However, we are hoping that our proposal can be used by individual hospitals as a reference where relevant.

### **TITIWANGSA DECLARATION 2019**

On 15<sup>th</sup> June 2019, the Titiwangsa Declaration (TD) 2019 was launched at Vistana Hotel, Titiwangsa Kuala Lumpur in response to the global call from the World Health Organization (WHO) for nations to achieve Universal Health Coverage (UHC). Inspired by the Astana Declaration, the MMA took the lead to invite medical associations and health organizations in the country to work together with the Ministry of Health (MOH) to achieve UHC. The MSA has agreed to be a signatory to the Titiwangsa Declaration 2019. The MMA will be handing over the Titiwangsa Declaration and list of signatories to the Health Minister during the MMA Health Carnival on 18<sup>th</sup> January 2020.

Before I end my message, I would like to wish Gong Xi Fa Cai to all friends and colleagues that are celebrating Chinese New Year and Happy Holidays to the rest.

# Anaesthesia Fees

by Dr Gunalan Palari Arumugam

The Executive Committee members of both the Malaysian Society of Anaesthesiologists as well as the College of Anaesthesiologists, Academy of Medicine of Malaysia met Dr Ahmad Razid bin Salleh and the entire team of Bahagian Amalan Perubatan to discuss some matters and areas of concern with regards to our Anaesthesia fees on 20<sup>th</sup> November 2019.

During the meeting, we agreed to identify some of the areas of contention and Bahagian Amalan considered proposals from both our Society and College that were deliberated at length. The items include the following and will be deliberated in detail as follows.

## i. Fees for MRI

Complexities of performing General Anaesthesia (GA) for Magnetic Resonance Imaging (MRI) and CT scan is not well understood by the non-anaesthesiologists. The patients that are undergoing GA include neonates as well as very sick, restless adults. The area of anaesthesia is not in the Operating room but at the radiology suite which is considered a remote peripheral location. The current fee does not commensurate with the challenges. There is no specific anaesthetist fee in the Act and currently follow clause 2 (In cases where no fee is stipulated for the anaesthetist and anaesthesia is deemed necessary, a fee not exceeding 50% of the surgical procedure fee or a minimum of RM 265 or whichever is higher may be charged by the anaesthetist)

We proposed the Anaesthesia fees to follow what's already in the Act for procedures done in the invasive catheterization labs (cardiology suite) whose area is almost similar to all peripheral remote areas where anaesthesia services are provided. Where there is no existing fee available for the anaesthesiologists and if only diagnostic procedure is done including contrast radiology without any intervention a fee of RM 760 is chargeable. If a procedure is done in either the CT scan or MRI room and there is no corresponding fee associated with the procedure in the current fee schedule, a fee of RM 1550 is chargeable irrespective of the type of procedure or the duration. These will include MRI or CT guided biopsies where applicable.

## ii. Anaesthesia Fees for Cath Lab (standby and active involvement)

At present there is a fee for Coronary angioplasty standby team (page 153) of RM 355. However, despite time spent to be accessible in the event of ACLS needed during diagnostic angiogram / angioplasty, it disregards the role of the anaesthetist who is providing his time and expertise to both the patient and the primary operator (cardiologist) while not being able to spend his time doing other cases. It is also not fair to the patient in the event assistance is needed and the anaesthesiologists is in the midst of a case elsewhere.

We proposed the Anaesthesia fees to follow what's already in the Act which is if only diagnostic adult cardiac catheterisation including coronary arteriography / catheterisation of right / left side of heart / contrast radiology without stent insertion is performed, a fee of RM 760 is chargeable. If percutaneous transluminal angioplasty with stent insertion is done, the anaesthesiologist will be allowed to charge RM 1550 irrespective of number of stents inserted.

As such, the need for a standby team that will take time to respond to the patient will be reduced and thus increase patient safety while performing complex procedures.

## iii. Anaesthesia Fees for Peripheral Nerve Blocks

At present, there is no separate fee for nerve blocks done if combined with General Anaesthesia despite the fact that peripheral nerve blocks need for specialized training and also time taken to perform the regional nerve blocks. There are also complications post regional nerve blockade that also requires early recognition and management by anaesthesiologists. At present, we are allowed to put in a fee if a catheter is inserted for the nerve block and if it remains the sole method of rendering anaesthesia (i.e. without combination with General Anaesthesia or sedation). However, not all patients will require catheter insertion.

We proposed the fee for peripheral nerve blocks as the fee for LA blockade of major nerve which is RM 370. The anaesthesia fee will also be following the surgical procedure performed. We also agreed that there will be no separate charges if a catheter is inserted. Post op review will be allowed to be charged as appropriate after the block is performed to detect any neurological sequelae.

**iv. Anaesthesia Fees for involvement of a second anaesthesiologist**

There are times when a second anaesthetist is required due to complexities of the case or duration of surgery (say a complex neurosurgical, cardiac or reimplantation surgery, neonate or complicated paediatric surgery) or an emergency situation where resuscitation requires a second anaesthetist. At present, there is a provision for surgeons under clause 10 but not well defined for anaesthesiologists. Clause 10 states that when procedures of highly complex nature require the service of a second surgeon of the same specialty, perform together in the interest of patient safety, operative efficiency or quality of care, the total fees chargeable by the second surgeon shall not exceed 50% of the total fees chargeable by the first (primary) surgeon for the procedure(s) performed by him.

We proposed that clause 10 is read together with clause 1 of part A of the medical fee which states that 'surgeons' refers to all categories of specialists and may include anaesthetists. As such we propose when procedures of highly complex nature require the service of a second anaesthetist of the same specialty, perform together in the interest of patient safety, operative efficiency or quality of care, the total fees chargeable by the second anaesthetist shall not exceed 50% of the total fees chargeable by the first (primary) anaesthetist for the procedure(s) performed by him.

**v. Anaesthesia for Paediatric Dental Surgery**

The large majority of cases presenting for paediatric dental surgery are not only stable patients without any previous medical problem but also children with significant medical problems like congenital heart diseases or neurological pathology where the risk of performing General Anaesthesia is significant and the current charges allowed do not reflect the expertise required to manage them including if the patient were

to be admitted in an ICU or HDU. As such we are urging Bahagian Amalan to review the current charges and to allow a more appropriate fee to be charged.

**vi. Anaesthesia for Endoscopy Procedure like OGDS, Colonoscopy, Endoscopic Ultrasound of the Pancreas and colonoscopies**

Complexities of performing Monitored Anaesthesia Care / General Anaesthesia (GA) for Endoscopic Procedure is not well understood by the non-anaesthesiologists. The patients that are undergoing GA include neonates as well as very sick, anxious and restless adults. The area of anaesthesia is not in the Operating room but at the endoscopy suite which is considered a remote peripheral location. The current fee does not commensurate with the challenges.

We proposed the Anaesthesia fees be reviewed to take into account factors relating to complexities of performing Endoscopy Procedures in a remote peripheral location.

**vii. Anaesthesia Fee for Stapled Haemorrhoidectomy**

We noted that there was a revision recently with regards to the surgical code for stapled haemorrhoidectomy in which there was an upward revision for the surgical fee to commensurate with the complexities of performing the procedure. However, the anaesthesiology fees were not revised, and it should be considered to be revised according to what the surgical fee which has been revised to the Category of Major 1.

We are hopeful that all our deliberations and proposals as above will be received with good consideration and once a decision has been made, we can cascade the decisions made to all our members and academicians. However, with the recent announcement of the deregulation of consultation fees charged by doctors, we anticipate that there will be some delay before a decision is made on the areas we proposed above. Nevertheless, we will continue to pursue them. I would like to thank Dr Raveenthiran Rasiah, Dato' Dr Jahizah Hassan, President, College of Anaesthesiologists, Academy of Medicine of Malaysia, Professor Dr Marzida Mansor, President, Malaysian Society of Anaesthesiologists, Dr Mohammad Namazie, Past President of MMA and all other members and academicians for suggestions and proposals put forth to us for this meeting.

# Welcoming the New Anaesthesiologists MMed Anaesthesiology 2019

May / November 2019

## UNIVERSITI KEBANGSAAN MALAYSIA

Dr Abdul Hakim Bin Abd Aziz  
Dr Ahmad Fairuz Abdul Shokri  
Dr Winnie Chiang Li-Xue  
Dr Eleen Ch'ng Chea Lin  
Dr Kanesh Kumar A/L Doraisamy  
Dr Elliza Binti Rusli  
Dr Fadzwan Binti Basri  
Dr Farah Syaza Binti Rahman  
Dr Gan Poh Tian  
Dr Nagappan A/L Ganason  
Dr Iskandar Bin Khalid  
Dr Kho Shu Shan  
Dr Khor Whuan Wyeen

Dr Vimalraja Muthukaruppan A/L L S Kanaga  
Dr Lee Sheau Yng  
Dr Lim Shin Hoei  
Dr Menaga M Vasu Dewan  
Dr Mohamad Hafifee Bin Mohamad Nor  
Dr Mohammad Fadzli Abd Manaf  
Dr Mohd Khazrul Nizar Bin Abd Kader  
Dr Nur Syahida Binti Mansor  
Dr Chara Quay Huei Ai  
Dr Cheryl Quek Ser Yin  
Dr Suzana Binti Anuar  
Dr Wong Sze Meng  
Dr Yusopian Bin Yusop

## UNIVERSITY OF MALAYA

Dr Tinagaran A/L Boghan  
Dr Imaan Binti Abdul Rahim  
Dr James A/L Joseph  
Dr Law Kai Laung  
Dr Lee Jia Wen  
Dr Lee Swea Fern  
Dr Esther Lim Hui Cheng  
Dr Vanessa Louis A/P Lionel Louis  
Dr Looi Ji Keon  
Dr Mohammad Basyir Bin Kasim  
Dr Mohammad Hafizshah Bin Sybil Shah  
Dr Mok Chun Leong  
Dr Norzati Hanani Binti Halim  
Dr Quah Chai Hoong

Dr See Chang Seng  
Dr Siew Gee Ho  
Dr Ivy Sim Chui Geok  
Dr Siti Nadzrah Binti Yunus  
Dr Komella Anne A/P Sooria Prakasam  
Dr Tan Ru Yi  
Dr Johnathan Tan Wei Lun  
Dr Teng Hung Xin  
Dr Tharani Ponnusamy  
Dr Christopher Ting Kah Ming  
Dr Kanargharaj A/L Vetaryan  
Dr Wan Kamilah Hana Binti Wan Nik Ahmad Mustafa  
Dr Wong Juan Yong

## UNIVERSITI SAINS MALAYSIA

Dr Abdul Jabbar Bin Ismail  
Dr Chua Mei Yin  
Dr Delima Radzwa Binti Hasan  
Dr Farah Nursuhada Binti Mohd Subakir  
Dr Maryam Jameelah Binti Haji Nawawi  
Dr Mohd Hanif Che Mat  
Dr Nik Mohd Zakimin Bin Zakaria  
Dr Nor Juliana Binti Mohd Arifin

Dr Bavani Naidu A/P Ragupathy Naidu  
Dr Thanesh Kumar A/L Sinasamy  
Dr Siti Nurul Ain Binti Ibrahim  
Dr Tam Wei Yaw  
Dr Tan Vi Jan  
Dr Tham Choon Kong  
Dr Wan Ahmad Asyraf Bin Wan Md Adnan  
Dr Wong Teck Fui

## INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

Dr Shahir Asraf Bin Abdul Rahim

# MSA/CoA Annual Scientific Congress 2019

4<sup>th</sup> to 7<sup>th</sup> July 2019

Report by Dr Valarmathi Chandrasegar & Dato' Dr Wan Rahiza Wan Mat

We were honoured to organise the 2019 Malaysian Society of Anaesthesiologists (MSA) and College of Anaesthesiologists, Academy of Medicine of Malaysia (CoA) Scientific Congress in the Silver State of Perak for the first time from 4<sup>th</sup> to 7<sup>th</sup> July 2019 at the Ipoh Convention Centre (ICC). We are proud that we had successfully conducted this prestigious event with the collaboration of Department of Anaesthesiology & Intensive Care Hospital Raja Permaisuri Bainun (HRPB).

"Anaesthesia: Challenges in 2020s" was the theme and it was very apt as it meant being prepared for challenges in future anaesthetic practice. About 938 delegates attended the event and there were 43 booths and three hospitality suites taken up by the biomedical and pharmaceutical industry showcasing their products and equipment. The scientific committee members made tremendous effort in inviting experienced and renowned speakers from Australia, Belgium, Germany, India, Japan, Korea, Lebanon, Philippines, Singapore, Sri Lanka and USA. Many local experts from all around our country shared their knowledge too.



Professor Dr Gracie Ong Siok Yan receiving the MSA Honorary Membership

Opening of the Trade Exhibition

Six pre-congress workshops were held a day prior to the congress. We received an overwhelming response from the participants as all the slots were taken up. Workshop on fascial plane block for ERAS was held in the Operation Theater in the Ambulatory Care Center (ACC) HRPB and the other five workshops were held at the ICC, which included flexible bronchoscopy, transthoracic & transesophageal echocardiography, field surgical care, mechanical ventilation in critical care and advanced peri-operative monitoring.

The opening ceremony of the congress commenced with a welcoming speech by Dato' Dr Jahizah Hassan, Organising Chairperson of the MSA and the CoA Annual Scientific Congress 2019, and President of the CoA. This was followed by a speech from Professor Dr Marzida

Mansor, President of the MSA. Dato' Dr Ding Lay Ming, Director of Health, Perak State, represented the Director-General of Health at the Opening Ceremony. Subsequently, Professor Dr Gracie Ong Siok Yan was conferred the MSA honorary membership and Professor Dr Marzida Mansor read the citation on her.

The invited speakers and guests were invited to the Faculty Dinner on 5<sup>th</sup> July 2020 which was held at the Jeff's Cellar, Banjaran Springs Resort, Ipoh, Perak. All the attendees were mesmerised to have dinner with a special ambience in a cave.



Faculty Dinner at the Jeff's Cellar

The scientific content was designed to provide pertinent knowledge and skills for the delegates to handle the challenges of providing and delivering effective and safe anaesthesia, critical care, perioperative care and pain management in the coming decade. The scientific programme consisted of eight plenaries, sixteen symposia and six in-congress concurrent workshops. Active participation from the delegates with relevant questions encouraged dissemination of knowledge between the speakers and delegates.

Seventy three abstracts were accepted with five nominated for the MSA / MSA YIA awards. Amazing oral presentations were made by the nominees. Congratulations to Dr Eric Tang Boom Kiat from Hospital Pulau Pinang for winning the MSA award and Dr Thanesh Kumar A/L Sinasamy from Hospital Universiti Sains Malaysia for earning the MSA YIA award. Three best poster presentations were awarded to the following researchers Dr Terrence Cheng Yen Wee (1<sup>st</sup>), Dr Siti Hajar Haryati Fauzi (2<sup>nd</sup>) and Dr Zahrin Mazam (3<sup>rd</sup>). All three represented Universiti Kebangsaan Malaysia Medical Centre. Dr Mohd Afiq Syahmi Ramli from University Malaya Medical Centre presented best case report. These awards were given out during the Gala Dinner.

The congress reached its peak at the glamorous Gala Dinner which was held in the ICC Grand ballroom with the

theme "Oscar Night: Glam & Glitter". Many came dressed aptly for the theme. The night was graced by the arrival of Chief Guest, Deputy Minister of Health Malaysia, YB Dr Lee Boon Chye. After the awards mentioned above were presented, Dato' Dr Radha Krishna Sabapathy Award was delivered to the recipients also by YB Dr Lee Boon Chye. The best student of the Conjoint Final Examinations in November 2018 was Dr Tham Li Yeen and in May 2019 was Dr Looi Ji Keon. Both recipients were from University Malaya.

Following the award presentations, the Gala Dinner's atmosphere was filled with music, dance and good food. There were numerous entertaining performances. A special performance by HRPB Anesthetic Medical Officers and paramedics dazzled the crowd. The highlight of the night was a surprise dance performance by Dato Dr Kavita M Bhojwani, Head of Department of Anaesthesiology & Critical Care and Chairperson of the Local Organising Committee.



*Souvenir presented to YB Dr Lee Boon Chye at the Gala Dinner*

*Dr Kavita Bhojwani with the local organising committee*



A closing ceremony was held on the last day at the end of the session to go through the highlights of the proceedings for the three days.

The congress was a huge success as it brought enormous joy and unity among delegates, emphasising team work as well as being a platform to update knowledge. We thank all delegates who attended as well as the exhibitors for their support during the congress.

*Oscar Night at Gala Dinner - Ladies only with chief guest of honour*



*Closing ceremony - the die hards*

## National Anaesthesia Day Carnival 2019

5<sup>th</sup> July 2019

Report by Dr Adibah Abdullah

Every year, World Anaesthesia Day is celebrated with themes set by the World Federation of Societies of Anaesthesiologists (WFSA). In keeping with the international celebration, nine hospitals in the Klang Valley joined forces to organise the National Anaesthesia Day Carnival 2019 with the theme of Let's Go Green, which encourages anaesthesia and intensive care practitioners to be environmentally conscious in our treatment choices. This event was sanctioned by the Malaysian Society of Anaesthesiologists (MSA) and the College of Anaesthesiologists (CoA).

Inspired by the theme and guided by the main objectives of fostering camaraderie between members of the anaesthesia and intensive care family from the various hospitals, the organising committee came up with many exciting activities for the National Anaesthesia Day Carnival. The event was held at the Forest Research Institute Malaysia (FRIM), Kepong, Selangor. The committee involved representatives from Hospital Selayang, Hospital Sungai Buloh, Hospital Shah Alam, Hospital Tengku Ampuan Rahimah, Hospital Ampang, Hospital Serdang, Hospital Putrajaya, Institut Kanser Negara, and of course, Hospital Kuala Lumpur. The committee chose the date 5<sup>th</sup> October 2019 and fate truly smiled upon us as the month-long haze cleared right before the event, allowing us to enjoy the bright sunny sky and fresh air on the day.



Participants arrived around 7.00 am looking cheerful and energetic and warmed up by the Zumba exercise. Following that, everyone stood alert for the national anthem and paid attention as Dato' Dr Hj Bahari bin Dato' Tok Muda Hj Che Awang Ngah (Director of Bahagian Perkembangan Perubatan, Bahagian Perkembangan Perubatan, Kementerian Kesihatan Malaysia) officiated the launch of the National Anaesthesia Day Carnival 2019. Dr Melor Mohd Mansor (National Head of Anaesthetic Services of Malaysia and Head of Department of Anaesthesiology and Intensive Care, Hospital Kuala Lumpur) was also present at the launching ceremony, as well as the Presidents of the MSA, CoA as and their Exco members.

Once the formalities had taken place, the fun activities began. About 1200 participants in total took part in the Carnival, signing up for the various activities on offer. The Amazing Race was the main highlight, featuring an obstacle course with multiple challenges to be faced by contestants organised into five-person teams. A total of 60 groups registered for the race and the winners went home with medals and cash prizes. The proud winner of the Amazing Race was Team Normal Saline from Hospital Kuala Lumpur, followed by Team Rapid Bolus from Hospital Tengku Ampuan Rahimah, and Team Guava Man from Hospital Kuala Lumpur.



For those who preferred activities in the field, there were several games which the participants joined with great enthusiasm. The nine participating hospitals divided themselves into four teams which competed in the six telematches, creatively named 'Terompah Gergasi', 'Bawa Bola Dalam Kain', 'Golek Rim Basikal', 'Bomba Kampung', 'Gorila Mencari Anak', and 'Waiter & Waitress Run'. After the excitement of the telematch, participants and audience alike

get more adrenaline rush in the Tug-of-War contest, with each match fought to the accompaniment of selected high-spirited songs played by the DJ. Following a series of battles, the Tug-of-War trophy was proudly won by the team from Hospital Tengku Ampuan Rahimah.

Consistent with the theme of World Anaesthesia Day 2019 and World Restart A Heart Day which highlighted the role of anaesthesiologists in resuscitation, the qCPR (Quality Cardiopulmonary Resuscitation) a contest was held. The prize went to the person who performed the best high-quality CPR, which would be the most crucial factor in resuscitating a cardiac arrest patient.

The younger members of the family also had a chance to be a part of the day's activities. A Colouring Contest with three categories based on age was organised for the budding artists. There were also fun-filled booths featuring inflatable castles, face painting, clown entertainer, popcorns and ice cream to keep the children happy and occupied.

Surrounding the outskirts of the games and contest arena, representatives from the Dentistry, Physiotherapy, Organ Donation, Pharmacy and Hospital Tuanku Mizan set up multiple booths to provide information and educational entertainment for the participants. There was a CPR (cardiopulmonary resuscitation) booth where visitors can learn and practice high-quality CPR. Of course, good food stalls were available where any peckish cravings was immediately satisfied. Fun needs fuel, after all. A tent in the corner of the field belonged to our colleagues from the Emergency Department, who kindly stood by to provide medical coverage for any undue mishaps and injuries.



The closing and prize-giving ceremony started at about noon. Dignitaries present for the closing ceremony included Dr Melor Mohd Mansor, Professor Dr Marzida Mansor (President of MSA) and Dato' Dr Jahizah Hassan (President of CoA).

Professor Dr Marzida Mansor gave a speech and launched the Malaysian Society of Anaesthesiologist (MSA) Year Book 2018/2019. Following that, the Obstetric Anaesthesia Guidelines was launched by Dr Norliza Mohd Noor (Consultant Obstetric Anaesthesiologist from Hospital Selayang), accompanied by Dr Thohiroh Abdul Razak (Consultant Obstetric Anaesthesiologist, Head of Department of Anaesthesiology and Intensive Care, Kuala Lumpur Women and Children's Hospital).

A photography session for the organising committee marked the conclusion of the National Anaesthesia Day Carnival 2019. With the day's objectives achieved, everyone involved was flushed with endorphins from having fun and enjoying the sense of a job well done. With this, the Anaesthesia and Intensive Care fraternity returned home happy and optimistic for a brighter, greener future.



## Hospital Tengku Ampuan Afzan, Kuantan, Pahang 12<sup>th</sup> & 13<sup>th</sup> October 2019

Since 16<sup>th</sup> October 1846, the anaesthesia community around the world is celebrating and commemorating the practice of anaesthesia when the volatile agent ether was demonstrated in public for tooth extraction by William Morton at Massachusetts General Hospital.

For the first time ever, the Department of Anaesthesiology and Critical Care of Hospital Kuala Lipis in collaboration with Hospital Tengku Ampuan Afzan was elected to host National Anaesthesia Day 2019 (State level) in conjunction with 'Karnival Koi Nak Sihat Lipis 2019' which was organised by Jabatan Kesihatan Negeri Pahang. The event was successfully conducted under the guidance of Dr Zurhayati, Dr Mohd Khazrul Nizar and Dr Azlin with the presence of Dato' Dr Nor Khairiah, Head of State of Anaesthesiology services.



Dewan Jubli Perak Sultan Haji Ahmad Shah, Kuala Lipis. We divided our booth into parts which were introduction to ICU (poster), hand washing demonstration under LED, mock setup of OT and acute pain services. We had organised several interesting and exciting activities such as hand washing practice, mannequin intubation, written quizzes, games, photo booth and videos presentation. All visitors were given token of appreciation from us hoping that they enjoyed the event and benefitted with the knowledge shared.



Our aim for Anaesthesia Day this year was to increase awareness among the community on our daily work and services in providing anaesthesia as well as resuscitation in critical care. We brought our remote ICU and OT outside the hospital as we knew not everyone among the public was familiar with them. Not to forget also we wanted to educate and create awareness among them that a simple but correct hand washing is able to prevent further infection.

We took part in SAFE-T campaign prior to our event by simply printed off the poster, filled it with the name of our hospital, took a photo of our team simulating and teaching resuscitation and shared on social media by using the hashtag #WorldAnaesthesiaDay.

The much awaited days were held for two days on 12<sup>th</sup> and 13<sup>th</sup> October 2019 with great zeal and excitement at

The event reached its climax during closing ceremony as our booth was visited by our beloved, humble Minister of Health, YB Datuk Seri Dr Dzulkefly Ahmad. We were very blessed and lucky as he participated in ribbon and cake cutting ceremony for the launching gimmick. All of us took this chance to take photos with him. The response excellent and the crowd stayed on until our event ended.

We had attracted quite a crowd by recording about 430 visitors during our event. The success of the event was impossible without good team work from both teams for their invaluable effort and sacrifice, not just the manpower and idea but also the money. Even with the very limited three weeks time and budget, we were able to organize such a memorable event. We were looking forward to the next year celebration.



## Hospital Sultan Abdul Halim, Sungai Petani, Kedah

16<sup>th</sup> October 2019

16<sup>th</sup> October 2019, yet another busy weekday over at Hospital Sultan Abdul Halim. Yet if one were to visit the hospital lobby, they would notice a different atmosphere. Multiple booths filled with music, food, laughter, and individuals not normally seen outside of their working environment filled the lobby. Yes, it's the day when the Department of Anaesthesia and Intensive Care of Hospital Sultan Abdul Halim celebrated World Anaesthesia Day, in conjunction with the 173<sup>rd</sup> year of the success of ether anaesthesia on 16<sup>th</sup> October 1846 at the Harvard Medical Faculty, Massachusetts Hospital, without which modern medicine as we know it would not exist.

This celebration was first launched at 8am at the hospital's auditorium and continued with further activities at the lobby, lasting till 5pm. The launch was officiated by the Director of Hospital Sultan Abdul Halim, Tuan Haji Dr Zainal bin Che Mee accompanied by the Head of Department of Anaesthesia and Intensive Care, Dr Khadijah binti Zulkifli. This was also attended by distinguished guests of the hospital, including the Deputy Directors, Heads of Department and Head of Units. Students and teachers from well respected schools in Sungai Petani, namely Sekolah Menengah Kebangsaan Ibrahim and Sekolah Menengah Kebangsaan Khir Johari were present as special guests as well.

The day was continued further at the lobby. Various fun-filled and educational activities were held for the public. The activities included various educational booths, interactive quizzes, basic life support demonstration and teaching, and many more.

These activities were done with the aim to enlighten the various hospital staffs and laymen regarding the important role of the Anaesthesia Department in the daily workings of a hospital. Visitors were exposed to the various methods of anaesthesia, the devices used, pre-operative preparation and not to forget the Intensive Care Unit demonstration. These helped to address issues and allay fears of the public towards anaesthesia. The various methods of analgesia were emphasized as well, in line with hospital's direction towards a Pain - Free Hospital. Video and live demonstration of basic life support also helped educate the public regarding the role of CPR, conforming with the theme of World Anaesthesia Day 2019, World Restart A Heart Day.

The celebration was a huge success in our books, and we owe this success to the combined effort and cooperation of staffs of Department of Anaesthesia, hospital administration, and various sponsors be it companies or individuals. The response from everyone on this day was very encouraging and with a heart full of hope, we wish that this celebration be done annually for the benefit of the public.



## Hospital Raja Permaisuri Bainun, Ipoh, Perak

18<sup>th</sup> October 2019

Report by Dr Murni Sari binti Ahmat Arbi

Every year on 16<sup>th</sup> October, the World Anaesthesia Day is celebrated worldwide by the anaesthesia fraternity. The main highlight of this celebration is to create awareness among the local community about anaesthesia and its scope of work and the role of anaesthesiologists in providing a safe operating environment to patients.



This year, the Department of Anaesthesiology and Intensive Care, Hospital Raja Permaisuri Bainun, Ipoh, Perak proudly organised this exciting event on 18<sup>th</sup> October 2019. The event took place in the Hospital Raja Permaisuri Bainun compound itself. "Resuscitation Saves Lives" was the theme for this year's celebration, thus our

aim was to share as much knowledge as possible with the public regarding the importance of early resuscitation. The event would not have been a success without careful planning as well as hard work and dedication from committee members which comprised specialists, medical officers, staff nurses and medical assistants.

We started off our Anaesthesia Day celebration sharp at 8.30am. A number of booths were set up to provide information on the different modalities of anaesthesia. There were posters, video presentations as well as display of equipment. The main highlight of the event was the Cardiopulmonary Resuscitation (CPR) booth which attracted the most crowd. Four doctors led by a specialist Dr Cheah Pike Kuan, a Basic Life Support certified instructor, provided hands-on CPR demonstration to the public. Those who could perform the CPR well were rewarded.

In order to increase awareness and knowledge about anaesthesia, we had set up a mock Operation Theatre and Intensive Care Unit (ICU) bay. Mannequins were set up for intubation as well as GA machines in the Operation Theatre booth. A poster exhibition regarding the role of anaesthesiologists, type of anaesthesia (general and regional) and the operating room environment were displayed to the public. In the Intensive Care Unit bay, we displayed an intubated mannequin with Ryles tube as well as infusion pumps and tubings. Posters regarding hand hygiene, arterial line insertion, tracheostomy and CVVH for dialysis were displayed. Explanations were given by the doctor in charge from the start of ICU referral, ICU care and discharge from ICU.



Hospital Raja Permaisuri Bainun is accredited as a "Pain Free Hospital". With the emphasis on "Pain as 5<sup>th</sup> vital sign", our Acute and Chronic Pain Service booth provided a splendid and thorough exhibition about the pain service in our hospital. Epidurals to Patient Controlled Analgesia (PCA) pumps, the different types of oral analgesics and acupuncture needles, were displayed to educate the public.

We hope this will reduce their fear of post operative pain. The Ice Box challenge was one of the highlights, where the public participated to see who could withstand the longest time they could immerse their hand inside a box full of freezing ice.

Another booth that managed to catch the interest of the public was the Organ Donation booth. Members of the Tissue and Organ Procurement (TOP) Team were seen giving out information to the public through brochures and verbal explanation. The beauty of organ donation and

how it affected the lives of the organ recipients were highlighted. The public were encouraged to ask regarding myths and misinformation regarding organ donation. The public also had the opportunity to pledge as organ donors at our booth.

In order to assess whether the public understood what we were trying to convey, we held a simple quiz for them to answer. Those who could answer correctly were rewarded with a small token of appreciation. Surprisingly, people started to visit our booth as soon as it was open. The numbers that participated in the quiz grew steadily until we ran out of gifts as early as 11.00am! Some members of the public showed genuine interest in anaesthesia and they stayed longer at certain booths and asked questions and patiently listened to the explanation given.

Overall, Anaesthesia Day celebration this year was a success. The feeling of satisfaction when we were able to convey to the public about what happened while they were 'asleep' was priceless. For the love of anaesthesia and creating awareness with correct information, we looked forward to holding this event again next year on a bigger scale.

Happy Anaesthesia Day!!!



## Hospital Melaka, Melaka

19<sup>th</sup> October 2019

Report by Dr Fatin Rabi'ah Binti Othman & Dr Shireen Sree Jayan

"Restart A Heart", it may sound peculiar in the eyes of the public, but it is indeed possible for anyone and everyone to help save someone else's life by learning the proper Cardiopulmonary Resuscitation technique.

Resuscitation has been the part and parcel of a hospital treatment, but according to American Heart Association (AHA), 7 out of 10 cardiac arrests occur at home, thus the need for lay person to learn CPR is alarming.



In conjunction with the International Liaison Committee on Resuscitation (ILCOR) and the European Resuscitation Council's effort to spread this awareness, "World Restart A Heart Day" campaign is marked and celebrated on the same day as the "World Anaesthesia Day", which is on 16<sup>th</sup> October every year; therefore "Resuscitation Saves Lives" was chosen as the theme for the World Anaesthesia Day 2019.

All praise to Allah the Almighty that we, the Anaesthesiology and Intensive Care team from Melaka region, have managed to put together almost 200 registered crowd outside of the hospital after eight long years.

Our open National Anaesthesia Day event held at Mydin, MITC Ayer Keroh this year on 19<sup>th</sup> October had successfully achieved the goal to extend our reach to the communities, thus bridging the gap of understanding and knowledge between healthcare providers and the general public.

This exciting day kicked off with the adrenalinepumping Senamrobik dance lead by staff nurse Lailee from ICU Mawar as early as 7.30 am in the morning.

Our Head of Department, Dr Zainal Abidin Bin Othman, gave an informative opening speech, where he addressed the importance of a first responder in giving effective CPR, without which subsequent treatment might be rendered futile and hence determining the outcome of the patient upon reaching the hospital.

Datuk Dr Hatijah Binti Hj Mohd Tan, Hospital Director, in her speech further emphasised the role of anaesthetists towards leading the team during emergency resuscitation of patients in a hospital setting, as well as expanding our scope to include the community by supporting this campaign and sharing this vital knowledge with the society.

Prior to the launching of this event, a pre-recorded video with an unveiling cardiac arrest scenario was broadcasted on stage with the audience attentively follow the dramatic scene until a successful defibrillation performed by our Hospital Director, subsequently officiating this Anaesthesia Day celebration.

Datuk Dr Hatijah Binti Hj Mohd Tan was then visited to the exhibition where numerous creative models were displayed to enhance the public understanding about anaesthetic and intensive care services which includes general anaesthesia and intubation corner, regional anaesthesia booth explaining about pain free labor, little ICU anatomy, hand hygiene steps, mix and match quizzes, painfree journey exhibition, organ donation booth recruiting new organ donor pledgers, and not to forget our Go-Green creative displays of daily disposable medical items which was turned into something ingenious like a robot model!

Our team also provided the public with health screening programme and a specific booth for them to check their eligibility for PEKA B40, an incentive provided by the government for the needful.

The vibrant and cheerful atmosphere was further uplifted with the hands-on CPR demonstration by non other than our ever enthusiastic Hospital Director and Head of Department themselves, whereby the crowd encompassing people from all walks of life was simultaneously attracted to learn more about CPR.

Throughout the event, participants were entertained with videoshows introducing to them our team, the services we provide as well as an amusing gimmick video about CPR rhythm and technique.

We hope that this relentless effort from over 80 committees comprising all level of anaesthetic and intensive care staff has managed to educate the people and increase their awareness regarding resuscitation and anaesthesia as a whole.



## Hospital Enche' Besar Hajjah Khalsom, Kluang, Johor

19<sup>th</sup> October 2019

Report by En Mohd Azlee bin Hj Ramli

Anaesthesia Day was first celebrated worldwide on 16<sup>th</sup> October 1984. This year, the "World Anesthesia Day 2019" celebration was combined with "Hari Sukan Negara Peringkat Negeri Johor" on 19<sup>th</sup> October 2019, and it was held at Dataran Tasik Putih Daerah Kluang Johor. Yang Berhormat Tuan Mohd Khuzzan Bin Abu Bakar, the Chairman of Jawatankuasa Kesihatan, Alam Sekitar Dan Pertanian Negeri Johor and Yang Berhormat Wong Shu Qi, the Parliamentary Member for the district of Kluang were patrons of this exciting event. The event had also involved several government departments, the local authorities, Majlis Sukan Negeri, a few public and private educational institutions (IPTA/IPTS) as well as non-governmental organizations (NGOs). To speak in numbers, about 5000 people had attended the programme.

### OBJECTIVES

1. To educate the public regarding anaesthesia
2. To educate the public regarding organ donation
3. To promote the activities carried out by the Department of Anesthesiology of Hospital Enche' Besar Hajjah Khalsom, Kluang, Johor to the public in general.



YB Tuan Mohd Khuzzan Bin Abu Bakar  
Ahli Majlis Mesyuarat Kerajaan  
Pengerusi Jawatankuasa Kesihatan, Alam Sekitar Dan Pertanian  
Negri Johor

### Activities:

#### 1. ANAESTHESIA FUN WALK

This involved 110 participants. All of them received medals, t-shirts and certificates. The programme consisted of a 5km fun walk.



#### 2. CPR (CARDIO PULMONARY RESUSCITATION)

Led by the Department of Emergency and Trauma.



YB Wong Su Qi doing Heimlich manoeuvre

#### 3. ORGAN DONATION

Almost 80 people pledged as organ donors in this programme.



#### 4. ANAESTHESIA BEYBLADE TOURNAMENT

68 children participated in this programme.



#### 5. ANAESTHESIA AEROBIC



## University Malaya Medical Centre (UMMC) - Celebrating Anaesthesia Day With The Community

20<sup>th</sup> October 2019

Report by Dr Mayura Hanis bt Ahmad Damanhuri & Dr Shairil Rahayu binti Ruslan

On 20<sup>th</sup> October 2019, the UMMC's Department of Anaesthesiology celebrated World Anaesthesia Day and World Restart a Heart Day by organising a community-outreach programme aimed to educate and empower the general public. The B-40 community of Taman Medan was chosen to be part of the celebrations and the event was held on the grounds of Dewan Serbaguna Taman Dato' Haron PJS 2C/6. The location of the multipurpose hall provided a good opportunity for the organising committee to involve as many members of the community as possible. The motto: "All citizens of the world can save a life! CHECK - CALL - COMPRESS" was adapted and translated into Bahasa Malaysia to engage the Malay-speaking community better - "Resusitasi: Saya Seorang Wira! TENGOK - TEGUR - TEKAN".



The idea of engaging the community in raising awareness on the crucial role of early resuscitation was conceived by the department's current head of department, Associate Professor Dr Ina Ismiarti Shariffuddin. The event was made successful by the collaborative efforts of many organisations/persons, namely the UMMC hospital administrative team, Professor Dr Marzida Mansor as the President of the Malaysian Society of Anaesthesiologists (MSA), Yang Berhormat Maria Chin as the parliamentary member of Petaling Jaya, Yang Berhormat Tuan Syamsul (a local assemblyman), Yang Mulia Raja Fairuz as the Majlis Bandararan Petaling Jaya (MBPJ) Local Councillor, the MBPJ Health Division and the IMAM Children and Teens Super Team (IMACATS).

The main focus of the community outreach event was on mass cardiopulmonary resuscitation (CPR) education. To enrich the itinerary, we included educational activities and demonstrations related to enhancing the public's understanding on:

- i) Anaesthetic services which included topics on labour epidural truths and myths;
- ii) Organ donation and brain death by the Intensive Care Unit (ICU) team as well as a dedicated booth where members of the public could enrol and pledge themselves as an "Organ Donor";
- iii) The pressing Dengue epidemic.



Visitors were enlightened to its dangers, early recognition of signs and symptoms of the dengue fever as well as its prevention by means of short talks and posters. The MBPJ's Health Division delivered the talk and organised a booth to broaden the public's knowledge on source reduction as the primary preventive measure to combat dengue infections and reduce dengue-related morbidity and mortality in the area.



The community of Taman Medan consists of mostly low-income group citizens, a subgroup of the Malaysian population who are prone to defaulting their medical check-ups and wellness surveillance due to a lack of health awareness. On this day, we opened a health-screening booth where anyone could get their Body Mass Index (BMI) calculated, blood pressure and



- i) Basic first aid skills : in which Teddy recognizes danger, Teddy gets an adult's help, and Teddy dials 999;
- ii) Processes at the hospital: in which Teddy meets the doctors, Teddy gets an X-ray, Teddy gets induced under general anaesthesia in the operating theatre and goes for surgery;
- iii) Eating well: in which Teddy learns "suku suku separuh" as a way of healthy eating;
- iv) Dengue and its dangers : in which Teddy learns about dengue, and what can Teddy do in its primary prevention.

sugar levels measured, as well as free medical counselling to selected patients. Certain patients were also issued memos for further follow-up at a government health clinic. For this purpose, Klinik Kesihatan Taman Medan was issued a formal notice to expect a higher influx of patients during the weeks following this event.

In the pursuit of empowering the younger population on CPR and health education, a total of 88 schoolchildren and teachers from three primary and secondary schools were invited to pre-register for the event. The youngest primary school-goers aged 8 to 9 years old were enrolled in a parallel programme specifically designed for younger children, called the "Teddy Bear Hospital". The IMACATS team provided volunteers consisting of medical students from various medical schools. The schoolchildren and children from the community were given a donated teddy bear as role-play assist tool and attended the play-hospital's booths to learn :

The initial target of 200 attendees was surpassed and the event was a huge success. Some 250 people from the community registered with their families on the day of the event, completed the circuit of programmes available and went home with gifts and goodie bags. Circuit cards issued at registration served as participants' logbooks where they received a stamp after completing each major booth ie CPR, choking first-aid, posters and health-screening (in order to be eligible for the goodie bags). An ice-cream van, iced sea-coconut drink truck, our very own department clown to entertain the younger visitors, a face-painting booth, and lucky draws were also organized to keep the atmosphere carnival-like and to keep the crowds consistent until the end of the programme. Behind the success of this wonderful event, we give thanks to the various sponsors, 120 hospital staffs, 40 Teddy Bear Hospital volunteers and seven MBPJ personnel who powered the event and brought it to its glorious completion.



## Hospital Wanita dan Kanak-Kanak, Kota Kinabalu, Sabah

22<sup>nd</sup> October 2019  
Report by Dr Grace Soon

Hospital Wanita dan Kanak-Kanak Sabah celebrated Anaesthesia Day for the second year in a row on the 22<sup>nd</sup> October 2019. Even though it was a small celebration, it was full of fun for us. We had two teams; an exhibition team and a mobile team that went around the hospital to spread words about anaesthesia.



The exhibition was held at the lobby walkway which has the highest human traffic. We had a station detailing the history of anaesthesia and its development, showcasing some antique equipment that had been used all over Sabah since the 1950s. The intravenous branulas made of gold did not fail to elicit some 'oohs' and 'aahs' from our visitors.

As they looked through our old equipment, we introduced to them the sophisticated equipment that we use nowadays, with a station showing a current operating theatre set up with GA machine and monitors. Our crew were happy to explain to them how we anaesthetise patients with general anaesthesia and regional



anaesthesia. Passers-by were intrigued, especially some in-patients (adults and kids) who were scheduled for operation soon. They benefitted from a thorough explanation and "touching" the non-self inflating bag, the GA machine as well as other equipment for themselves.

A game-filled station educated the attendees about pain free hospital policies and how to manage pain in our preparation for pain free hospital accreditation. Hospital staff came and joined in on games to memorize policies and management. "Guess the number of needles in a bottle" was among the popular games that were played.

The organ procurement team put up a booth as well and attracted students and passers-by to pledge for a good cause. Traditional complementary medicine set up a booth to tell the public and hospital staff about the services they provide; traditional massage, post-partum massage, acupuncture and so on.



The highlight of the day was our mobile team led by our favourite mascot, Baymax, that went around all over the hospital to spread word about Anaesthesia and Pain Free Policies. Baymax loved to take photos with everyone and gave out balloons to the little ones. A team of cute balloon-animals tailed after him wherever he went attracting even more children to join in the fun.

It was a busy and fun day for us and hopefully an enjoyable and eye-opening experience for our visitors. We hope to be able to do it again next year!



# Anaesthesia Crisis Simulation Workshop

20<sup>th</sup> August 2019  
Report by Dr Soo Sean Li

Anaesthesiology and Intensive Care Department of Hospital Kuala Lumpur was privileged to host the Anaesthesia Crisis Simulation Workshop on 20<sup>th</sup> August 2019. Invited facilitators includes anaesthetists, Dr Rajeswary Kanapathipillai from Hospital Tuanku Jaafar, Seremban, Negeri Sembilan, Dr Noraini Sangit from Hospital Tengku Ampuan Rahimah, Klang, Selangor, Dr Zarina Mahmood from Hospital Selayang, Selangor and Dr Noorulhana Sukarnakadi Hadzrami, Dr Zarina Abu Kassim together with Dr Nora Azura Dintan from Hospital Kuala Lumpur.

The workshop held at the Specialist Complex and Ambulatory Care Centre (SCACC) received enthusiastic participation of 31 doctors from different hospitals across the states of Malaysia including Hospital Tuanku Jaafar, Hospital Seri Manjung, Hospital Raja Permaisuri Bainun, Hospital Tengku Ampuan Rahimah, Hospital Sungai Buloh and Hospital Kuala Lumpur. The day started off with a welcome speech by organising chairperson, Dr Noorulhana Sukarnakadi Hadzrami, followed by an interesting talk by Dr Rajeswary Kanapathipillai on human performance issues and fixation error and a video presentation.

The participants were divided into three groups, rotating around three stations in the operation theatre and recovery area. Different crisis simulations were given to the participants to manage followed by debriefing sessions for discussions on crisis management guided by the facilitators.

Over the years, medical education has progressed significantly to improve patient's safety through enhancement of clinical competency of medical practitioners. Simulation training allows an interactive approach of acquiring clinical skills and acts as an alternative to replace hands-on learning on real patients. Performing errors can be a valuable part of the learning process and simulation training provides a safe environment for learning without putting patients at risk. The Department of Anaesthesiology and Intensive Care Hospital Kuala Lumpur would like to thank all the invited facilitators, speakers, operation theatre staff and organising committee for their effort in making this workshop a success.



## ASEAN Society of Paediatrics Anaesthesiologists (ASPA) East Cost Peri-Operative Paediatric Life (PPLS) Workshop

13<sup>th</sup> September 2019

We were very honoured to have had the opportunity to organise the ASPA East Cost Perioperative Paediatric Life Support (PPLS) workshop at Hospital University Sains Malaysia (HUSM), Kubang Kerian, Kelantan. This workshop was a collaboration between the Asian Society of Paediatric Anaesthesiologists (ASPA), the Malaysian Society of Paediatric Anaesthesiologists (MPSA), the Kementerian Kesihatan Malaysia (KKM) and the HUSM. Nearly all the Paediatric Anaesthetists in Malaysia came to this peaceful state of Kelantan with one mission which is to educate the young anaesthesia trainees in managing paediatric patients for perioperative life support. The workshop's main subjects revolved around the perioperative management of neonates and the objective of the workshop was to empower the participants to be able to anticipate, prevent and manage perioperative related cardiac arrest in children.

The course consisted of a series of lectures about paediatric perioperative cardiac arrests, recognising a critically ill child, effective teamwork during crisis, identifying and managing arrhythmias, updates on paediatric resuscitation and breaking bad news to caregivers. There were also interactive case discussions done in groups with subject matters that included recognizing the airway at risk, the bleeding child, desaturation in the recovery room, management of a difficult manual bagging during surgery, unexpected cardiac arrest in an infant after a caudal block and sudden fall in end-tidal carbon dioxide (EtCO<sub>2</sub>) in an infant during neurosurgery. This was followed by practical skill stations on recognition and management of arrhythmias, effective

cardiopulmonary resuscitation (CPR) skills and teamwork, intraosseous access and fluid delivery, as well as teamwork in crises. Despite a tight schedule, all participants remained energetic and enthusiastic, including our very dedicated facilitators.

The next day, we held the First Paediatric Anaesthesia Study Day, which consisted of lectures by Dr Usha Nair, Dr Phang Ye Yun and Dr Teoh. Their talks focused on perioperative management of fluids, electrolytes and medications in neonatal surgery as well as maintenance of a normothermic neonate in the operating theatre. We were also very honoured to have Mr Tarmizi Md Nor (a Paediatric Surgeon) delivered a talk regarding surgical care of the neonate, as well as Associate Professor Dr Noraida Ramli (a Neonatologist) who spoke about peripherally inserted central catheter (PICC), umbilical artery catheterization (UAC) as well as umbilical vein catheterization (UVC).

We want to express our gratitude to all facilitators for making this workshop a huge success: Professor Dr Felicia Lim Siew Kiau, Dr Nur Hafiizhoh Binti Abd Hamid, Dr Rajeswary Kanapathipillai, Dr Ruwaida Binti Isa, Dr R Usha A/P V R Nair, Dr Muhammad Habibullah Zakaria, Dr Lakshmi Thiyagarajan, Dr Teo Shu Ching, Dr Phang Ye Yun, Dr Yoga Bhavani A/P M Shanmuganathan and Dr Thavaranjitham A/P Sandrasegaram. The knowledge, experience and skills that were passed down to all the junior doctors were highly appreciated and would definitely benefit Malaysia in the long run.



Participants and Facilitators in ASPA PPLS East Coast Workshop

# Basic Airway Course

14<sup>th</sup> October 2019

Report by Dr Ambiga Chelliah

How many times have we anaesthetists as specialists and medical officers been called to the ward for intubation and how many times have we encountered that normal intubation would become difficult due to lack of preparation by ward staff.

The Anaesthetic Department of Hospital Banting conducted a Basic Airway Course on 14<sup>th</sup> October 2019 in conjunction with World Anaesthesia Day. The objective of the course was to teach the staff nurses and paramedics as well as medical officers the importance of preparation of equipment and drugs prior to intubation. Around 24 participants from various departments attended this workshop.

The day started with a welcome speech by Head of Department of Anaesthesiology, Dr Yusnizah bt Mohd Nasir, followed by a lecture of indication of intubation and ventilation. The participants were introduced to adjuncts of intubation such as masks of different sizes, oropharyngeal airways, nasopharyngeal airways, endotracheal tubes, laryngoscopes and suction.

The last lecture was about intubation in special groups of people such as pregnant patients, obese patients and finally children as these groups of patients have different

anatomy and physiology, therefore preparation has to be more meticulous. Mnemonic for features of difficult intubation was also shared. We also had an interactive session where different case scenarios were discussed and participants gave opinions and discussed plan of management.

In the afternoon, participants had hands-on sessions where they identified and played around with airway adjuncts as well as intubate mannequin with an endotracheal tube and laryngeal mask airway. They were also introduced to video laryngoscope; CMAC as one of the advanced airway adjunct. It was reiterated that maintenance of ventilation is of utmost importance and not the success of intubation. The objective of this course was to emphasize that failing to plan is planning to fail and henceforth preparation and planning takes precedence.

In conjunction with World Anesthesia Day, Hospital Banting decided to organise this course and to remind doctors and other health care staff that anaesthetists do not only function in the operation theatre or in the intensive care setting. Our area of expertise is also extended to the wards and any other emergency, acute setting.



# BORNEO ANAESTHESIA, INTENSIVE CARE & PAIN CONFERENCE (BAIPC) 2019

19<sup>th</sup> - 20<sup>th</sup> October 2019

Report by Dr Yew Chee Yen, Dr Lim Teng Teik & Dr Tan Kai Ming

The Borneo Anaesthesia, Intensive Care & Pain Conference (BAIPC) is an annual event organised by the Persatuan Akademik Kakitangan Anestesiologi Sabah (PERAKAS) and the Department of Anaesthesiology & Intensive Care, Hospital Queen Elizabeth, Kota Kinabalu, Sabah. The event aimed to provide a platform for delivering educational information, knowledge and updates on anaesthesia, intensive care and pain management to all healthcare workers providing anaesthesia care across the nation.

Coming to its 6<sup>th</sup> edition, for the very first time, BAIPC was held with a special interest group in mind - obstetric patients. Known as the Borneo Obstetric Anaesthesia Symposium (BOAS), the event lined up various topics covering essential aspects of obstetric anaesthesia. Providing care for the parturients are no doubt challenging. Hence, depicting these, the conference was themed 'Diving Through Difficulties', emphasising on challenges and difficulties in stabilising a critically ill mother as well as how to overcome these obstacles.

The conference kick-started with 2 pre-congress workshops - Advanced Airway Management Workshop & Obstetric Anaesthesia Crisis Simulation Workshop, held simultaneously on 18<sup>th</sup> October 2019 at Hospital Queen Elizabeth, Kota Kinabalu, Sabah. Joined by skillful anaesthesiologists including Dr Vinodh A/L Suppiah, Dr Johnny Yong Chun Hen and others as facilitators, both workshops provided exposure and training for participants on how to manage obstetrical crisis and difficult airways in a safe and orderly manner.

The event was then followed by the main conference itself on 19<sup>th</sup> to 20<sup>th</sup> October 2019 at the Kota Kinabalu Marriott Hotel, Sabah.

The opening ceremony was officiated by YB Pn Norazlinah bt Arif, Assistant Minister of Health and People's Well-being Sabah who delivered a speech. Y Bhg Datuk Dr Christina Rundi, Sabah State Health Director and Dr Melor Mansor, Head of Anaesthesia Service Malaysia also gave welcome speeches.



Borneo Anaesthesia, Intensive Care & Pain Conference (BAIPC) 2019 is officiated by YB. Pn Norazlinah bt Arif, Assistant Minister of Health and People's Well-being Sabah.



YB Pn Norazlinah bt Arif, Assistant Minister of Health and People's Well-being Sabah officiating the Trade Exhibition.

We are honoured to be able to invite experienced anaesthesiologists across Malaysia to be our speakers for the event. Various lectures and forums covering core topics of obstetric anaesthesia such as postpartum haemorrhage, cardiovascular diseases in pregnancy, labour analgesia, etc. were discussed extensively throughout the two-day conference. In addition, there was also a poster presentation competition which was won by Dr Lem Fui Fui, Ms Teong Win Zee and Dr Lim Ming Yao from the Clinical Research Centre and Pharmacy Department of Hospital Queen Elizabeth with their topic on 'How Depressing Can Pain Be?: A Retrospective Review of a Tertiary Pain Clinic'. Throughout the event, there were booths set up by different medical companies to provide a glance on the latest advancements in drugs and equipment relevant to patient care. The event ended with a closing speech by Datin Dr Tan Li Kuan.

The event was deemed a success as all delegates brought back key messages regarding updates on obstetric anaesthesia and care, ready to be translated into day-to-day clinical practices at their respective centres.

## Honourable guests at the opening ceremony of BAIPC 2019



From left: Dr Shahzharn Muhd Zain (Head of Department Anaesthesiology and Intensive Care, Hospital Queen Elizabeth II), Dr William Gotulis (Director of Hospital Queen Elizabeth, Sabah), Datin Dr Tan Li Kuan (Head of Anaesthesia Service Sabah and Head of Department Anaesthesiology and Intensive Care, Hospital Wanita and Kanak-kanak Sabah), Dr Mohammad Yazir Adam bin Husin (Senior Assistant Director of Sabah Health Department Sabah), Pn Norazlinah bt Arif (Assistant Minister of Health and People's Well-being Sabah), Datuk Dr Christina Rundi (Sabah State Health Director), Dr Wan Satifah binti Wan Ngah (Head of Department Anaesthesiology and Intensive Care, Hospital Queen Elizabeth), Dr Melor Mansor (Head of Anaesthesia Service Malaysia), Dr Mohd Rohisham bin Zainal Abidin (Head of Services for Obstetrics Anaesthesia Malaysia)

# Ultrasound Guided Regional Anaesthesia Training Programme in University of Malaya

Report by Dr Beh Zhi Yuen

## INTRODUCTION

Regional anaesthesia - peripheral nerve block (PNB) - is a vital skill for an anaesthesiologist and ultrasound-guided techniques have enhanced the skill and improved patient safety.<sup>1</sup> With the current trend of implementing enhanced recovery after surgery (ERAS) pathway for various surgical procedures<sup>2,3,4</sup> and opioid crisis<sup>5</sup> in the developed countries, regional anaesthesia will continue to gain interest and become the centre of multimodal analgesia protocol.

Prior to this, ultrasound guided regional anaesthesia (UGRA) training in University Malaya Medical Centre (UMMC) was conducted on a per case basis without a dedicated team, block room and limited supervision. Trainees usually learned UGRA by their own initiatives - attend workshops, read textbooks or online materials and hands-on practice on patients with limited supervision. There were no database to capture the practice and follow up on patients who received PNB.

We launched a training programme for UGRA since mid 2018 as part of the quality improvement initiative. There has been several published quality improvement papers on UGRA practice, training and teaching.<sup>6,7,8</sup> These papers showed improvement in clinical services and participants skills following project implementation. Our UGRA training framework is based on the abovementioned papers and programme creator's vast experiences from several European meetings and fellowship training in Singapore. We present the annual report and framework recommendation to set up such training programme.

## FRAMEWORK

This was a quality improvement project in which the training module was implemented using the Plan-Do-Study-Act (PDSA) framework. It received approval from the Medical Research and Ethics Committee (MREC) UMMC [MREC ID NO: 201963-7484].

### Regional Block Corner

We began this project by setting up a regional block corner in a dedicated area in the operating theatre. This regional corner would be a centralised location for trainees to learn UGRA, to perform them under supervision and in less pressured environment thus resulting in fewer failed blocks and minimise avoidable complication.<sup>7,8,9</sup>

This corner should decrease regional anaesthesia related delay, non-operative time, which might improve productivity, efficiency and thus increase surgeon acceptance. It would be handled by a "block team" which administers regional anaesthetics and then follow up patients postoperatively, adding continuity of care and possibly improving the quality of analgesic management and patient satisfaction. By setting up a regional corner, it allows ultrasound machine to remain in a single location and avoid being continuously moved among operating rooms, possibly increasing the life span of this expensive equipment. The corner would be equipped with regional anaesthesia related tools, guidelines, media and documents to facilitate the teaching and work process.<sup>6</sup> Patient information leaflet in three main languages (English, Bahasa Melayu and Mandarin) were printed and a web-based online database registry using Redcap were created to capture the practice of PNB in the institution.

**Added values** - regional corner became a dedicated area to perform blocks for patients who suffer from acute and chronic pain in the ward, not amenable to standard pharmacological agents.

**Limitations** - some institution has no space to set up a regional corner; a qualified personnel is required to run the regional service and supervise the trainees; likewise supporting staff like nurses are important to assist in the block preparation and performance.

### Regional Anaesthesia and Acute Pain Medicine (RAPM) Posting

Trainees were assigned to undergo one month regional anaesthesia and acute pain medicine (RAPM) posting. They got to perform blocks under supervision, learned fundamentals and follow up patients who received blocks. All trainees had to attend a UGRA workshop before start their posting. The trainees would be evaluated during the posting for their knowledge and technical skills using the validated assessment form. They also had to sit for end of posting exams using standardized question bank (30 questions in 30 minutes - single best answer format). The questions covered fundamental knowledge about UGRA including the ultrasound physics, applied anatomy, technical description and complications.

Learning UGRA has three major components: understanding the equipment, knowledge of sonographic anatomy, and technical skills associated with needle

placement.<sup>10</sup> The aim of this posting is to learn the above and be competent with the basic regional anaesthesia (to become better than before at the end of the posting). Trainees will learn the technical components (anatomical and procedural) with the non-technical skills (e.g. patient engagement, preparation, safety checks and judgment) to achieve competence in UGRA.

They will have supervised practical session and receive the current updates, merits and demerits of the approaches, type of local anaesthetics and concentration during the sessions. Brief/debrief/feedback will be given in between the block activities. Some of the trainees may need to undergo evaluation of needling skills on simulation and meat-based models prior to being allowed to perform on patient. Therefore it is compulsory for them to undergo UGRA cadaveric workshop before joining the posting. Patient safety comes first.

Didactic learning material on ultrasound physics, sonographic techniques, and relevant anatomy will be delivered during the rotation posting through lectures, media, discussion and hands-on sessions with structured syllabus. Journal discussions were arranged and trainees will have end-of-posting assessment as mentioned above which include MCQ and performance appraisal using the Systematic Training and Assessment of Technical Skills (STATS framework) plus Delphi method.<sup>11,12</sup> The details of the workflow system for the RAPM posting will be available in the journal article.

**Added values** - RAPM posting became a formal training rotation for trainees to learn UGRA under structured syllabus with supervision in our institution. Regional anaesthesia posting has been a recognised rotation posting in the postgraduate anaesthesia training programme in many countries. For example, the



*Figure 1: A patient received erector spinae plane block (ESP) with catheter technique as analgesic adjunct for multiple rib fractures with lung contusion requiring non-invasive ventilation support and close monitoring in intensive care unit.*

anaesthesia trainees in Singapore have two months of rotation posting during the 2<sup>nd</sup> and 3<sup>rd</sup> year of training.<sup>15,16</sup> The RA team also expanded its service to manage acute and chronic pain outside theatre such as providing regional analgesia for patients with multiple rib fractures in intensive care units and those suitable for interventional pain procedure for chronic pain problems such as ultrasound guided stellate ganglion block for complex regional pain syndrome.

**Limitations** - manpower status may interrupt the consistency of service provision and limit the service expansion especially during exam season.

#### **UGRA Cadaveric Workshop**

As mentioned in the earlier segment, it is a prerequisite for trainees to attend UGRA workshop before starting their RAPM posting. The uniqueness of our workshops is that it incorporated cadaveric session in conjunction with the University Malaya silent mentor programme (donated fresh cadaver bodies for medical training and research). The silent mentor programme is held regularly about four times a year.

The aims of having these regular workshops are:

- to impart knowledge and fundamentals of UGRA to the participants on how to perform UGRA safely and competently with main focus on essential basic regional blocks,
- assess trainees motor skills (probe manipulation and needling skills) on the cadavers before they begin their RAPM posting, an extra measure to promote patient safety,
- assess trainee knowledge and information retention after the didactic lessons
- provide opportunities for trainees to practice needling on the cadavers

This workshop is a two-day programme and reading materials would be shared online with the participants a week prior to the workshop.

Day 1: The first half of the day was essential lectures on UGRA - fundamentals and conduct, upper limb blocks, lower limb blocks, truncal blocks, managing complications such as local anaesthetic systemic toxicity (LAST) and nerve injury. During the regional block lectures, we found that a brief live-demo by the speaker or co-facilitator at the end of the lecture would enhance understanding and re-emphasize the essential points of the blocks. The second half of the day was hands-on session using volunteer models (there are usually six stations: two stations for upper limb blocks - above and below clavicle, two stations for lower limb blocks - anterior and posterior, and two stations for truncal blocks - thoracic and abdominal). Participants would be assessed

using formal assessment tool during the hands-on session to encourage active learning, to evaluate knowledge retention and to guide them obtaining ideal sono-anatomy for each type of block with probe manipulation.

Day 2: Cavaderic session and real live-demo by expert in the operating theatre. Participants were rotated between the anatomy lab and operating theatre. They had at least two hours of cadaveric session and one hour of real live-demo in the operating theatre.

Ultrasound needle visualization is a fundamental skill required for competency in UGRA, especially in-plane needling technique (the most common approach). This skill requires a level of dexterity to achieve precise alignment of the needle and ultrasound beam. For many practitioners, acquiring this skill is a challenge, requiring practice and repetition.<sup>16,17</sup> Cadaver model is the best simulator for participants to practice and acquire needling skill in a stress free environment (without the fear of harming patient and pressure of OT turnover time). Unlike other simulators such as inanimate models (gel phantom) or meat based animal models (chicken, beef), cadavers provide the most realistic model - comparable to live subjects.<sup>17,18</sup> However cadaveric model has its major limitation - inability to use nerve stimulator, lack of vascular anatomy and some models were too

cachexic, which impaired probe placement, needling and sonoimaging.<sup>18</sup> Nevertheless, cadaveric model is the best model to practice truncal blocks and deep advanced blocks. Not all institutions have the facilities to provide cadaveric sessions, and it is expensive with limited participation seats to preserve workshop quality.

### Innovation and Technology

We continue to innovate our programme content. We tried having pre and post workshop quiz during the in-house workshop by using interactive real time voting app (Mentimeter) and online game system (Kahoot). However the workshop schedule was too tight therefore it prohibited further exploration of the abovementioned method.

We often faced manpower constraint to run the RA corner and supervise the trainees. The lecturer in charge also has to run other operating theatre lists and cover other academic duties. Our ultrasound machines were relatively old and the hospital has no plan or budget to purchase a high end machine specially for regional team use. Unlike other country healthcare system or local private practice, patients do not pay for the PNB service including its disposable items. To overcome the above shortcomings, we used the cheapest needle designed for PNB - a stimulating non echogenic needle because we performed high volume of cases using PNB. Trainees had to adhere to



Figure 2: Photo collages of several in-house UGRA workshops since April 2018. Lecture contents were standardized and delivered by regular speakers (UM lecturers). We had the help of facilitators from Special Interest Group Regional Anaesthesia (SIGRA) during hands-on volunteer models and cadaveric sessions; several methods were tried including on-site assessment

the main principle of achieving precise alignment of the needle and ultrasound beam before advancing the needle to prevent any avoidable needling complication. We only used disposable dressing set yellow plastic as probe cover for single shot PNB to save cost. To enhance trainees understanding on anatomy and UGRA, we subscribed some app using 3D anatomy model. All patients shall receive sedation analgesia during block performance to provide comfort and a pleasant experience.<sup>19</sup> This is particularly essential for those surgical cases using PNB as sole anaesthetic technique. The drug choices and doses were titrated clinically according to patient comorbidities and frailty. We also provided headphones for patients to feel comfortable and relax with light sedation analgesia during surgery.<sup>20</sup>

Due to limited funding and long waiting time to purchase the simulators produced by NYSORA [NYSORA Simulators™], we self-manufactured the simulators using 3D printing machine. We wanted to provide trainees with more opportunity for needling practice during RAPM posting. The prototype had been tested during in-house workshop and still undergoing refinement.

### CONCLUSION

This project underpins a novel effort to provide a comprehensive UGRA training for anaesthesia residents in Malaysia. There is plenty of room to improve and it requires team effort, funding and dedication from various stakeholders.



Figure 3: Photo collages of several innovation made such as trial of using online interactive voting system and games like Mentimeter & Kahoot during in-house UGRA workshops, trial of transparent sterile drape, provision of music therapy plus sedation analgesia for patients using PNB as sole anaesthetic technique. Self-manufacture simulators – the prototype is created for trainees to practice needling during RAPM posting.

## ACKNOWLEDGEMENT

This project is made possible with great support from the Department of Anaesthesiology, University of Malaya, Silent Mentor Programme (special mention Prof Saw Aik and Mr Sia), various companies such as B Braun Medical, Sonosite Fujifilm, BK Medical, Mindray, ESAOTE, Vygon, Phillip and Clarius.

We are grateful to numerous anaesthesiologists from the SIGRA and KKM RA Subspecialty training programme for helping us as facilitators:

- Dr Amiruddin Nik Mohd Kamil (Hospital Kuala Lumpur)
- Dr Azrin Mohd Azidin (Hospital Kuala Lumpur)
- Dr Herna Marlynnie (Hospital Kuala Lumpur)
- Dr Lee Pui Kuan (private hospital)
- Dr Ling Kwong Ung (private hospital)
- Dr Mohd Fakhzan bin Hasan (Hospital Kuala Lumpur)
- Dr Ng Sze Teik (Hospital Kuala Lumpur)
- Dr Sabri Dewa (private hospital)

## REFERENCES

1. Barrington MJ, Uda Y. Did ultrasound fulfill the promise of safety in regional anesthesia? *Curr Opin Anaesthesiol* 2018;**31**(5):649-655
2. Helander EM, Webb MP, Bias M, Whang EE, Kaye AD, Urman RD. Use of Regional Anesthesia Techniques: Analysis of Institutional Enhanced Recovery After Surgery Protocols for Colorectal Surgery. *J Laparoendosc Adv Surg Tech A* 2017;**27**(9):898-902
3. Bowling T. Positive Impacts of Ultrasound-Guided Regional Anesthesia on Enhanced Recovery Pathways. *Anesthesiology News*. Published on March 18, 2019. [accessed August 28<sup>th</sup>, 2019] [https://www.anesthesiologynews.com/Pain-Medicine/Article/03-19/Positive-Impacts-of-Ultrasound-Guided-Regional-Anesthesia-on-Enhanced-Recovery-Pathways/54225?sub=6681AD7AAFFE252C929CE542841C4DB951CAB737346CCEFFE541D49D563930&enl=true&dgid=X3618103&utm\\_source=enl&utm\\_content=1&utm\\_campaign=20190318&utm\\_medium=button](https://www.anesthesiologynews.com/Pain-Medicine/Article/03-19/Positive-Impacts-of-Ultrasound-Guided-Regional-Anesthesia-on-Enhanced-Recovery-Pathways/54225?sub=6681AD7AAFFE252C929CE542841C4DB951CAB737346CCEFFE541D49D563930&enl=true&dgid=X3618103&utm_source=enl&utm_content=1&utm_campaign=20190318&utm_medium=button)
4. Kopp SL, Børglum J, Buvanendran A, Horlocker TT, Ilfeld BM, Memtsoudis SG, Neal JM, Rawal N, Wegener JT. Anesthesia and Analgesia Practice Pathway Options for Total Knee Arthroplasty: An Evidence-Based Review by the American and European Societies of Regional Anesthesia and Pain Medicine. *Reg Anesth Pain Med* 2017;**42**(6):683-697
5. Lee BH, Kumar KK, Wu EC, et al. Role of regional anesthesia and analgesia in the opioid epidemic. *Reg Anesth Pain Med* 2019;**44**:492-493
6. Moran PJ, Fennessy P, Johnson MZ. Establishing a new national standard for the documentation of regional anaesthesia in Ireland *BMJ Open Quality* 2017;**6**:e000210
7. Chazapis M, Kaur N, Kamming D. Improving the Peri-operative care of Patients by instituting a 'Block Room' for Regional Anaesthesia *BMJ Open Quality* 2014;**3**:u204061.w1769
8. Brown B, Khemani E, Lin C, et al Improving patient flow in a regional anaesthesia block room *BMJ Open Quality* 2019;**8**:e000346
9. Ilfeld BM, Liguori GA. Regional Anesthesia "Block Rooms": Should They Be Universal? Look to Goldilocks (and Her 3 Bears) for the Answer. *Reg Anesth Pain Med* 2017;**42**(5):551-553
10. Sites BD, Chan VW, Neal JM, Weller R, Grau T, Koscielniak-Nielsen ZJ, Ivani G. The American Society of Regional Anesthesia and Pain Medicine and the European Society of Regional Anaesthesia and Pain Therapy Joint Committee Recommendations for Education and Training in Ultrasound-Guided Regional Anesthesia. *Reg Anesth Pain Med* 2009;**34**(1):40-46
11. Chuan A, Thillainathan S, Graham PL, et al. Reliability of the direct observation of procedural skills assessment tool for ultrasound-guided regional anaesthesia. *Anaesth Intensive Care* 2016;**44**(2):201-9
12. Slater RJ, Castanelli DJ, Barrington MJ. Learning and Teaching Motor Skills in Regional Anesthesia A Different Perspective. *Reg Anesth Pain Med* 2014;**39**(3):230-9
13. Mulroy MF, Weller RS, Liguori GA. A checklist for performing regional nerve blocks. *Reg Anesth Pain Med* 2014;**39**(3):195-199
14. Pandit JJ, Matthews J, Pandit M. "Mock before you block": an in-built action-check to prevent wrong-side anaesthetic nerve blocks. *Anaesthesia* 2017;**72**(2):150-155
15. Singhealth Anaesthesiology Residency Programme [https://www.singhealthacademy.edu.sg/residency/programmes/Documents/Anaesthesiology\\_Brochure.pdf](https://www.singhealthacademy.edu.sg/residency/programmes/Documents/Anaesthesiology_Brochure.pdf)
16. Gupta AK, Morton JR. Cadaveric training - the solution for ultrasound-guided regional anaesthesia? *Anaesthesia* 2016;**71**:874-878
17. Barrington MJ, Wong DM, Slater B, Ivanusic JJ, Ovens M. Ultrasound-guided regional anesthesia: how much practice do novices require before achieving competency in ultrasound needle visualization using a cadaver model. *Reg Anesth Pain Med* 2012;**37**(3):334-9
18. Sawhney C, Lalwani S, Ray BR, Sinha S, Kumar A. Benefits and Pitfalls of Cadavers as Learning Tool for Ultrasound-guided Regional Anesthesia. *Anesth Essays Res* 2017;**11**(1):3-6
19. Hohener D, Blumenthal S, Borgeat A. Sedation and regional anaesthesia in the adult patient. *Br J Anaesth* 2008;**100**:8-16
20. Graff V, Cai L, Badiola I, Elkassabany NM. Music versus midazolam during preoperative nerve block placements: a prospective randomized controlled study. *Reg Anesth Pain Med*. 2019; pii: rapm-2018-100251. doi: 10.1136/rapm-2018-100251. [Epub ahead of print]

# Patient Blood Management

by Dr Kevin Ng Wei Shan & Associate Professor Dr Ina Ismiarti Shariffuddin

## HISTORY AND INTRODUCTION

As anaesthesiologists we are entrusted by the patients and surgeons to provide the utmost of care for the patients at their most vulnerable while they undergo invasive painful procedures that are designed to treat and cure, but with the potential to hurt and debilitate the patients. Amongst the earliest limits to surgery was the threat of exsanguination, as described by Dr John Bell in

his 1818 *Textbook of Surgery*, "Is not this fear of hemorrhage uppermost in the minds of young surgeons? Were this one danger removed, he would go forward in his profession, almost without fear." This description is apt as the advancement of surgery was coupled with the advancement of anaesthesia, blood transfusion and aseptic measures to reduce infections.

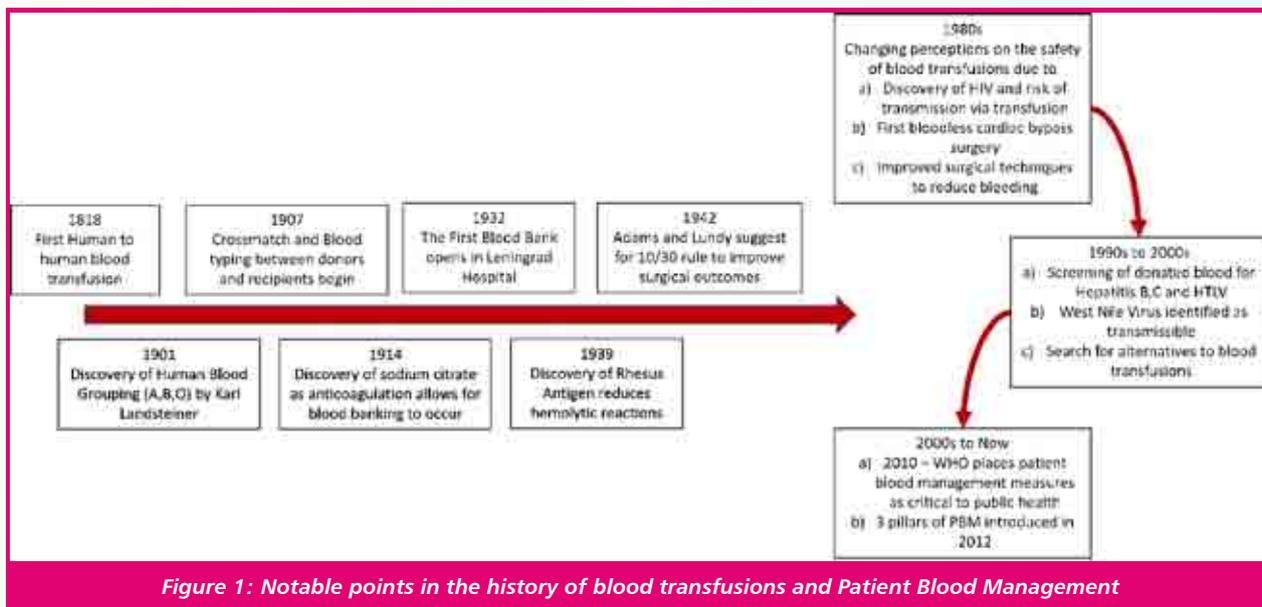


Figure 1: Notable points in the history of blood transfusions and Patient Blood Management

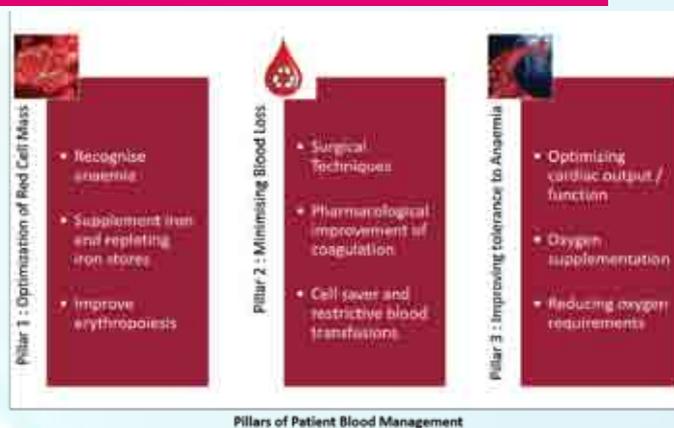
As seen in the timeline, Patient Blood Management (PBM) is the consolidation of years of clinical experience and practice on the use of blood and blood product transfusions to save lives. The modern Patient Blood Management has been defined by the Society for the Advancement of Blood Management (SABM) as "the timely application of evidence-based medical and surgical concepts designed to maintain hemoglobin concentration, optimize hemostasis and minimize blood loss in an effort to improve patient outcome". The introduction of PBM also coincided with an increase awareness of the attending physicians on the alternatives to blood transfusions as well as an increase impetus to reduce the dependence medicine has on blood transfusions. We will be discussing one component of interest in PBM to the anaesthesiologist, namely perioperative PBM.

## THE 3 PILLARS OF PATIENT BLOOD MANAGEMENT

The 3 pillars identified to be crucial for Patient Blood Management were

### • Pillar 1 - Optimization of Red Cell Mass

In the context of elective surgery, this pillar is of the utmost importance. Most studies agree that the worldwide prevalence of anaemia is about 30%, which rises to about 50% for patients presenting for surgery, and as high as 2/3<sup>rd</sup> of patients presenting for major



surgery.<sup>1</sup> The majority of these anaemic patients would be iron deficient and as such would be amenable to iron supplementation.

The old adage introduced in 1942 by Adams and Lundy of the 10/30 rule is outdated and in need of review.<sup>2</sup> They reviewed and suggested that to improve outcomes in elective surgical patients, physicians should target a Hemoglobin level of 10 g/dL or a hematocrit level of 30%. As such, it has been common practice of surgeons to top up the preoperative hemoglobin levels of their patients to this magic target, in hope for improved surgical outcomes. Current evidence has shown that preoperative anaemia is

independently associated with an increased risk for blood transfusions and with it longer hospital stays and increase surgical site infections.<sup>1,3,4</sup>

Whitlock et al in 2015 reviewed 1.5 million patients presenting for non-cardiac, non-vascular and non-intracranial surgery in the United States of America and found that transfusion of as little as one unit was associated with an odds ratio of 2.33 (95% confidence interval 1.90 to 2.86) for perioperative stroke / myocardial infarction, and the odds of stroke / myocardial infarction markedly increased with transfusion of four or more units.<sup>5</sup>

As the evidence increases, we as anaesthesiologists and custodians of the patients under our care should be well aware and be proactive in our management of perioperative anaemia. Recommendations by the international consensus on perioperative anaemia are that all patients who require major surgery (including the obstetrics and gynaecology population), especially if moderate to high blood loss (> 500 ml) is likely and/or if there is a  $\geq 10\%$  statistical probability for red blood cell (RBC) transfusion, should be investigated

and treatment started to achieve the target hemoglobin of > 13 g/dL preoperatively.

As such, preoperatively, a patient's FBC should ideally be reviewed at the point of decision for surgery. Early detection also gives time for correction of the anaemia with Munoz et al. making the case for a preop hemoglobin level of 13 g/dL regardless of gender, as women with a pre-operative Hb of 12 g/dL are twice as likely to require a transfusion as men with an Hb of 13 g/dL as shown in the Austrian benchmark study for PBM.<sup>6</sup> Iron supplementation can be either oral or intravenous depending on the time frame available to surgery, with oral supplementation taking 6-8 weeks or longer for optimization. Intravenous iron would be a faster, and more efficient intervention for more immediate and sustained results, especially in cancer cases where delaying surgery may not be desirable.

• **Pillar 2 - Minimising Blood Loss**

Pillar 2 has the focus on the reduction of blood loss during and after the surgery. To understand this emerging area in medicine, a quick review of the coagulation pathway is needed.

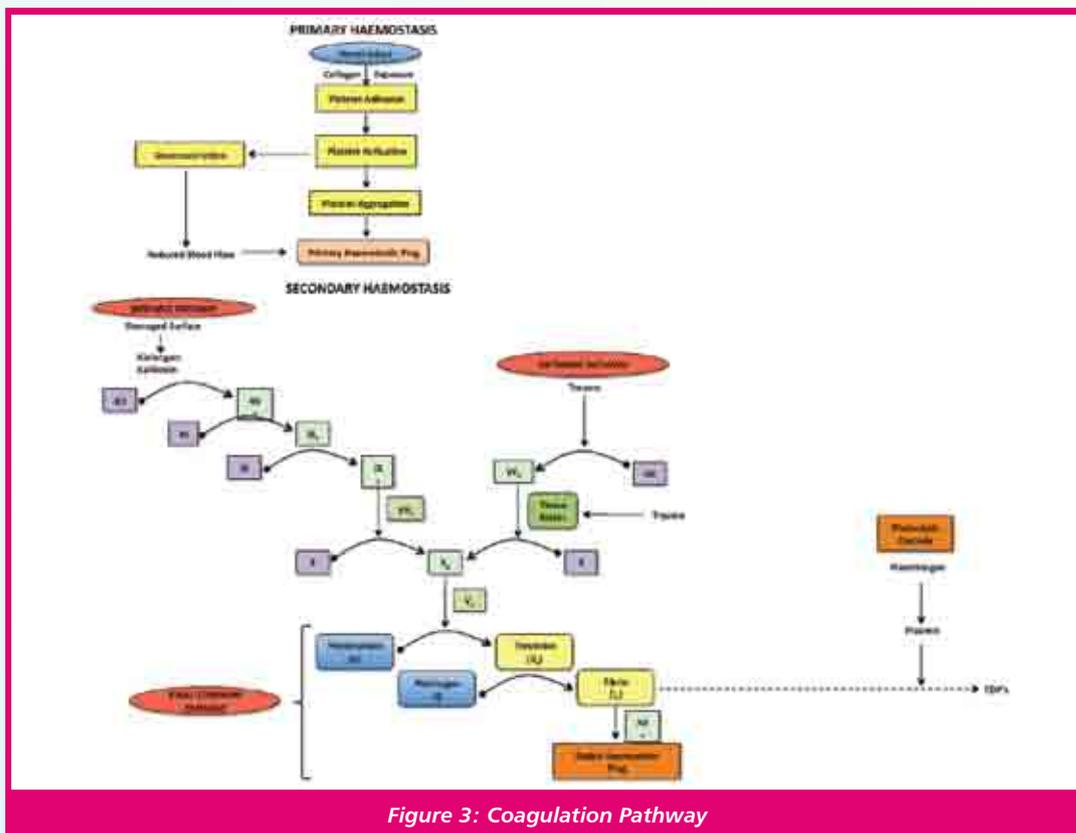


Figure 3: Coagulation Pathway

The coagulation pathway that leads to haemostasis involves two paths, intrinsic and extrinsic (Figure 3). This pathway originates separately but converge at a specific point, leading to fibrin activation. Fibrinogen is the final component in the coagulation cascade, the ligand for platelet aggregation to ultimately stabilize the platelet plug to form haemostasis.

**Pathophysiology of perioperative bleeding**

In perioperative bleeding, it is found that fibrinogen

contributes substantially to achieving and maintaining haemostasis.<sup>7</sup> In massive perioperative bleeding fibrinogen is the first factor to decrease to below critical value.<sup>8</sup> In addition, bleeding leads to hypoperfused areas which lead to acidosis. Hypoperfusion acidosis causes endothelial cells to release tissue-type plasminogen activator, which subsequently leads to hyperfibrinolysis. Hypoperfusion acidosis has been shown to decrease fibrinogen levels by approximately 30% and platelet count by 50%, and

this reduction is irreversible, even though the pH is corrected.<sup>9</sup>

Volume resuscitation during bleeding will lead to dilutional coagulopathy, especially with the use of synthetic colloid expander such as hydroxyethyl starch and gelatine. This will lead to alteration of fibrin structure due to less fibrinogen available and the interference with fibrin polymerization. An ex-vivo experiment showed that the alteration of fibrin structure causes a reduction of clot firmness, causing abnormal clot propagation. Unfortunately, addition of platelet or factor VII would not improve the clot, but the addition of fibrinogen concentrate has been shown to correct the clot firmness and hence improving haemostasis.<sup>10</sup> In a study looking at coagulopathy after cardiac surgery, it was found that the administration of fibrinogen substitution is most effective method in correcting maximum clot firmness for haemostasis immediately after cardio pulmonary bypass, whilst platelet administration, only had a moderate effect.<sup>11</sup>

#### **What should we do?**

Anaesthesiologists play a major role in improving haemostasis with the maintenance of optimal conditions for coagulation to occur. With recent insight into the mechanism of haemostasis that can be affected by fibrinogen, it is paramount that in massive perioperative bleeding, acidosis should be prevented from the start as it leads to many harmful circumstances and its effect on coagulation is irreversible with correction of the pH. Early administration of tranexamic acid has been shown to improve coagulation. Volume resuscitation should be given wisely, avoiding over transfusion that leads to haemodilution. In addition, good temperature control with appropriate warming devices and careful positioning of patient should be practice perioperatively.

Administration of blood products to patients should be based on goal-directed coagulation management. This can be done with a standard laboratory coagulation tests or a viscoelastic test. However, recent data supports the use of viscoelastic test as it is more accurate and provide faster results, in situation where time is an essence.<sup>12</sup>

To replace fibrinogen in a massive perioperative bleeding patient, currently FFP is used. Each plasma contains 92% water and 8% plasma proteins. In this plasma proteins, there is only 1-3 g/l fibrinogen. As was mention earlier, haemostasis is critically dependant on fibrinogen as a substrate. A plasma fibrinogen level less than 1.5 g/L or a functional fibrinogen deficit as shown in a viscoelastic test, will need a huge amount of plasma to be administered. This will further lead to haemodilution. Hence, early use of fibrinogen concentrate has shown better outcomes, as fewer patients need other rescue therapy.<sup>13</sup> However, in Malaysia, fibrinogen concentrate is not yet available. In this case, to administer a higher concentration of

fibrinogen, administering cryoprecipitate will provide more fibrinogen if compared in 1:1 ratio. Typically, one bag of whole blood cryoprecipitate given per 5-10 kg body weight would be expected to increase the patient's fibrinogen concentration by 0.5-1.0 g/L.

Advances in the understanding of pathophysiology of massive perioperative bleeding have led to a paradigm shift of management strategies which includes early, individualised goal directed treatment. In Malaysia, we hope that we are able to use appropriate blood product or its synthetic concentrates, guided by appropriate test such as viscoelastic test and hence reduce complications of unnecessary blood products and blood transfusion.

Surgical techniques have also improved tremendously over the years with the use of newer electrocautery devices as well as improved techniques of dissection away from the vascular planes. The advent of minimally invasive surgery has also seen a reduction in the intraoperative blood loss. Surgeons today also have a wide variety of hemostatic materials like Surgicel and Hemostat sprays which assist in the maintaining of hemostasis. Cell savers and preoperative autologous acute normovolaemic hemodilution have also been used to reduce the need for allogenic packed cells with the recycling of the patient's own blood for replenishment postoperatively.

#### **• Pillar 3 - Improving tolerance to anaemia**

In pillar 3, we now shift our attention to improving oxygen delivery as well as reducing the physiological oxygen demands of a perioperative patient. Looking back at the oxygen flux equation, to optimize oxygen delivery as anaesthesiologists we would need to improve the patient's cardiac function preoperatively as well as for careful supplementation of oxygen during and after the surgery. Once again current evidence has shown that most patients can tolerate anaemia to lower levels than previously thought. Most recommendations are looking to a hemoglobin level of 7 g/dL as a transfusion trigger for healthy patients, 8 g/dL for stable heart and vascular diseases and only aiming for 10 g/dL in unstable or acute cardiac disease.<sup>14</sup>

The reduction in oxygen demands of the body is also an important component in PBM. As anaesthesiologists we should ensure that the patient's analgesic needs are met, and that the patient is warm and comfortable intra and post operatively.

#### **PBM IN MALAYSIA**

Patient Blood Management has been championed by far and few since 2010, primarily amongst the hematologists and transfusion medicine specialists with little buy in from the clinicians. Slowly but surely this has changed and there is increasing awareness amongst all clinicians on this essential part of patient safety and quality improvement. Hospital Ampang holds a yearly course on Patient Blood Management since 2014, as does Hospital Tuanku Ampuan Rahimah since 2015 and Hospital Sultan

Haji Ahmad Shah, Temerloh. Recently Johor and Sarawak have also organised Patient Blood Management courses for their states.

The National Patient Blood Management committee has just been called to be formed under the Ministry of Health and the Division of Medical Planning. Taking the lead from the National Blood Authority and its comprehensive Patient Blood Management programme in Australia, it is hoped that Malaysia will emulate their success with a similar programme tailored to the Malaysian healthcare ecosystem.

The Malaysian Society of Anaesthesiologists has also played an important role in increasing the awareness of PBM. In the 2017 MSA/CoA Annual Scientific Congress (ASC), Dr Andrew Klein gave a plenary on "Save Blood Save Lives". In ASC 2019, this was expanded to an entire symposium on PBM. Professor Dr Aryah Shander and Professor Dr Bernd Froessler, both eminent anaesthesiologists and leaders in the field of PBM shared their experiences with PBM. At the symposium itself, anaesthesiologists from all over the country were challenged to embrace the practice of PBM as we stand at the forefront of patient care and are uniquely suited to meet the challenge and to make a difference by offering anaemia optimization preoperatively by use of our pre anaesthetic clinics.

Our center, UMMC, is also moving forward with the use of PBM in our daily practice. We had recently conducted our second audit on PBM practices in our centre and organized our first PBM workshop in 2019, with the second planned for 2020. The PBM unit is being planned with outpatient intravenous iron services being offered in

our anaesthesia clinic at the moment. More to come as this service expands and we hope to be able to share more about our journey and experiences as we move towards being a leader in PBM in the country.

### What does the future hold

For Patient Blood Management, it would seem that the new decade will bring about more advances in PBM care. The advances in intravenous iron therapy as well as more competitive pricing may lead to better access for its use. As the awareness grows it is hoped that more and more Anaesthesia Clinics in our country will take up the mantle of PBM Champions and be the nidus for change. The first multidisciplinary PBM society has been formed in Malaysia in 2019 and hopefully its growth will expand the awareness on PBM.

Internationally, we await the results of the PREVENTT trial that concluded in 2019 and should be reported soon. PREVENTT is the largest preoperative intravenous iron therapy randomize control trial to date and its findings should clear up many of the doubts regarding the use of intravenous iron as a preoperative optimization of anaemia. The ITRACS trial is also ongoing and Malaysia is part of the trial investigating the use of PBM and intravenous iron in cardiac surgery.

### CONCLUSION

Patient Blood Management does change the practice of transfusion within any organisation. Its implementation can help reduce our dependence on blood and blood product transfusions and hopefully, in the near future blood and blood product transfusions will be reserved for the emergency cases needing lifesaving transfusions only.

### REFERENCES

1. Munoz, M., et al., International consensus statement on the peri-operative management of anaemia and iron deficiency. *Anaesthesia* 2017;**72**(2):p.233-247
2. JS., A.R.L., Anesthesia in cases of poor surgical risk. Some suggestions for decreasing the risk. *Surg Gynecol Obstet* 1942;**74**:p.1011-1019
3. Froessler, B., et al., The Important Role for Intravenous Iron in Perioperative Patient Blood Management in Major Abdominal Surgery: A Randomized Controlled Trial. *Ann Surg* 2016;**264**(1):p.41-6
4. Munoz, M., et al., An international consensus statement on the management of postoperative anaemia after major surgical procedures. *Anaesthesia* 2018;**73**(11):p.1418-1431
5. Whitlock, E.L., H. Kim, and A.D. Auerbach, Harms associated with single unit perioperative transfusion: retrospective population based analysis. *BMJ: British Medical Journal* 2015;**350**:p.h3037
6. Gombotz, H., et al., Blood use in elective surgery: the Austrian benchmark study. *Transfusion* 2007;**47**(8):p.1468-80
7. Sorensen, B., et al., The role of fibrinogen: a new paradigm in the treatment of coagulopathic bleeding. *Thromb Res* 2011;**128** Suppl 1:p.S13-6
8. Spahn, D.R., et al., The European guideline on management of major bleeding and coagulopathy following trauma: fifth edition. *Crit Care* 2019;**23**(1):p.98
9. Martini, W.Z., Coagulopathy by hypothermia and acidosis: mechanisms of thrombin generation and fibrinogen availability. *J Trauma* 2009;**67**(1):p.202-8; discussion 208-9
10. Fenger-Eriksen, C., et al., Thrombelastographic whole blood clot formation after ex vivo addition of plasma substitutes: improvements of the induced coagulopathy with fibrinogen concentrate. *Br J Anaesth* 2005;**94**(3):p.324-9
11. Tang, M., et al., Rational and timely haemostatic interventions following cardiac surgery - coagulation factor concentrates or blood bank products. *Thromb Res* 2017;**154**:p.73-79
12. Haas, T., et al., Usefulness of standard plasma coagulation tests in the management of perioperative coagulopathic bleeding: is there any evidence? *Br J Anaesth* 2015;**114**(2):p.217-24
13. Innerhofer, P., et al., Reversal of trauma-induced coagulopathy using first-line coagulation factor concentrates or fresh frozen plasma (RETIC): a single-centre, parallel-group, open-label, randomised trial. *Lancet Haematol* 2017;**4**(6):p.e258-e271
14. Meier, J. and H. Gombotz, Pillar III--optimisation of anaemia tolerance. *Best Pract Res Clin Anaesthesiol* 2013;**27**(1):p.111-9

# Field Anaesthesia: The Experience of International Federation of Red Crescent (IFRC) Field Hospital in Cox's Bazar, Bangladesh

Report by Dr Mohamad Azlan bin Ariffin

Amin was a 27 years old Rohingya man who lived with his four months pregnant wife and a three years old son in a Maungdaw district in Rakhine state. He supported his family with farming paddy fields and raising cattle. His siblings and parent were also living nearby his house. When violence erupted in August 2017, Rakhine state was in chaos and caused the 2017 exodus to the neighbouring countries. The military came to his village and their brutality was indescribable. His brother was nabbed by the military; whether he is alive, or dead is unknown. They took his house and burned it to the ground, destroyed his farm and shot the cattle. Some of his neighbours tried to fight back but were beaten mercilessly. Many wives and girls were raped. The situation was worsening with the involvement of Arakan Buddhists mobster and the authority was seen given



*Inside the Operating Theatre.*

them blessing to treat Rohingyans like animals. Fearing for the safety of his family, he decided not to fight and accepted the cruelty. He could not take any belongings as there was no time because the military ambush happened very fast. He fled the village with his family and brought along his elderly sick mother. Together they went through an unimaginable journey. With his mother on his bareback, he walked for several days through the forest and swamp alongside his wife and son. They were starving and only survived by eating leaves of the trees. They slept in the bush. After finally reaching the riverside of Naf River, they had to hide in the forest and wait for their turns to board the boat to Bangladesh. He had to pay 40,000 Kyat for each family member to the boat's captain. The boats usually departed at night to avoid detection and at risk of being shot by Myanmar border patrol. The boat was cramped with people and whoever fell into the river would not be rescued. Throughout the

journey they felt fear and hopelessness and could only pray to Allah for protection. It took them three hours to reach Sha Porir Dwip (the southern point of Cox's Bazar peninsular). Here they were welcomed by Medicines San Frontier (MSF) staff and were taken by bus to Jamtoli settlement. He was given a tent to build and live in with his family. They received some humanitarian relief but never had enough to feed the family. His son and mother



*The workstation of anaesthesia. Glostavent anaesthesia machine and convertible cabinet box for anaesthesia items.*

had been admitted twice to MSF Amsterdam in Kutupalong for dehydration. In March his wife gave birth to their baby daughter at Malaysian Field Hospital (MFH) via emergency lower segment caesarean section (EMLSCS) for bleeding placenta previa. In MFH was where I learned his story, Amin's experience is a typical story of Rohingya who has no choice but to leave his/her home and became Forcibly Displaced Myanmar National (FDMN).

Cox's Bazar settlement is currently the densest refugee camp in the world. More than one million refugees took shelter here. The refugees are dependent on humanitarian relief for survival. For medical relief, many Primary Health Center (PHC) scattered in the camps area and this including the maternity PHC sponsored by the Malaysia Medical Relief (MERCY). In cases needing advance care, there were field hospitals sponsored by Medecins Sans Frontieres (MSF) that focus on medical based cases and infectious diseases, these were MSF from

Amsterdam, Brussel, Paris and Barcelona which were operating in different camps. The field hospitals that primarily deliver surgical services were the Malaysian Field Hospital (MFH), the International Federation of Red Crescent/Red Cross Field Hospital (IFRC) and the Turkish Field Hospital (TFH). The IFRC in Cox's Bazar was built by cooperation of Finland and Norway Emergency Rapid Unit (ERU). Even though the number of field hospitals seem many, the capability in each of us was limited due to budget, facilities and volunteers.



*Fridge box for anaesthesia drugs (equipped with uninterrupted power supply, UPS).*



*Method of warming blood for transfusion as no blood warmer equipment available.*

MFH is a level 3 field hospital and was officially opened on 1<sup>st</sup> December 2017. It was a Prime Minister Office (PMO) initiative and was initially operated by the Ministry of Health that provided medical personnel and the logistics were supported by Ministry of Defense. However due to MOH difficulty for continuous and adequate volunteer recruitment, MFH was then taken over by Kor Kesihatan Diraja (Royal Medical and Dental Corps) which started on 1<sup>st</sup> March 2018 and was named Operation Starlight with six monthly rotation.

In late February 2018, I was called for mission deployment with appointment as Anaesthesiologist and Logistics Officer in Operation Starlight 1. This was my second mission as I had an experience in 2009 serving for United Nations Mission for the Referendum in Western Sahara (MINURSO). Upon arrival, we established networking with all field hospitals to coordinate the MFH medical service as we mainly emphasized on semi-emergency and elective cases. Other surgical field hospital like IFRC was only catering for emergency surgeries and TFH was still in the midst of completing their organization therefore their service was limited at that time. The IFRC was a strategic partner for MFH as we were working very closely in sharing expertise and medical logistics, beside that IFRC willingly shared their blood service with us as they are the only

field hospital that has stored blood bank supplied from their counterpart Bangladesh Red Crescent (BDR).

Practising anaesthesia in the field is different from the mainstream OT work. Language barrier and limited investigations during pre-operative assessment, OT room temperature that changed with the position of the sun, limited oxygen supply, unfamiliar field anaesthesia ventilator machine, limited monitoring equipment, lack of choices of anaesthesia drugs and inadequate staff were a few from the long list of field anaesthesia challenges. I had the chance to work in both MFH and IFRC surgical team when I was in Cox's Bazar. Both hospitals had different setting of operating theatre equipment but shared the same goal which was to deliver safe anaesthesia to the unfortunate Rohingya refugees.

The opportunity came in the middle of the March 2018 when IFRC had difficulty with their volunteer anaesthesiologist replacement due to visa issuance. She would be delayed for two weeks and IFRC at that time had three surgeons in-house (general surgeon, orthopaedic surgeon and obstetrician) with a backlog of many cases. After discussion, I agreed to help them performed cases during the night as I had to run back to MFH operating theatre during the day. This was the beginning of many sleepless night for the next two weeks. The average emergencies cases done in IFRC were 10 to 15 cases per day ranging from simple surgery like wound debridement to caesarean section and laparotomy. All the cases were cramped to be done from evening until early morning during the period I was assigned.

At home, a typical day of an anaesthesiologist normally started with brewing an espresso for morning coffee and walk into a 20-degree Celsius air-conditioned operating room with laminar flow ventilation. We perform the anaesthesia machine checklist and hook up the machine



*From left: Dr Lotta (Finland) , Dr Tove (Norway), Dr Azlan (Malaysia), OT Nurse Sini Tullick (Finland).*

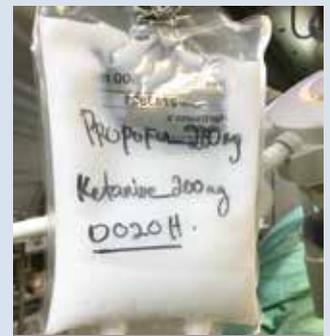
with unlimited four bar pressurized oxygen from the wall. Preoxygenation of patient was done with 10 L/min oxygen flow for three minutes while comforting patient and glancing at the monitor and the patient was induced after end tidal of oxygen reached above 90%. Intravenous fentanyl, propofol and rocuronium prepared by his favourite GA nurse was handed to him for induction of anesthesia to commence. The patient was ventilated manually with reservoir bag with Adjustable Pressure Limiting valve (APL) closed at 20 cmH2O for three minutes. Any difficult intubation was assisted with C-Mac video laryngoscope, ETT passed through the trachea seamlessly and confirmed placement with end tidal carbon dioxide tracing. Ventilator was set to Volume Control and sevoflurane then dialed to maintain MAC 1. The surgeon then started his surgery and the anaesthesiologist sat on his cushioned chair and started charting his form and sipping his espresso like a pilot flying with autopilot set on. After surgeon's last knot, the sevoflurane was dialed off and flushed out with high flow oxygen. The reversal agent was given after noted spontaneous tracing on end tidal carbon dioxide graph. At low MAC and patient started waking up, he then extubated the patient and sent him to recovery area where an assigned recovery nurse will be waiting to accept and monitor the patient before discharge to ward.

The situation in the field was completely different. The IFRC OT complex were made up of two tents, one was for the operating theatre and the other one was for CSSD and storage for sterilized set. The tent was only ventilated by air conditioner blower with an average temperature of 28-degree Celcius during the midday. Therefore, standing fan will be switched on to air the OT to prevent staff from developing heat stroke. The OT was run by four persons only; surgeon, anaesthesiologist and two scrub nurses.



From Left: Dr Trygve (Norway) and OT Nurse Patricia (Canada).

During surgery, one of the nurses has to scrub in and the other will do multitasking as a runner, circulating and sterilizing surgical set. Hence, there was no nurse to assist the anaesthesiologist during surgery. No oxygen supply in IFRC field hospital, no Vacuum Insulated Evaporator, centralized manifold system



The modified TIVA technique using the drip method.

nor oxygen tank available. The only source of oxygen was from oxygen concentrator that could extract and enriched room air of 21% fraction oxygen to 85% however it could only generated 5L/min flow of oxygen. The anaesthesia machine supplied was Glostavent and it was a type of draw over vaporizer and could only be used with isoflurane and halothane; the type of vaporizers that many are not familiar, especially with the young generation. The Glostavent has no APL valve therefore the machine only has defaulted PEEP at 5cm<sup>o</sup>, hence manual bagging would be very challenging in patient with difficult mask ventilation. It has no ventilator equipped therefore I must manually bag for all patients that I paralyzed. Each tidal volume given was determined with the compliance felt on the hands. Both the nurses would scrub in if the surgeon required extra assistance in difficult cases, I would not have any assistant to help me diluting drugs or hang up fluids and blood. At this time, I would hyperventilate patient and leave him apnea or intermittently ventilated if desaturated in order to allow myself to do other things and sometime as circulating nurse. Only basic monitoring is available for anaesthesia which were NIBP, ECG and oxygen saturation. The portable ETCO2 monitor was broken during that time and gas analyzer was never a standard equipment in field therefore there was no MAC to monitor adequacy of awareness. This was the time when I must refresh back my pharmacological notes of isoflurane and halothane from my white and grey matters. Furthermore, no oxygen analyzer was available to assess the level of oxygen fraction inhaled or exhaled by patient. Difficult intubation was challenging as the only tools available were direct McCoy laryngoscope and bougie. There was no video laryngoscope or fiberoptic set to intubate a patient with preexisting large goitre presenting with perforated viscus for laparotomy.

The drug choices were limited, morphine and ketamine served its purpose as field drugs as readily use, could be stored in room temperature and have pharmacodynamic profile that was fit for field usage and were heavily used. Other drug such as fentanyl and propofol were available but very limited in supplies. Regional anaesthesia was usually the first choice whenever possible, but more complex regional anaesthesia could not be performed as

there was no regional equipment listed in the deployed anaesthesia set of IFRC. There was also no designated recovery area for observation and no dedicated recovery nurse to help me to monitor my post-operative patients. Extubated patients were sent to the ward tent which about 100 meters away from OT and would be looked after by only a nurse that was nursing the whole ward, therefore it was important to ensure the patient was adequately reversed before leaving him/her in the ward and starting the next cases.

There was a time when the isoflurane and halothane ran out of stock. I had to performed Total Intravenous Anaesthesia (TIVA) as an alternative. Unfortunately, there was no infusion pump available, hence anaesthesia was maintained with boluses of propofol and ketamine for the four hours laparotomy. This was continued for other cases until the morning. Looking at inefficiency as I was alone and left with no assistant during surgery, I had to ventilate the bag by placing it in between knees to free my hand to prepare and pushed boluses of drugs. Modification was made, all TIVA was performed with infusion rate of the propofol and ketamine calculated, and the total amount of agents required then were mixed in empty IV drip. Rate of intravenous agents' infusion then delivered with via drop rate which could be determined using drop factor (guttae/mL). Using this method, subsequent cases were more relaxing in performing multiple general anaesthesia with TIVA.

Ethical issues are always a grey area in field practice, some decision that we made might differ from the one we made back home. Scarce medical resources and limitation of human power usually would influence in decision making which sometime involve life or death situation. I had an occasion when I was in IFRC in which when I look back at it today, I always wonder if I could do more to save him. A 39 years old man with no past medical history presented with acute abdomen and proceeded with laparotomy for severe acute pancreatitis. Intra operatively he was found to have a lot of intra abdomen collection which was drained by the surgeon. The surgery went for three hours and at the end of surgery, arterial blood gases showed he had severe metabolic acidosis. Unfortunately, there was no ICU facility in IFRC, therefore the initial plan was to keep him ventilated in OT and challenged him with fluids and

blood transfusion with hope to improve the acidosis before extubating him. Unfortunately, during the same time there was a cord prolapse fetal in distress came for EMLSCS. There was a dilemma between the general surgeon and obstetrician on whose case should be my priority, looking at the situation I made the decision to extubate the post laparotomy and he immediately went to Kussmaul breathing. The chance of surviving was given to the cord prolapse fetus. The mother was intubated and the baby was delivered in shortest time possible but unfortunately the newborn passed away after a long resuscitation by the paediatrician. Later I found out the post laparotomy patient also died after an hour in ward. Should I turn my back away from the cord prolapse fetus and give the chance for his acidosis to improve before extubating him? I could not seem to be able to find the answer. This was one of the many ethical issues that was made in field anaesthesia.

Working in IFRC field hospital had open my eyes on how the medical services particularly anaesthesia was different from the civilian general hospital. It also has enhanced my MedLog knowledge in planning for field operating theatre. The Red Cross has decades of experience in providing care in austere environment of war or disaster relief. The Emergency Rapid Unit (ERU) has a dedicated logistic supply that can be deployed in shortest time to set up field surgical hospital wherever needed on the globe. The professionalism and passion shown by the Scandinavians in IFRC field hospital has really amazed me on how a team of people who travelled thousands of miles from home from different regions, religions and background from the Rohingyans has provided care to the refugees like their own family members. The person I respected the most was 73 years old Norwegian orthopaedic surgeon, Dr Trygve, as he had volunteered in many missions and planned to keep going on for the next 10 years to contribute to the humanity with his surgical skills. Learning from the heads of the operation on how to they set up their hospital from the planning to execution had given me the valuable knowledge that could be applied in military settings and perhaps for Malaysian NGO medical relief in future.

Indeed, it was tiring to serve alone for two weeks in two field hospitals day and night. However, I felt grateful to get this opportunity and I hope it has made a small impact on the life of every patient that I has helped. The experiences that I had during my stays in IFRC has helped me to become more confident, practical and realistic in practicing field anaesthesia. Hopefully this experience would inspire more doctors to participate in humanitarian missions. "If anyone saved a life, it would be as he saved the life of the whole humanity: Quran 5:32".



The staffs quarters.

# My Heart Fell in Kyorin

by Dr Khairul Idzam Bin Muslim

Mastering regional anaesthesia in Japan was something that I had only dreamt of doing for quite a long time. Originally I figured it was far too expensive and difficult to be able to travel abroad and do such things so I put it off my list. However, after my application was accepted by Professor Dr Tomoko Yorozu of Kyorin University Hospital, I immediately grabbed this opportunity with the intention of gaining more new knowledge and experiences in the field of regional anaesthesia. This is where my trip to Japan begins.

As part of my subspecialty requirement, it needed me to do an attachment abroad, I was required to study in Tokyo from July 2018 until April 2019. For nine months, my personal journey in The Land of the Rising Sun has taken me out of my linguistic and cultural comfort zones, as well as empowered me to expand my exposure, not only in regional anaesthesia skills but also to Japanese working culture and medical system as a whole.



Even though learning abroad can seem out of reach, giving yourself a chance to experience new culture allows you to understand yourself from an outside perspective, as well as harnessing the ability to develop unforgettable friendships, and overcoming apprehension towards financial constraints. I ultimately decided to go for it. I knew that my dream of going to Japan could be worked through, even though it appeared daunting at first.

One of the obstacles of training there is the necessity of managing my yen wisely. Tokyo is one of the most expensive cities in the world and I do not want to end up begging in the streets. I also need to adapt and work hard to make the most out of the experience both academically and socially. Japanese doctors devote much of their time on work and their patients, requiring serious commitment. Karoshi is part of Japan's work culture which literally means 'overwork death' was something

that was of concern to me, as I was afraid that I would be unable to cope with the stress. However, in reality they are actually proud to work very hard and it means that they have worked with dignity.

Professor Dr Yorozu, who is the first Japanese female Chairperson in Anaesthesia in this hospital was my clinical supervisor. She then introduced me to Dr Kunitaro Watanabe, who is the pain specialist in Kyorin University Hospital. Both of them guided me and were the personnel whom I sought for, when I need advice, opinion and solution. In Kyorin, the opportunities to learn are abundant and the doors are there to be opened.



*Dr Kunitaro Watanabe, Pain Specialist My badge of graduation  
Miss Ogihara, my Japanese teacher*

My daily schedule consisted of preparing OT and giving anaesthesia, both peripheral nerve blocks (PNB) and general anaesthesia, for elective cases. I was usually assigned to thoracic, urology robotic and orthopaedic OT. The total number of PNB I performed for nine months were 262 blocks, the majority of them were paravertebral for truncal, interscalene for upper limb and femoral for lower limb block.

In the afternoon, I usually gave communication classes to medical students and nurses. Twice a week I need to attend Japanese class with Miss Ogihara, who is a student in this university. She is an English teacher in the making and is kind enough to mould me in becoming Japanese literate. I still think the language class was some of the best that I have received, and combined with the opportunity to test it out in the field, my Japanese language improved exponentially. Taking regular classes was a big stretch in my language ability. I only knew konnichiwa when I got off the plane but during my last month there I was able to have a simple Japanese conversation with my colleagues.

I attended conferences and presented posters, I even gave lectures in one of the conferences conducted for nurses. The Department of Anaesthesiology, Kyorin University Hospital hosted Japanese Cardiovascular Anaesthesia

2018 conference in Keio Plaza Hotel and I was given the chance to be part of the organising committee. It was an honour to help them to organize this international event. Invited speakers from USA and Korea were given slots for the plenary sessions. The most unforgettable moment was when I won the first place for poster presentation in the 46<sup>th</sup> Annual Meeting of Kyorin Medical Society. The prize was 5000 yen worth of Lawson card and a certificate. Another e-poster I presented was in Tokyo Anaesthesia Scientific Meeting in Shinjuku entitled Regional Anaesthesia Fellowship Training in Malaysia. Lastly, I gave a lecture in Perioperative Management Care Seminar for nurses in Roppongi Academy Hill. It was my pleasure to share the knowledge and from the feedback that I received, most of the participants appreciated my lecture.

At the end of my training, Dr Watanabe awarded me with badge of graduation with 'I'm good at PNB' printed on the badge. This is to honour me for doing PNB and for helping them out in OT. I also received a fellowship certificate from the University. I appreciate all these accolades and I was sad to think that I needed to leave them.



*Fifth year medical students  
Japanese Cardiovascular  
Anaesthesia Conference Ghibli  
Museum, Mitaka*

Japan is a prosperous country and it was such a privilege to be exposed to new knowledge in the Land of Cherry Blossom. Besides the valuable experience, I also enjoyed making friends and received their warm hospitalities. They always invited me to dinner to celebrate the meaning of brotherhood. Friendship like this is a reward in itself and my time abroad has allowed me to make the connection. It was one of the best years of my life, and truly a transformative experience. I have carved all the fond memories in my heart. Arigato gozaimashita.



*Dinner with Professor Yorozu and colleagues  
Anaesthetists of Kyorin University Hospital*



# Antarctica - The Last Pristine Wilderness

by Ms Molly Kong

In November 2019, I went on a 16-day cruise with the French (Marseilles-headquartered) expeditions company, PONANT, from Ushuaia in Tierra del Fuego Province of Argentina to the West Falkland Island, South Georgia and the Antarctic Peninsula. This particular cruise marked the beginning of an association between PONANT and the National Geographic Society (headquartered in Washington DC), and this meant that there were experts on board the cruise ship, Le Soleal. They specialised in Antarctic species, geology, history, climate science and other topics relevant to the region.

## Expectations

When I first made plans to go on a cruise of this kind, in early 2017, my expectations were general. I expected to see lots of snow and ice, glaciers, birdlife and sea life, and to have an enjoyable time. I expected it to be cold, even though the Antarctic summer was about to start. However, there was so much more, and the cold was not an issue (see later). The experience is overwhelming. The wildernesses are both vast and fragile and have a character like no other on the planet. The experience is unique and life changing and changes one's perspective on life and about nature.

## Last Great Wilderness

West Falkland is not part of the Antarctic and is outside the Antarctic zone. It is part of the Falkland Islands which is British (although that is contested by Argentina). We landed on rubberised dinghies (called Zodiacs) on beaches. The Zodiacs carry up to 10 people plus a driver and are well adapted to small group transfers from ship to shore.



Zodiac - from cruise ship to shore

West Falkland has countless rookeries in which gulls, terns, albatrosses and other seabirds were nesting. Importantly it is the home of a number of penguin species, especially the Rockhopper (named for its obvious way of moving over the stony terrain).

West Falkland provided an interesting contrast to South Georgia and the Antarctic Peninsula. It has been subjected to introduced species of plants and animals (one of our landings was at a beach within a sheep farm). It has some sparse human habitation and is not a wilderness. Because of the introduction of non-native species, it is not pristine.

## Penguins

The behaviour of mass colonies of penguins is fascinating. I could have watched all day as the penguins bickered amongst themselves, marked out and defended nesting territory, and traded feathers and stones with each other. Feathers and stones are the building materials for nests. Penguins typically lay no more than one egg every one to two years, and pair up to incubate and hatch it, and to feed the penguin chicks when they hatch.



Warm welcome by the penguins at Saint Andrews Island



Penguins on the iceberg - wonder how they got onto the iceberg!



Moulting King Penguins



*Gentoo*

*You can guess his species - Chinstrap!*

*What a loving couple!*

The way penguins move and relate to each other is unique, but also suggestive of human behaviour. It is hard not to take an anthropomorphic view when watching them, and to attribute human motives and attitudes to them as they move about. Penguin walking seems at first to be very comical as they shuffle back and forth and appear to be very engaged in the business of living in a large community. However they are extremely well adapted to their environment. They shuffle (quite quickly) on land, but move very fast through the water. They seem to ignore the human onlookers, and have undoubtedly learned that the latter pose no threat. The natural predators for penguins are sea birds that attack their eggs and chicks, and various types of seals (especially leopard seals) that attack and eat adult penguins.

We saw six types of penguins in this trip - Rockhopper, Adelie, Gentoo, Chinstrap, Macaroni (only one) and of course the King Penguins.



*The chicks - about one year old - South Georgia*



*The sole and only one Macaroni penguin we saw*



*Penguins frolicking in the sea*

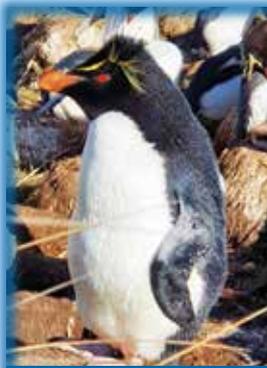
### South Georgia

South Georgia is sub-Antarctic and administered by the United Kingdom as the South Georgia and South Sandwich Islands Territory. Every effort is made to keep the wilderness aspects of South Georgia pristine and to ensure that non-native species of both plants and animals (such as rodents) are kept out. Expedition vessels such as ours are subject to a rigorous process of clothing and footwear cleaning both before and after each disembarkation. This ensures that there is no cross contamination between areas within South Georgia.

In South Georgia we saw masses of penguins belonging to other species, as well as fur seals and elephant seals. It was the beginning of the whale spawning season, and we saw some fin whales that were the advance parties of seasonal migrations south from warmer waters in Brazil and the South Atlantic.



*The Rockhoppers - West Falkland*



*Rockhopper - Isn't he a beauty?*



*Playful cormorants - West Falkland*

### The Antarctic Peninsula

After two days of sailing from South Georgia we reached the Antarctic Peninsula. This is the closest part of the continent to any of the other continents. We encountered new penguin species and more leopard seals and also more whales, although it was early in their seasonal migration.

A special treat is the icebergs. We were able to see some turn in the water (as their centre of gravity slowly changes), and, on one occasion, an iceberg calving off

from the glacier. Being the beginning of summer, the great annual melt was well underway. However, as a result of climate change and the extent of that change over the past 50 years, the extent of the melt and of glacier retreat is accelerating.

The Antarctic is subject to an international Treaty (due to be renegotiated in 2048) under which all treaty signatories have agreed that it will remain undeveloped and that human activity will be devoted to peace and science. As a result the protocols for maintaining it as a pristine wilderness are especially strict and rigorously enforced by governments and cruise operators alike. We had to be especially careful about boot cleaning and ensuring that nothing was left after visiting each of the bays and beaches we visited.



*Pristine Antarctica*



*No trespassing in my territory - seals can be aggressive even though they look relaxed*

### Overall Impressions

Many of my expectations needed correction.

The wildlife is abundant and endlessly fascinating, especially the penguins. I thought that I would quickly tire of watching them, but I was wrong. I am sure that their 'humanity' is part of what appeals and causes some sort of addiction to watching them go about their business. Although we saw six or seven different species, including many king penguins, their social behaviour is much the same across the species.

The ice and snow are also endlessly fascinating. The deep blues and hues and other shades (as a result of water and aeration) are beautiful. The scene is ever changing.

The cold is not a factor as I thought it would be. Of course the temperatures are low, but all the expedition group is well covered by appropriate layers of water-proofed clothing. It sometimes became very warm walking about and climbing the snowy hills in that gear, with sunny

skies. On most days sun glasses are a must. On all days, sunscreen needs to be applied to face and other exposed skin.

I realise that the Antarctic is a precious pristine wilderness, and that concerted action and continuing care is needed to keep it that way. The point about a wilderness is to prevent it from changing for the benefit of future generations. That does not stop it from changing forever those who experience it.

### Pre-Cruise Sojourn

I took the opportunity to visit the Atacama Desert, a desert plateau in South America, covering a 1,000 km strip of land on the Pacific coast, west of the Andes mountains. The Atacama desert is one of the driest places in the world, with average rainfall of 0.04 inch of rainfall per year!! The tours were operated out of San Pedro de Atacama which itself is 2,407 metres above sea. It is an exhilarating experience to view the serene laguna and bubbling geysers at an altitude of over 4,000 metres and also the amazing Moon Valley which presents an extraordinary attractiveness by its similarity with the moon surface and the eroded rock formations and the Rainbow Valley with colourful rock formations (including greenish ones) as well.



*Rainbow Valley*



*My travel buddies - second from the left is Margaret Ng, our coordinator*

### Acknowledgements

I would like to thank my travel buddies for the great company, assistance each other all the way and also for sharing the memories and photographs some of which I have used in this write-up.

# “Because It’s There”

## Full Time Adventurer, Part Time Anaesthesiologist

by Dr Mafeitzeral Mamat

At 5200m altitude,

You are tachypnoeic. You are breathless.  
Your mind cannot seem to think straight.  
You are so tired. You feel sleepy.

And upon checking your saturation, SPO2 is 74%. You are very hypoxic.

And why again did you climb that high??



“Because it’s there” was the frank answer given by George Mallory; a legendary British Everest climber when asked after his first failed attempt. He tried again in 1924 and that attempt caused him his life but the mystery of it remains despite his body was later discovered in 1999.



If you ask me what makes me itchy every year to go for a summit be it alpine or not kind of expedition, I have to concur with Mr Mallory’s answer. Everybody will have their own reasons. However, I believe it is the satisfaction of experiencing the journey rather than the destination. Of course, reaching the summit is the objective but as we go higher and higher, it is much more than grit and ability; it is more of knowledge, wisdom and perseverance. It can be a very dangerous hobby as evidenced by the recent death of a fellow Malaysian anaesthesiologist whilst trying to summit Mount Annapurna in May 2019.



*Mt Siguniang base camp*

Since 2012, I will try to plan a major trip overseas yearly to mountains higher than 4500m. I really do not know how to explain why I am looking for the hypoxic feeling but it is part of the challenge. Climbing these mountains would require a lot of preparations, physically and mentally in the aim of reaching the top. I was introduced to the idea of reaching the 7 summits of the world. (7 summits in 7 continents)

2012 - Mount Koszioko, Australia 2228m - Highest in Australasia continent

2014 - Everest Base Camp, Nepal 5364m

2015 - Mount Kilimanjaro, Tanzania. 5895m Highest in African continent

2016 - Mount Stok Kangri, Leh India 6153m Highest in Stok Range Himalaya. Reached 6000m.

2017 - Mount Elbrus, Russia 5642m Highest in Europe continent

2018 - Mount Pulag, Philippines 2926m Highest in Luzon

2019 - Mt Fansipan, Vietnam. 3143m Highest in Indochina



I have always been fascinated with mountains. It has always been my dream to be a climber since my school days. It was through my reading of various books at my early stage of life that drew me to this past time. I would read the lengthy expedition journals and novels and be amazed by the pictures seen in the library (old school, no internet then). Occasionally there would be national geographic television documentaries and at night I would dream of doing these climbs in my sleep.



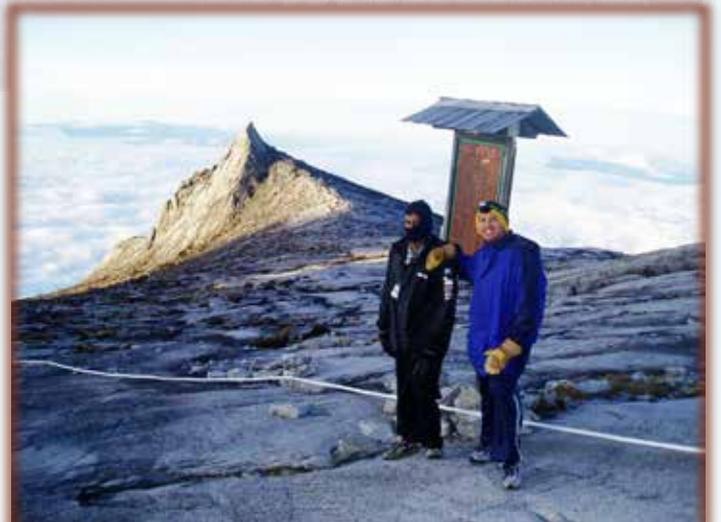
*Everest Base Camp. This is also not here anymore after the earthquake!*



*Mt Kilimanjaro summit*

Joining scouts in secondary school brought me closer to nature. I have always enjoyed outdoors and school holidays would be something to look forward too for our camping and hiking activities. True enough I managed to do the first climb when I was in form four and that was to the highest peak in Peninsular Malaysia, Gunung Tahan! It was such a wonderful experience and a very painful expedition to learn from! We trekked via the Ulu Tembeling route which took us five days up and down! What made it painful was we did not really have an expert to guide us for the preparation. It did not deter us and all of us summited in 1992!

Interestingly, despite my so-called passion to climb, I did not join any another mountain expedition until 2006! I suppose I had too many ambitions to fulfill and being an anaesthesiologist was one of it. Ironically, it was during my Masters programme I rekindled this passion of mine. Foolishly then, with a comrade of mine Dr Shakti (currently anaesthesiologist in Australia) we took the leap of faith scaling up Mount Kinabalu! There was zilch training and it was just grit and stubbornness. Shakti suffered a chronic pain episode after that and I recovered my 1, 2, 3 step breathe to summit strategy.



*Mt Kinabalu 2006. Its not there anymore after the earthquake!*

I was lucky that I managed to meet like-minded people and joined their society, Orang Gunung Kuala Lumpur. There were many experienced ones and slowly I learnt the ways of outdoors and art of climbing. Malaysian mountains are of heights of less than 3000m and pose a challenge of dense rainforest extremes. I have yet to finish my G12 but I have done all my Big 5 by 2009. (There are two recent additions to the 12 mountains in Malaysia which I need to renew)

It was with this group that I met my two mentors - two awesome gentleman who later became the few who have summited Mount Everest in 2013. And it is with their encouragement and guidance that I have decided to hold that dream of summiting Everest one day. They are the ones who have introduced me to the next level of mountaineering; alpine climbing.



When one climbs higher than 3000 meters, there are significant physiological changes of the body. This is called acclimatization as the body needs to adjust with the decreasing oxygen levels in the atmosphere. The adjustment process itself will produce symptoms and causes illness perhaps better known as Acute Mountain Sickness (AMS). These symptoms are really resulting from hypoxia to the tissues. AMS is not to be taken lightly as it can cause serious fatalities.

The physiology of altitude sickness centres around the **alveolar gas equation**; the atmospheric pressure is low, but there is still 20.9% Oxygen. Water vapour still occupies the same pressure too - this means that there is less oxygen pressure available in the lungs and blood. Compare these two equations comparing the amount of oxygen in blood at altitude:

	At Sea Level	At 8400m ( rough height of Everest)	Formula
Pressure of oxygen in the alveolus	21%. (101.3kPa - 6.3kPa) - (5.3kPa / 0.8kPa) = <b>13.3kPa O<sub>2</sub></b>	21%. (36.3kPa - 6.3kPa) - (1.8kPa / 0.74kPa) = <b>3.9kPa O<sub>2</sub></b>	$F_iO_2 \cdot (P_B - P_{H_2O}) - (P_{CO_2} / RQ)$
Oxygen Carriage in the blood	(0.98 * 1.34 * 14g/dL) + (0.023 x 12kPa) = <b>17.3ml O<sub>2</sub> / 100ml Blood</b>	(0.54 * 1.34 * 19.3g/dL) + (0.023 x 3.3kPa) = <b>14.0ml O<sub>2</sub> / 100ml Blood</b>	(Sa <sub>o2</sub> * 1.34ml/g Hb * Hb) + (Oxygen carriage in blood * Pa <sub>o2</sub> )

The hypoxia leads to an increase in minute ventilation (hence both low CO<sub>2</sub>, and subsequently bicarbonate), Hb increases through haemoconcentration and erythropoiesis. Alkalosis shifts the haemoglobin dissociation constant to the left, 2,3-BPG increases to counter this. Cardiac output increases through an increase in heart rate.

The body's response to high altitude includes the following:

- ↑ Erythropoietin → ↑ hematocrit and haemoglobin
- ↑ 2,3-BPG (allows ↑ release of O<sub>2</sub> and a right shift on the Hb-O<sub>2</sub> disassociation curve)
- ↑ kidney excretion of bicarbonate (use of acetazolamide can augment for treatment)
- Chronic hypoxic pulmonary vasoconstriction (can cause right ventricular hypertrophy)

People with high-altitude sickness generally have reduced hyperventilator response, impaired gas exchange, fluid retention or increased sympathetic drive. This is thought to be an increase in cerebral venous volume because of an increase in cerebral blood flow and hypocapnic cerebral

vasoconstriction causing oedema. Hypothermia is another challenge that the body has to take and that factors in on how fast one gets AMS if one is not readily equipped to battle the cold.

Over the years, I have had my fair share of AMS. I have had to initiate a rescue on a fellow group member who was severely hypoxic. I have had to make decisions for the group in limiting another member's further participation in the expedition. Both these stories were written in my short story in the Diagnosis2 novel, awarded the Best MPH Malay non-fiction book for 2015. I have myself become a near victim of Acute Pulmonary Oedema (not a nice feeling yeah!). And I have been very dehydrated before that I had frank haematuria! I am thankful with all that had happened I was still able to maintain my sanity and health.

Yes, it is my aim to peak Everest one day and I hope to be able to do it in the coming years. Watch it! As for now, 2020 - I will be embarking my adventure to reach near 7000m with my coming expedition to Mount Aconcagoa, Argentina. 6960m.



42<sup>nd</sup> birthday on Mt Siguniang

# Anaesthetizing The Ocean Masters

by Salimi Mohd Salleh

## A caster rambling

FG knot, GT knot, Rizutto finish, ball-bearing swivel, 80-100 pound main line, 100-300 pound leader, deep crank, slim minnow, top water lures, stickbaits, popper, jigging are just to name a few bombastic words pluck from my world of fishing vocabulary.



Happy kids from surrounding villages at Terapo, Gulf Province, PNG. At the background was my home base during the five-day Papuan Coast Expedition back in September 2107



A 5 lb local grouper of the rocks at Jimah power plant, Port Dickson from years ago

Papuan Black Bass, spot tail bass, red mahseer, blue mahseer, red gourami, jungle perch, giant trevally, blue fin trevally, Napoleon wrasse - these are just to name few of my bucket list's fishes.

Forget all those anaesthetic jargons - RSI, TCI, BIS, MAC, ANH, ACLS, Schneider model, Minto model bla bla bla - *aiya* at this 'young' age it is just too mind boggling.

The thought of stressful cases with potential PEA and intra-operative cardiac massage in a small private hospital really put a dent on your ego - it haunts me for days on end. *Dey macha* life is too short to get worked up *lah*.

All the more reason to drop everything and wander straight into the thick jungle of Indonesia or its vast ocean.

## My calling

These last few years I have call Indonesia as my second home and have acquired few local fishing kakis as well. Every tow to three months, I would venture out with them in search for the elusive monster size fish.

My passion has taken me into the far-flung remote corner of the world where phone line does not exist at all - here satellite phone is a MUST in case you get stranded in one of these remote islands.

Kaimana, Misool, Long Reef, Terapo, Wahai, Halmahera, Long Pelay, Berau, Segah, Biduk-Biduk are some of the weird names that I have ventured to.

I have gone back to the basics of life - live simple with bare necessities and some time living off the land. Appreciate mother nature more. Get connected with the people of the land who are living a simple life.

The thrill of the adventure and the journey is what matters most. Being able to catch the target fish is considered a BONUS. Eating doughnut (not catching any fish) is a norm. Mother nature - earthquake, cyclone and heavy rain are something beyond my control.

## Future Beckons

Future plan of going to Bolivia for peacock bass, wild Patagonia for sea run giant salmon, brown trout in New Zealand, black bass in wild West Papua are already in place. With Allah's blessing hopefully I can make it a dream comes true.

## War Torn Country: Yemen

A plan has been forged to travel to UNESCO World Heritage site located at the tip of Africa Horn - an isolated island name Socotra Island. I have heard it before but never put a real thought about it until recently.

Known as the Land of BIG Mama Giant Trevally (*Caranx ignobilis*) or Geets weighing at a monstrous 50-60 kg each - a big slab of meat indeed. On this island, a 40-kg Geet is considered a rat fish (small size)!!! The news made me drool incessantly but it is a place not for the fainted heart as the journey would take you across some dangerous area in Yemen.

Scare the shit out of you? Hell ya ... even my wife gave me that long Parkinson look. What the heck if my time come then I make peace with it already at least doing what I love the most. For I am a part time Anesthetist and a full time Angler!



12 lb Golden Trevally - a highly prized fish known for its succulent sweet white flesh caught jigging at Long Reef, Wari, Papua New Guinea in January 2019



A fine specimen of the strongest fresh water fish known as Papuan Black Bass (*Lutjanus goldiei*) a brute weighing at 28 lb. Hauled from sunken timbers at Kaimana, West Papua in October 2019

# Malaysian Society of Anaesthesiologists & College of Anaesthesiologists, AMM

ANNUAL SCIENTIFIC CONGRESS 2020

**MyAnaesthesia 2020:**  
**Quality, Safety, Availability**

26<sup>th</sup> - 29<sup>th</sup> March 2020

Shangri-La Hotel, Kuala Lumpur, Malaysia



**Call For Abstracts**

Abstract Submission Closes  
31<sup>st</sup> January 2020

## Plenaries

- Leadership & Vital Directions in Anaesthesiology
- Quality & Safety in Neuroanesthesia - The Way Forward
- The Effects of the 4<sup>th</sup> Industrial Revolution on the Anaesthesia Specialty & How Technology and Digitalisation Reduces The Risk of Harm to Patient in Our Care
- What's New in Clinical Airway Management

## Pre-Congress Workshops

- Aeromedicine - Transportation of the Critically Ill
- Education - Critical Appraisal
- Perioperative Goal Directed Therapy
- Thoracic Anaesthesia - Lung Isolation Techniques
- Transoesophageal Echocardiography

## Symposia

- Cardiac Anaesthesia
- Information Technology
- Neuroanaesthesia
- Obstetric Anaesthesia
- Paediatric Anaesthesia
- Pain Medicine
- Pharmacotherapy
- Professionalism
- Quality & Safety
- Thoracic Anaesthesia

## In-Congress Workshops

- Adjunct Pain Treatment
- Basic Ultrasound
- Critical Care
- Difficult Airway Management
- Perioperative Anaphylaxis
- Perioperative Medicine
- Regional Anaesthesia
- Transthoracic Echocardiography
- Updates on Cardiopulmonary Resuscitation
- Tea with Examiners

CONGRESS SECRETARIAT

### Malaysian Society of Anaesthesiologists

Unit 1.6, Level 1, Enterprise 3B, Technology Park Malaysia, Jalan Innovasi 1 Bukit Jalil, 57000 Kuala Lumpur, Wilayah Persekutuan

Tel: +603 8996 0700, 603 8996 1700, 603 8996 2700 Fax: +603 8996 4700

Email: secretariat@msa.asm.org.my Website: www.msa.asm.org.my

## Plenary Lecturers



Ariffin Marzuki Mokhtar  
MALAYSIA



Davy Cheng  
CANADA



John Doyle  
UAE



Justin Sangwook Ko  
SOUTH KOREA



Deepak Sharma  
USA



Ashish Sinha  
USA

**SINGAPORE**  
Chong Chin Ted

**SOUTH KOREA**  
Jin-Tae Kim

**THAILAND**  
Suraphong Lorsomradee

**MALAYSIA**

Abdul Fuad Abdul Rahman	Felicia Lim
Azrin Mohd Azidin	Lim Thiam Aun
Beh Zhi Yuen	Mohamed Hassan Mohamed Ariff
Kavita Bhojwani	Mohd Lutfi Nijar
Fazilah Shaik Allaudin	Mohd Rohisham Zainal Abidin
Intan Zarina Fakir Mohamed	Muhammad Maaya
Jahizah Hassan	Kevin Ng Wei Shan
Jusmidar Abdul Jamil	Noor Aireen Ibrahim
Lee Choon Yee	Raha Abdul Rahman
Maria Lee Hooi Sean	Carolyn Yim Chue Wai
Leong Kok Weng	

Online registration is available at  
[www.msa.asm.org.my](http://www.msa.asm.org.my)

*continued from back page*

My heartfelt appreciation to Professor Dr Tae Kim Yop and his team of colleagues for their hospitality and generosity

### **2. College of Anaesthesiologists of Ireland (CAI)**

Our new camaraderie with the CAI has been cemented through the numerous meetings and training of trainer workshops for the parallel pathway programme that were held in collaboration between the two respective Colleges.

It further gives me gratification and pride to share my conferment, at the invitation of the CAI, as an Honorary Fellow in April 2019 in Dublin, Ireland. This honor left me overwhelmed and humbled for it acknowledges the hard work and the numerous steps taken to ensure the success of implementation of the parallel programme.



*Dato' Dr Jahizah Hassan conferred the Honorary Fellowship of the CAI*

### **3. 21<sup>st</sup> ASEAN Congress of Anaesthesiologists (ACA) in Brunei Darrulsalam**

I would like to share that for the first time, the Presidents of both the CoA and the MSA were invited to attend the ASEAN Congress of Anaesthesiologists on 5<sup>th</sup> & 6<sup>th</sup> September 2019. This was also the first time that the ACA was held in Brunei. The theme was "Together Embracing Innovation and Enhancing Quality". I delivered a lecture on "Leadership in the Era of Embracing Innovation and Enhancing Quality in Healthcare".

Malaysia was represented by three other speakers namely Dr Shahridan Mohd Fathil, Dr Amiruddin Nik Mohammed Kamil and Dr Raveenthiran Rasiah. There were 52 speakers from 16 countries who contributed to the Congress.

We enjoyed both the scientific sessions and the social programmes during the Congress and had the opportunity to make new friends and renew friendship to extend our existing networks

### **CPD and SIG**

There are various Special Interest Groups under the umbrella of the COA who are tasked with organising CME programmes relevant to their SIGs. However, feedback from many of our members, was that they are not aware of some of these activities such as CME programmes that can potentially be attended. As such the COA and the MSA organized a meeting with both the state representatives and the SIG representatives to ensure we can streamline our CME programmes in such a way that all our members who are keen to attend can do so in a timely fashion with more advanced notice. We are hoping to come up with a calendar of activities well in advance so that members can take note and attend the CME programmes.

I urge all specialists, the young and the seasoned, in the public sector, universities and private establishments who have yet to be members of the College to apply for membership and be a part of our activities. It is with large numbers that we can have a larger voice among our peers. United we stand, divided we fall.

I wish to take the opportunity to thank you all for your continuous support and trust in me as I take helm of the leadership of the CoA. I will strive to deliver in the best interest of the fraternity in every endeavor.

Happy New Year and may 2020 bring us to even greater heights.

## *Flash News*

Dato' Dr Jahizah Hassan receiving the Fellowship of the Academy of Medicine, Singapore on 18<sup>th</sup> January 2020.



# Message from the President of the College of Anaesthesiologists, AMM

*Dato' Dr Hj Jahizah Hj Hassan*



As the curtain comes down to bid farewell to 2019 and we usher in the new dawn of 2020, it gives me immense pride to write to you, my first message as College president. I foresee in the horizon many interesting changes, challenges and opportunity that await us.

The year 2019 has left its imprint on a positive note. It has been a remarkable year to say the least with ample work done bearing magnanimous successes. Allow me to detail below.

## **MSA/CoA Annual Scientific Congress 2019**

The MSA/CoA Annual Scientific Congress 2019 was successfully held on 4<sup>th</sup> to 7<sup>th</sup> July 2019 at the Ipoh Convention Centre, Ipoh, Perak. The theme was Anaesthesia: Challenges in the 2020s. This was the first time the Congress was held in Ipoh, Perak. There were six pre-congress workshops, eight plenaries, 16 symposium sessions and in-congress concurrent workshops in addition to breakfast with the examiner and presentations for the MSA and the MSA YIA Awards.

There was a total of 938 registered delegates with 18 overseas faculty supported by 47 local speakers. The Faculty Dinner was held in the amazing Jeff's Cellar in Banjaran Springs, Ipoh and the Congress Dinner at the Convention Centre itself.

## **13<sup>th</sup> MOH-AMM Scientific Meeting 2019**

I am particularly proud of the conferment of many deserving people within our fraternity as members into the Academy of Medicine of Malaysia. The Fellowship conferment and induction ceremony was held on 27<sup>th</sup> August 2019 at the new National Institutes of Health Complex in Setia Alam, Selangor. This event was graced by the Honourable Health Minister, YB Dato' Seri Dr Zulkefli Ahmad. There was a sense of pride, grandeur and prestige as I saw many of our members from our fraternity took their rightful place in conferral. I am delighted to record that three were conferred fellowship and nine were inducted. Congratulations!

## **National Anaesthesia Day**

This event is marked yearly on our calendars. The CoA has always played a major role yearly alongside the MSA, Ministry of Health Hospitals and the universities, to commemorate the birth of anaesthesia. The CoA and the MSA collaborated with Hospital Kuala Lumpur to celebrate the National Anesthesia Day. This year's celebration was

all the more unique and special as the event brought forth in unison a congregation of all major hospitals departments of anaesthesiology and intensive care within the Klang valley and the state of Selangor in the spirit of celebrating National Anaesthesia Day on 15<sup>th</sup> October 2019 at the Forest Reserve Institute Malaysia. It was officiated by Dato' Dr Hj Bahari b Awang Ngah, Director, Medical Development, Ministry of Health, Malaysia. The theme was "Let's Go Green". It was a day full of merriment, games and camaraderie attended by 1000 in the number of anesthesia personnel. The atmosphere was electrifying, and I am so blessed to bear witness to this celebratory spirit within the fraternity.

## **FCAI Parallel Programme**

I am exceptionally pleased to report that the long hours of meetings, transcripts alongside a proximate working relationship with the College of Anaesthesiologists of Ireland and Ministry of Health Malaysia has produced a comprehensive structured training programme to ensure training standards and competency are equivalent to our local Masters Postgraduate programme.

Successful short courses such as "*Training of the trainers, Training of the trainees and Anesthesia Parallel Pathway training symposium*" were amongst the effort by the College in 2019.

At this juncture I would like to inform that the regulations, rules and payment for the parallel programme are available on the College website. Candidates who are considering the MCAI and FCAI examinations are advised to read through these regulations to avoid any confusion. When in doubt, do drop an email to the CoA secretariat for clarification.

## **International Networking**

### **1. Korean Society of Anaesthesiologists**

As College President, I alongside Professor Dr Marzida Mansor, Dr Gunalan Palari, Associate Professor Dr Ina Ismiarti Sharifuddin and 30 other delegates attended the Korean Society of Anaesthesiology Annual Scientific Meeting. This meeting was held at the Paradise City Convention Centre, Incheon. The Korean Society played great hosts to our delegates and ensured that we were well taken care off. It is through this warm relationship and collaboration that the MOUs between the respective entities have been made available for subspecialty training. Additionally, the KSA has provided an affordable and an international platform for many of our trainees to present their scientific papers.

*continued on page 43*