

PACCMAN



NEWSLETTER

2020 Edition Issue 1



Congratulations!

You may go to our PACCMAN webpage for the full article

Crit Care. 2020 Jan 31;24(1):31.doi: 10.1186/s13054-020-2741-x.

The Impact of High Frequency Oscillatory Ventilation on Mortality in Paediatric Acute Respiratory Distress Syndrome

Judith Ju-Ming Wong, Siqi Liu, Hongxing Dang, Nattachai Anantasit, Phuc Huu Phan, Suwannee Phumeetham, Suyun Qian, Jacqueline Soo May Ong, Chin Seng Gan, Yek Kee Chor, Rujipat Samransamruajkit, Tsee Foong Loh, Mengling Feng, Jan Hau Lee, Pediatric Acute & Critical care Medicine Asian Network (PACCMAN)

In this issue ...

- New members
- New PACCMAN Committee
- Studies update
- Upcoming studies
- Joining us



New Members ...



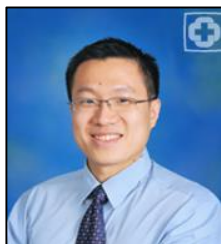
Our New members for Jan-Jun 2020

- Dr Osamu Saito from Tokyo Metropolitan Children's Medical Center
- Dr Ichiro Watanabe from Tokyo Metropolitan Children's Medical Center
- Dr Mioko Kasagi from Tokyo Metropolitan Children's Medical Center
- Dr Pon Kah min from Penang Hospital
- Dr Yuki Enomoto from University of Tsukuba Hospital
- Dr Yujiro Matsuishi University of Tsukuba Hospital
- Dr Chong Jia Yueh from Women and Children's Hospital, KL
- Dr Takanari Ikeyama from Aichi Children's Health Medical Center
- Dr Cheng Yibing from Zhengzhou Children's Hospital
- Dr Zhang Furong from Wuhan Children's Hospital

New PACCMAN Committee ...



~ Executive Committee Members ~



Dr. Lee Jan Hau
PACCMAN Chair
Senior consultant
Children's intensive care unit
KK Women's and Children's Hospital



Prof Rujipat Samransamruajkit
PACCMAN Deputy Chair
Chief of PICU
King Chulalongkorn Memorial
Hospital



Dr. Jacqueline Ong
Member
Head & Senior consultant
Division of Paediatric Critical
Care
National University hospital



Prof Qian Suyun
Member
Professor
Department of PICU
Beijing Children's Hospital



Prof Jayashree M
Member
Chief of PICU
Post Graduate Institute
of Medical Education and
Research

“ To be a PACCMAN EXCO member, I am keen to serve everyone here to stimulate research into effective strategies to improve survival in critically ill children. Same time as a link bridge, I will help PACCMAN to identify the challenge facing children severe disease and bring connectivity with all countries throughout Asia who can then participate/contribute as a community in meaningful research. The main goal is to nurture the PACCMAN platform to be growing stronger step by step for better serve our children worldwide. ”

~ Prof Qian Suyun

“ I wish to strengthen and lend momentum to PACCMAN in championing the cause of improving critical care in resource poor nations, I perceive that there are several areas where we can work together in a global partnership. ”

~ Prof Jayashree M

New PACCMAN Committee ...



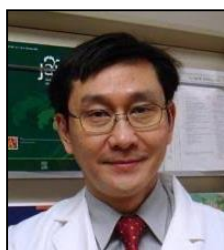
~ Scientific Committee Members ~



Dr. Judith Wong
Critical Care Chair
Consultant
Children's intensive care unit
KK Women's and Children's Hospital



Prof Naoki Shimizu
Acute Medicine Chair
Professor
Department of Paediatrics
St. Marianna University School of Medicine



Prof Ellis Hon
Member
Professor
Paediatric Intensive Care Unit
Hong Kong Children's Hospital



Dr. Phan Huu Phuc
Member
Deputy Head
Paediatric Critical care medicine
Vietnam national Children's Hospital

“ As the Acute Medicine Chair, I would love to modulate the resuscitation research field on both emergency and critical care further on top of the ongoing research activities, and also I should dig more possibilities of new directions of acute medicine research, such as emerging infectious diseases, triage systems, paediatric trauma, transport medicine, disaster medicine, etc., and try make these research fields attractive. ”

~ Prof Naoki Shimizu

“ Given my position as the Editor-in-Chief of the World Journal of Critic Care Medicine, I am humbly determined to collaborate with Asian giants in PACCMAN to target for Excellence in research and education in acute, emergency and critical care medicine. ”

~ Prof Ellis Hon

Study Updates 1 ...



Paediatric Traumatic Brain Injury (pTBI) Study 1: Retrospective design

Study lead: Dr Chong Shu Ling, Department of Emergency Medicine, KK Women's and Children's Hospital



~ Manuscript accepted to
Pediatric Critical Care Medicine ~

Traumatic brain injury outcomes in 10 Asian Pediatric Intensive Care Units: A retrospective study by the Pediatric Acute and Critical Care Medicine Asian Network (PACCMAN)

Objective Traumatic brain injury (TBI) remains an important cause of death and disability. We aim to report the epidemiology and management of moderate to severe TBI in Asian pediatric intensive care units (PICUs) and identify risk factors for mortality and poor functional outcomes.

Design A retrospective study of the Pediatric Acute and Critical Care Medicine Asian Network (PACCMAN) moderate-severe TBI dataset collected between 2014 and 2017.

Setting Patients were from the participating PICUs of PACCMAN.

Patients We included children < 16 years old with a Glasgow coma scale (GCS) ≤ 13 .

Measurements We obtained data on patient demographics, injury circumstances, and PICU management. We performed a multivariate logistic regression predicting for mortality and poor functional outcomes.



Main Results We analyzed 380 children with moderate to severe TBI. Most injuries were a result of road traffic injuries (174, 45.8%) and falls (160, 42.1%). Fifty-six children died (14.7%), with no difference in mortality between high-income countries (HIC) and non-HIC sites. Among those who survived, more children in non-HIC sites had a poor functional outcome on discharge compared to HIC sites (47.0% vs 27.0%, $p < 0.001$). Poor functional outcomes were associated with: non-HIC [adjusted odds ratio (aOR) 2.08, 95% confidence interval (CI) 1.23-3.54, $p = 0.006$], GCS < 8 (aOR 5.54, 95% CI 3.33-9.40, $p < 0.001$), involvement in a road traffic collision (aOR 1.91, 95% CI 1.10-3.35, $p = 0.022$), and presence of multiple trauma (aOR 1.84, 95% CI 1.08-3.16, $p = 0.026$).

Conclusions Poor functional outcomes are prevalent after pediatric TBI in Asia. There is an urgent need for further research in these high-risk groups.

Management Strategy	High-income sites (N=182)	Non high-income sites (N=198)	p-value
Intubated within 24 hours (%)	121 (66.9)	171 (86.8)	<0.001
Use of hyperosmolar therapy within 24 hours	105 (57.7)	112 (56.6)	0.906
3% hypertonic saline	46 (43.8)	12 (10.7)	<0.001
20% mannitol	79 (75.2)	102 (91.1)	0.003
Others ^a	26 (24.8)	0 (0.0)	<0.001
Use of anti-epileptics within 24 hours (%)	71 (39.4)	137 (69.5)	<0.001
Phenytoin	28 (39.4)	63 (46.0)	0.450
Phenobarbitone	10 (14.1)	82 (59.9)	<0.001
Levetiracetam	33 (46.5)	3 (2.2)	<0.001
Use of anti-epileptics within 24 hours (%)	71 (39.4)	137 (69.5)	<0.001
Prophylactic	45 (63.4)	62 (35.8)	0.001
Temperature control within 24 hours (%)	132 (72.9)	74 (37.6)	<0.001
Hyperventilation within 24 hours (%)	18 (9.9)	6 (3.0)	0.011
Barbiturate therapy (%)	20 (11.0)	11 (5.6)	0.081
Neurosurgical intervention (anytime throughout admission) (%)	73 (40.3)	88 (44.7)	0.454
Decompressive craniectomy	14 (19.2)	33 (37.5)	0.018
Craniotomy	19 (26.0)	32 (36.4)	0.217
Monitoring of ICP ^b	41 (56.2)	42 (47.7)	0.364
EVD ^c	23 (56.1)	31 (72.1)	
Parenchymal bolt	12 (29.3)	6 (14.0)	
Subdural	3 (7.3)	6 (14.0)	
Evacuation of intracranial bleed	29 (39.7)	28 (31.8)	0.379
Elevation of depressed skull fracture	7 (9.6)	9 (10.2)	1.000

Paediatric Traumatic Brain Injury (pTBI) Study 2: Prospective design

Study lead: Dr Chong Shu Ling, Department of Emergency Medicine, KK Women's and Children's Hospital

Title: Does 3% hypertonic saline decrease mortality and improve long-term neurological outcomes among children with traumatic brain injury?

Status summary --

Participating site	IRB	Study Agreement	Recruited
KKH	✓	✓	14
National University Hospital	✓	✓	5
Beijing Children's Hospital	✓	✓	23
Children's Hospital of Fudan University	✓	In Progress	10
Children's Hospital of Chongqing Medical University	✓	✓	31
Sarawak General Hospital	✓	✓	2
University Malaya Medical Centre	✓	In Progress	15
Women and Children Hospital Kuala Lumpur	✓	In Progress	pending
Universiti Kebangsaan Malaysia Medical Centre	✓	In Progress	1
Ramathibodi Hospital	✓	✓	pending
Chulalongkorn University	✓	✓	pending
Kobe Children's Hospital	✓	✓	2
Aga Khan University	✓	In Progress	pending
Total			103

Study Updates 2 ...



PEDSAC- A Retrospective Epidemiologic study in Paediatric Sepsis in Asia

Study lead: Prof Rujipat Samransamruajkit, King Chulalongkorn Memorial Hospital, Thailand

Recruitment Completed



- Manuscript in preparation (last edited)
- Preliminary result was presented at the ESPNIC 2019, Salzburg, Austria

No.	Site name	n	Percent
1	Maharaj Nakorn Chiang Mai, Thailand	30	11.07
2	National University Hospital, Singapore	29	10.7
3	Sarawak General Hospital, Malaysia	20	7.38
4	Ramathibodi Hospital, Thailand	30	11.07
5	King Chulalongkorn University Hospital,	44	16.24
6	Faculty of Medicine Siriraj Hospital, T	13	4.8
7	KK Women & children hospital, Singapore	50	18.45
8	Hat Yai Medical Center, Thailand	39	14.39
9	Universiti Kebangsaan Malaysia Medical	16	5.9
Total		271	100

Study Updates 3 ...



Pediatric Acute Respiratory Distress Syndrome Prospective Asian Study (PARDSProAsia 1)

Study lead: Dr Judith Wong, Children's Intensive Care Unit, KK Women's and Children's Hospital

Status summary as of June 2020 --

No.	Sites	Number
1	KK Women's and Children's Hospital	102
2	National University Hospital, Singapore	? 2
3	National Hospital of Pediatrics	20
4	Hyogo Prefectural Kobe Children's Hospital	4
5	Guangzhou Women and Children's Medical Center	1
6	Universiti Kebangsaan Malaysia Medical Centre	3
7	Sarawak General Hospital	16
8	Chongqing Hospital	? 33
9	Harapan Kita Children and Women hospital	4
10	Hong Kong Children's Hospital	
11	King Chulalongkorn Memorial Hospital	? 12
12	Shengjing hospital of China Medical University	
13	Sanglah Hospital Denpasar	9
14	Sultanah Aminah Hospital	11
15	Ramathibodi hospital	
16	Children's Hospital of Fudan University	
17	Post Graduate Institute of Medical Education and Research, Chandigarh	
18	University Malaya Medical Centre	
19	Aga Khan University Hospital	
20	Penang General Hospital	

Let's work on it now!



Lung Protective Mechanical Ventilation Bundle (PARDSProAsia 2)

Study lead: Dr Judith Wong, Children's Intensive Care Unit, KK Women's and Children's Hospital

Status summary as of May 2020 --

Tasks	% completion	Timeline
Study + redcap opens to sites	100%	Aug 2019
Sites receive IRB approval	80%	July 2020
Sites complete bilateral agreement	65%	July 2020
Sites enrolment first patient	60%	July 2020
Enroll half sample size	33%	Dec 2020
Initiation of PARDSProAsia II		Dec 2020
Enroll full sample size		Dec 2021
Preliminary analysis		June 2021
First major publication		July 2022

Coming Soon..

Study Updates 4 ...



Severe Pneumonia in Children (S-PIC) Study: A Comparative Effectiveness Study of Children with Severe Pneumonia in Asia

Study lead: Dr Lee Jan Hau, Children's Intensive Care Unit, KK Women's and Children's Hospital

ABSTRACT: Severe pneumonia is a leading cause of mortality and morbidity in children worldwide. Mortality rates from pediatric severe pneumonia are three times higher in South East Asia compared to the Western hemisphere. The lack of description of epidemiology, current management strategies and outcomes of children with severe pneumonia admitted to pediatric intensive care units (PICUs) in Asia is a barrier to improving paediatric critical care in the region. The lack of a sustainable paediatric critical care network in Asia makes multinational PICU studies challenging.

AIM: To estimate the burden of paediatric patients admitted to Asian PACCMAN PICUs due to severe pneumonia that develop pediatric acute respiratory distress syndrome; To characterize etiologies, identify risk factors associated with morbidity and mortality, and develop prognostic prediction models.

DESIGN: A prospective multicenter cohort study over 24 months to recruit 2000 children with severe pneumonia. Pertinent demographic, clinical, microbiological, critical care support and management data will be collected to enable an investigation of the association between risk factors and clinical outcomes in these children.



We're pleased to share that S-PIC online database is now ready for data entry, and we are starting our recruitment in PICU on 8th June 2020.

As of May 2020, a total number of 11 sites including KKH have received the ethics approval.

We look forward for sites to enrol their first few patients and we will keep all sites involved updated with the enrolment numbers over the study period.

No.	Site-PI	Country	Site Name
1	Lee Jan Hau	Singapore	KK Women's and Children's Hospital
2	Jacqueline Ong Soo May	Singapore	National University Hospital
3	Phuc Huu Phan	Vietnam	National Hospital of Pediatrics
4	Justin Wang Qi Yuee	Malaysia	University Malaya Medical Centre
5	Lee Pei Chuen	Malaysia	Universiti Kebangsaan Malaysia Medical Centre
6	Dang Hongxing	China	Children's Hospital of Chongqing Medical University
7	Mary Zhu Xuemei	China	Children's Hospital of Fudan University
8	Liu Chunfeng	China	Shengjing Hospital of China Medical University
9	Suresh Kumar Angurana	India	Post Graduate Institute of Medical Education and Research (PGIMER)
10	Qalab Abbas	Pakistan	Aga Khan University Hospital
11	Jeff Wong Chin Pang	Hongkong	Hong Kong Children's Hospital



Sites recruitment are still open. Interested members please contact Dr Lee Jan Hau, lee.jan.hau@singhealth.com.sg or Patricia Tay, patricia.tay@scri.edu.sg for more study details.

Study Updates 5 ...



Pediatric Acute and Critical Care COVID-19 Registry of Asia (PACCOVRA study)

Study lead: Dr Judith Wong, Children's Intensive Care Unit, KK Women's and Children's Hospital

Introduction

In December 2019, an outbreak of pneumonia of unknown aetiology was first reported in the city of Wuhan, Hubei Province, People's Republic of China. Since then, a novel coronavirus, 2019 novel Coronavirus (2019-nCoV) has emerged as the most likely causative agent. To date, it has evolved into a pandemic involving over a million cases and thousands of deaths have been identified, including a high burden in countries like Italy, Spain, United Kingdom and the United States. We aim to investigate the clinical epidemiology of 2019-novel coronavirus (2019-nCoV) epidemic in Singapore and Asia. A retrospective outbreak study of all suspect cases admitted to hospital from the beginning of the pandemic (Dec 2019) to Dec 2020. Clinical and epidemiological information will be extracted from medical databases for analysis.





Participating sites:

No.	Sites	Number
1	Ramathibodi Hospital	
2	King Chulalongkorn Memorial hospital	
3	St. Marianna University School of Medicine	37
4	Tokyo Metropolitan Children's Medical Center	
5	Aichi Children's Health and Medical Center	
6	Hyogo Prefectural Kobe Children's Hospital	
7	Adam Malik General Hospital	
8	Children's Hospital of Chongqing Medical University	
9	Zhengzhou Children's hospital	5
10	Wuhan Children's Hospital	
11	National University Hospital	
12	KK Women's and Children's Hospital	86
13	Hospital Canselor Tuanku Muhriz (University Kebangsaan Malaysia)	
14	Hospital Pulau Pinang	6
15	University Malaya Medical Centre, Kuala Lumpur	
16	Hospital Tunku Azizah Kuala Lumpur	
17	Vicente Sotto Memorial Medical Center	
18	The Medical City	
19	Advanced Pediatrics Centre, PGIMER, Chandigarh	11
20	Aga Khan University	





Projected timeline:

Tasks	% Completion	Timeline
Study + redcap opens to sites	100%	June 2019
Sites receive IRB approval	25%	June 2020
Sites complete bilateral agreement		June 2020
Sites enrolment first patient	25%	June 2020
Enroll all retrospective cases*		Sep 2020
Enroll half sample size*		June 2021
Enroll full sample size*		Dec 2021
Final analysis and report		Dec 2021

*Several analysis and report anticipated



Sites are in midst **IRB application & project agreement negotiation**

Site Survey Manuscript --

Changes Adopted for Infection Control and Respiratory Support in Asian Pediatric Hospitals During the COVID-19 Pandemic: A Report from the Pediatric Acute and Critical Care COVID-19 Registry of Asia (PACCOVRA)



Study updates 6 ...



Delphi Study to Establish Paediatric Critical Care Nursing Research Priorities in Asian Countries

Study lead: Nurse Poh Pei Fen

Objectives: Studies showed that nursing care improves patient outcomes, however there are gaps between translation of evidence into clinical practice. Such studies had been done in the USA, Australia and European countries. However, due to cultural, social and economic differences between the Western countries and Asia, the findings from the Western studies may not apply in Asia. Thus a need for the study to be done in an Asia context. This study aims to identify priorities in nursing research as defined by paediatric intensive care nurses across Asia

Sample size: A minimum targeted sample of 8 expert nurses in each PICU from a minimum of 1 PICU in each Asia country.

Design: A three-round Delphi method will be used to identify and prioritise nursing research topics of importance to PICUs in Asia. Round one involves qualitative data collection in electronic format via the Survey Monkey application. Participants will be asked to list three to five areas of research topics that they consider are important. Qualitative responses will be analysed by content analysis and research statements will be generated. The results generated from Round 1 will be converted into a questionnaire and used for the subsequent two rounds. Based on the results from Round 1, the same nurses will be invited to rank each research according to its importance to their respective nursing areas using a six-point scale, ranging from not important to extremely important.

In Round 3, the anonymous mean value of the group response from Round 2 will be made available to the participants. They will rate the same research topics again according to its importance with the information of the group response of Round 2. Descriptive and inferential statistics will be used for data collected from Round 2 and 3.

Study in Pipeline 1 ...



End-of-life Care in Pediatric Intensive Care Unit in Asia

Study lead: Drs Mioko Kasagi, Naoki Shimizu, Yusuke Seino, Hiroshi Kurosawa

Background:

There is a lack of studies looking at paediatric end-of-life (including brain death/arrest) in Asian countries. In literature, end-of-life studies are mainly from adult ICUs. End-of-life in PICU only received 423 hits and dominated by the European and Americans populations. Data on End-of-life in PICU in Asian countries are comparatively sparse and available for only a few countries. Being culturally very different from the West, these studies are not representative of Asia. Thus we need to have an Asia study. With the data collected, guidelines relating to end-of-life decision making and practice in Asian countries can be developed.

Study Aims:

1. To understand the attitudes of PICU health care professionals to end-of-life care in Asian PICUs
2. To evaluate factors associated with observed attitudes

Study Design:

Self-administered, structured, and scenario-based survey (Background Survey and Case-scenario survey)

Study Population:

Healthcare professionals working at PICUs in Asian countries

Study in Pipeline 2 ...



Assessment of Barriers for Enteral Nutrition Delivery in Pediatric Intensive Care – An Asian Multicentric Prospective Observational Study (BEND-ASIA)

Study lead: Dr Arun Bansal

Background:

Optimal calorie and protein delivery to meet the nutritional requirement of critically ill children is significantly associated with improved outcomes. Enteral nutrition (EN) is the preferred mode of nutrient intake in critically ill patients with a functional gastrointestinal system, due to its lower cost and complication rate when compared to parenteral nutrition (PN). EN is frequently interrupted in the intensive care setting for a variety of reasons, some of which are avoidable. Frequent interruptions in enteral nutrient delivery may affect clinical outcomes secondary to suboptimal provision of calories. There are almost no studies available on this aspect of nutrition from lower middle-income countries or from Asia. Thus, we have planned to study the factors responsible for enteral feed interruptions from a tertiary care PICU's.

Aim:

To identify various modifiable and non-modifiable factors for interruptions in enteral nutrition.

Proposed timeline:

Protocol submission and Approval – PACCMAN

- 1-2 months

IRB Approval

- 1 month

CTRI/Clinical Trails Gov Approval

- 1 -2 month

Open to All members of PACCMAN for participation

- Aug - Sept 2020

Join Us ...

WELCOME

To become one of us, please go to:

<https://www.scri.edu.sg/crn/pediatric-acute-critical-care-medicine-asian-network/members/> to download the registration form. Kindly submit the completed form to patricia.tay@scri.edu.sg.

If you have any feedback or would like to feature updates from your country in the PACCMAN newsletter, kindly write to Ms Patricia Tay, PACCMAN secretariat, at patricia.tay@scri.edu.sg.



We do not have a fixed criteria to join as member. We welcome anyone who is keen to collaborate and share common goal of developing best practices to improve survival in critically ill children in Asia. If you have any colleagues or friends who are interested, please do refer them to us.