

Rujipat Samransamruajkit, MD, FAAP, FCCP
Professor of Pediatrics



Affiliation

Chief, Pediatric Intensive Care Unit (PICU)
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Present Academic & Work Positions

- Chair, Thai Pediatric Critical Care Training Program
- Director, CU Pediatric Critical Care Training Program
- Chair, CU-ECMO Committee
- Member, Board of CU Critical Care Excellence Center
- Member, Board of CU Critical Care Committee
- Member, Board of CU Ethical Committee
- Member, Board of Thai Critical Care Society
- Member, Board of Thai Pediatric Pulmonary & Critical Care Society
- Member, American Thoracic Society

Education

Doctor of Medicine (1985-1991)
Chulalongkorn University Hospital, Bangkok, Thailand

House-staff in Pediatrics (1992-1995)
Jersey City Medical Center, Seton Hall University, Jersey City, New Jersey, USA

Chief Resident, Selected (1994-1995)
Jersey City Medical Center, Jersey City, New Jersey, USA

Pediatric Pulmonary Fellow (1995-1998)
Memorial Miller Children's Hospital of Long Beach, University of California, Irvine,
California, USA

Pediatric Critical Care Fellow (1999-2000)
Loma Linda Children's Hospital, Loma Linda University, California, USA

Medical Diploma

- Diplomate American Board of Pediatrics
- Diplomate American Board of Pediatric Pulmonary
- Certificate in Pediatric Critical Care

Licenses

California, # A054196, 1995-present / Thailand, #16932, 1991-present

Work Experience

- Clinically based program covering all phases of pediatric pulmonology, including flexible fiberoptic laryngoscopy / bronchoscopy, interpretation of pulmonary function test and sleep study as well as consultation
- Pediatric Intensive Care Unit - supervising fellows and house-staff
- Preparing research protocols, proposals, and manuscript; conducting research; and supervising the pediatric pulmonary fellows
- Supervising and teaching fellows, house-staff and medical students in pediatric pulmonary & critical care

Areas of Research Interest

- Basic science and clinical trial related to viral respiratory tract infection, especially RSV and emerging respiratory virus
- pARDS / High frequency oscillator ventilation / ECMO
- Sepsis / septic shock / hemodynamic resuscitation & monitoring
- Therapeutic hypothermia
- Infection control in PICU/VAP
- Asthma treatment
- Pediatric CPR / Pediatric Critical Care Nutrition

Recent Research Grants

- pARDS - Ratchadapisek Sompotch Fund, Chulalongkorn University
- pSEPSIS and Protein C - Thailand Research Fund
- Epidemiology of pediatric sepsis in Thailand - National Research Council of Thailand
- Epidemiology of pediatric sepsis in three Asian countries - Royal College of Thai Pediatricians
- High-frequency Oscillatory Ventilation (HFOV) - Prospect trial site investigator - NIH

International Research Networks

- PACCMAN Research Group with Singapore Research Clinical Institute (2016)
- Epidemiology of pediatric sepsis in ASIA
- International multicenter research network - Prospect network HFOV and prone position in severe pediatric ARDS, NIH grant (2018)
- International multicenter research network - Pediatric CPR: Prospective-Observational study, NIH grant with Children Hospital of Philadelphia (2018)

Publications

1. Puvabuditsin S, Samransamruajkit R, Garow E, Lopez L. Postnatal intussusception in a premature infant, causing Jejunal Atresia. *J of Pediatr Surg*. 1996;31:711-712
2. Puvabuditsin S, Garrow E, Samransamruajkit R et al. Epidermolysis Bullosa associated with congenital localized absence of skin, fetal abdominal mass, and pyloric atresia. *Pediatr Derm*. 1997;14:359-362
3. Samransamruajkit R, Gollapudi S, Kim CH, Gupta S, Nussbaum E. Modulation of endothelin-1 expression on pulmonary epithelia cell line (A549) after exposure to RSV. *Int J Mol Med*. 2000 Jul;6(1):101-5
4. Samransamruajkit R, Moonviriyakit K, Vanapongtipagorn et al. Plasma endothelin-1 in infants and young children with acute bronchiolitis and viral pneumonia. *Asian Pac J Allergy Immunol*. 2002;20:229-34
5. Chongsrisawat V, Chatchatee P, Samransamruajkit R, et al. Plasma endothelin-1 levels in patients with biliary atresia: Possible role in development of portal hypertension. *Pediatr Surg*. 2003;19:478-81
6. Thanasugarn W, Samransamruajkit R, Vanapongtipagorn P, et al. Human metapneumovirus infection in Thai children. *Scand J Infect Dis*. 2003;35:754-6
7. Samransamruajkit R, Chin TW, Yuensrigul A, et al. Possible effect of chest physical therapy in hospitalized asthmatic children. *Pediatr Asthma, Allerg & Immunol*. 2003;16:295-303
8. Lekkanont P, Samransamruajkit R, Charearnrad P, Likitnukul S, Prapphal N. Epstein Barr virus infection with unusual pneumothorax: A case report. *Chula Med J*. 2004;48:249-252
9. Deerojanawong J, Manuyakorn W, Prapphal N, Harnruthakorn C, Sritippayawan S, Samransamruajkit R. Randomized controlled trial of salbutamol aerosol therapy via metered dose inhaler-spacer vs. jet nebulizer in young children with wheezing. *Pediatr Pulmonol*. 2005;39(5):466-72
10. Samransamruajkit R, Prapphal N, Deerojanawong, et al. Plasma soluble intercellular adhesion molecule-1(sICAM-1) in pediatric ARDS during high frequency oscillator ventilation: A predictor of mortality. *Asian Pac J Allergy Immunol*. 2005;23:181-8
11. Sritippayawan S, Jitchaiwat S, Chatchatee P, Prapphal N, Deerojanawong J, Samransamruajkit R. Disseminated cytomegalovirus infection associated with PCP in a previously normal infant. *Scand J Infect Dis*. 2006;38(4):312-4
12. Samransamruajkit R, Thanasugarn W, Prapphal N, et al. Human metapneumovirus in infants and young children in Thailand with lower respiratory tract infections: Molecular characteristics and clinical presentations. *J Infect*. 2006;52:254-63
13. Theamboonlers A, Samransamruajkit R, Thongme C, Amonsin A, Chongsrisawat V, Poovorawan Y. Human Coronavirus infection among children with acute lower respiratory tract infection in Thailand. *Intervirolgy*. 2006;50(2):71-77

14. Wachirapaes W, Samransamruajkit R, Deerojanawong, Sritippayawan S, Prapphal N. Validity of clinical diagnosis in isolated laryngomalacia in infants with congenital stridor. *Chula Med J* 2007;51:13-25
15. Samransamruajkit R, Hiranrat T, Prapphal N, Sritippayawan S, Deerojanawong J, Poovorawan Y. The levels of plasma protein C in early phase of pediatric septic shock and the risk of death. *Shock*. 2007;28:518-23
16. Samransamruajkit R, Jitchaiwat S, Deerojanawong J, Sritippayawan S, Prapphal N. Adrenal insufficiency in early phase of pediatric ALI/ARDS. *J Crit Care*. 2007;22:314-8
17. Chieocharnsin T, Chutinimitkul S, Payungporn S, Hiranras T, Samransamruajkit R, Theamboolers A, Poovorawan Y. Complete coding sequences and phylogenetic analysis of human Bocavirus (HBoV). *Virus Res*. 2007;129:54-7
18. Chutinimitkul S, Chieocharnsin T, Payungporn S, Samransamruajkit R, Hiranras T, Theamboolers A, Poovorawan Y. Molecular characterization and phylogenetic analysis of H1N1 and H3N2 human influenza A viruses among infants and children in Thailand. *Virus Res*. 2008;132:122-31
19. Chieocharnsin T, Samransamruajkit R, Chutinimitkul S, Payungporn S, Hiranras T, Poovorawan Y. Human bocavirus (HBoV) in Thailand: Clinical manifestations in a hospitalized pediatric patient and molecular virus characterization. *J Infect*. 2008;56:137-42
20. Samransamruajkit R, Jitchaiwat S, Wachirapaes W, Deerojanawong J, Sritippayawan S, Prapphal N. Prevalence of Mycoplasma and Chlamydia pneumonia in severe community acquired pneumonia among hospitalized children in Thailand. *Jpn J Infect Dis*. 2008;61:36-9
21. Payungporn S, Chieochansin T, Thongme C, Samransamruajkit R, et al. Prevalence and molecular characterization of WU/KI polyomaviruses isolated from pediatric patients with respiratory disease in Thailand. *Virus Res*. 2008; 135:230-6
22. Suwannakarn K, Payungporn S, Chieochansin T, Samransamruajkit R, et al. Typing (A/B) and subtyping (H1/H3/H5) of influenza A viruses by multiplex real-time RT-PCR assays. *J Virol Methods*. 2008;152:25-31
23. Payungporn S, Chieocharnsin T, Thongmee C, Panjaworayan N, Samransamruajkit R, et al. Detection and discrimination of WU/KI polyomaviruses by real time PCR with melting curve analysis. *J Virol Methods*. 2008;153:70-3
24. Boonsak P, Payungporn S, Chieocharnsin T, Samransamruajkit R, et al. Detection of influenza virus types A& B and type A subtypes (H1, H3 & H5) by multiplex PCR. *Tohoku J Exp Med*. 2008;215:247-55
25. Samransamruajkit R, Hiranrat T, et al. Prevalence, clinical presentations and complications among hospitalized children with influenza pneumonia. *Jpn J Infect Dis*. 2008;61: 446-9

26. Linsuwan P, Payungporn S, Samransamruajkit R, et al. Recurrent human rhinovirus infection in infants with refractory wheezing. *Emerg Infect Dis*. 2009;13:506-12
27. Linsuwan P, Payungporn S, Samransamruajkit R, et al. Recurrent human rhinovirus C infection in Thai children with acute lower respiratory tract disease. *J Infect*. 2009; 59:115-21
28. Samransamruajkit R, Jirapaiboonsuk S, et al. Effect of frequency ventilator circuit changes (3 VS 7 days) on the rate of VAP in PICU. *J Crit Care*. 2010;25:56-61
29. Ruangnapa K, Samransamruajkit R, Namchaisiri J, et al. The long duration of extracorporeal membrane oxygenation in a child with acute severe hypoxic respiratory failure treated in a resource-limited center. *Perfusion*. 2012;27:547-9
30. Samransamruajkit R, Jiratanawong K, Siritantiwat S, et al. Potent inflammatory cytokine response following lung volume recruitment maneuvers with HFOV in pediatric ARDS. *Asian Pac J Allergy Immunol*. 2012;30:197-203
31. Samransamruajkit R, Tongnuan C, Sosothikul D, et al. Pulmonary coagulopathy in pediatrics ALI/ARDS. *Crit Care & Shock*. 2013;16:68-73
32. Samransamruajkit R, Uppala R, Pongsanon K, et al. Clinical outcomes after utilizing surviving sepsis campaign in children with septic shock and prognostic value of initial plasma NT-proBNP. *Indian J Crit Care Med*. 2014;18:70-6
33. Samransamruajkit R, Nakornchai K, Pongsanon K, et al. Interleukin-10 polymorphisms and clinical risk factors in children with severe sepsis and septic shock. *Crit Care & Shock*. 2014;2:50-57
34. Samransamruajkit R, Uppala, R, Pongsanon K, et al. Clinical outcomes after utilizing surviving sepsis campaign in children with septic shock and prognostic value of initial plasma NT-proBNP. *Indian JCCM*. 2014 Feb;18(2):70-6
35. Samransamruajkit R, Rassameehirun C, et al. A comparison of clinical efficacy between high frequency oscillatory ventilation and conventional ventilation with lung volume recruitment in pediatric acute respiratory distress syndrome: A randomized controlled trial. *Indian J Crit Care Med*. 2016 Feb;20(2):72-7
36. Samransamruajkit R. It is too early to say no place for high-frequency oscillatory ventilation in children with respiratory failure. *Am J Respir Crit Care Med*. 2016 Aug 15;194(4):521-522
37. Samransamruajkit R, Saelim K, Hantragool S, et al. A comparison of NSS vs balanced salt solution as a fluid resuscitation and impact of fluid balance on clinical outcomes in pediatric septic shock. *Crit Care Shock*. 2017;20:68-75
38. Wong JJ1, Phan HP, Phumeetham S, Ong JSM, Chor YK, Qian S, Samransamruajkit R, et al. Pediatric Acute & Critical Care Medicine Asian Network (PACCMAN). Risk stratification in pediatric acute respiratory distress syndrome: A multicenter observational study. *Crit Care Med*. 2017 Nov;45(11): 1820-1828

39. Sitthikarnkha P, Samransamruajkit R, et al. High-flow nasal cannula versus conventional oxygen therapy in children with respiratory distress. *Indian J Crit Care Med*. 2018 May;22(5):321-325
40. Gan CS, Wong JJ, Samransamruajkit R, et al. Pediatric Acute and Critical Care Medicine Asian Network (PACCMAN). Differences between pulmonary and extrapulmonary pediatric acute respiratory distress syndrome: A multicenter analysis. *Pediatr Crit Care Med*. 2018 Oct;19(10):e504-e513
41. Prajongkit T, Veeravigrom M, Samransamruajkit R. Prognostic value of continuous electroencephalography in children undergoing therapeutic hypothermia after cardiac arrest: A pilot study. *Neurophysiol Clin*. 2019 Feb; 49(1):41-47
42. Samransamruajkit R, Limprayoon K, Lertbunrian R, Uppala R, Samathakanee C, Jetanachai P, Thamsiri N. The utilization of the surviving sepsis campaign care bundles in the treatment of pediatric patients with severe sepsis or septic shock in a resource-limited environment: A prospective multicenter. *Trial*. *Indian J Crit Care Med*. 2018 Dec;22(12):846-851
43. Saetae T, Pongpirul K, Samransamruajkit R. Assessment of early goal-directed therapy guideline adherence: Balancing clinical importance and feasibility. *PLoS One*. 2019 Mar 15;14(3):e0213802
44. Wong JJ, Liu S, Dang H, Anantasit N, Phan PH, Phumeetham S, Qian S, Ong JSM, Gan CS, Chor YK, Samransamruajkit R, Loh TF, Feng M, Lee JH. The impact of high frequency oscillatory ventilation on mortality in pediatric acute respiratory distress syndrome. *Pediatric Acute & Critical Care Medicine Asian Network (PACCMAN)*. *Crit Care*. 2020 Jan 31;24(1):31
45. Lee JH, Rogers E, Chor YK, Samransamruajkit R, Koh PL, Miqdady M, Al-Mehaidib AI, Pudjadi A, Singhi S, Mehta NM. Optimal nutrition therapy in pediatric critical care in the Asia-Pacific and Middle East: A consensus. *Asia Pac J Clin Nutr*. 2016 Dec;25(4):676-696
46. Zeng JS, Qian SY, Wong JJ, Ong JS, Gan CS, Anantasit N, Chor YK, Samransamruajkit R, Phuc PH, Phumeetham S, Feng X, Sultana R, Loh TF, Lee JH. Non-invasive ventilation in children with paediatric acute respiratory distress syndrome. *Ann Acad Med Singap*. 2019 Jul;48(7):224-232
47. Sirivongrangson P, Kulvichit W, Payungporn S, Pisitkun T, Chindamporn A, Peerapornratana S, Pisitkun P, Chitcharoen S, Sawaswong V, Worasilchai N, Kampunya S, Pucharoen O, Thawitsri T, Leelayuwatanakul N, Kongpolprom N, Phoophiboon V, Sriprasart T, Samransamruajkit R, Tungsanga S, Tiankanon K, Lumlertgul N, Leelahavanichkul A, Sriphojanart T, Tantawichien T, Thisyakorn U, Chirathaworn C, Praditpornsilpa K, Tungsanga K, Eiam-Ong S, Sitprija V, Kellum JA, Srisawat N. Endotoxemia and circulating bacteriome in severe COVID-19 patients. *Intensive Care Med Exp*. 2020 Dec 7;8(1):72

Abstracts & Presentations

1. Beharry K, Samransamruajkit R, Modanlou DH. Continuous infusion of therapeutic dosage of morphine sulfate causes up-regulation of Endothelin-1 mRNA expression in the brain stem of newborn piglets. Presented in part at the Society of Pediatric Research Meeting 1997 (Washington DC, USA)
2. Samransamruajkit R, Chin TW, Nussbaum E. The modulation of potent inflammatory cytokines, interleukin-6 and interleukin-8 by glucocorticoids and ribavirin after exposure to RSV. *AJRCCM* 1998;157:A287
3. Samransamruajkit R, Lekhanont P, Sritippayawan S, Prapphal N, Deelodejanawong J, Bhattarakosol P, Poovorawan Y. The occurrence and clinical presentations of RSV subtype in acute bronchiolitis and viral pneumonia among hospitalized infants and young children. The 11th Asian Congress of Pediatrics 2003; Abstract page 178-179
4. Jitchaiwat S, Samransamruajkit R, Trinavarat P, Deelodejanawong J, Sritippayawan S, Prapphal N. Ventilator associated pneumonia: Incidence, risk factors, microbiology and outcome experienced from tertiary PICU. The 11th Asian Congress of Pediatrics 2003; Abstract page 179
5. Lekhanont P, Samransamruajkit R, Trinavarat P, Sritippayawan S, Prapphal N, Deelodejanawong J, Poovorawan Y. The chest radiological findings of RSV infection among hospitalized infants and young children: Does subtype really matters? The 11th Asian Congress of Pediatrics 2003; Abstract page 184
6. Samransamruajkit R, Hiranrat T, Prapphal N, Sritippayawan S, Deerojanawong J, Poovorawan Y. The levels of plasma protein C in pediatric septic shock and the risk of death. *Am J Respir Crit Care*. 2005;a157
7. Samransamruajkit R, Jitchaiwat S, Panruethai Trinavarat, Prapphal N, Sritippayawan S, Deerojanawong J. Ventilator Associated Pneumonia (VAP) care map impact on outcome experienced from tertiary care PICU. *Am J Respir Crit Care*. 2005;a425
8. Sritippayawan S, Wong P, Tosukhowong P, Prapphal N, Samransamruajkit R, Deerojanawong J. Environmental tobacco smoke exposure and RSV infection in young children. *Am J Respir Crit Care*. 2005;a598
9. Samransamruajkit R, Jitchaiwat S, Sritippayawan S, Deerojanawong J, Prapphal N. Adrenal insufficiency in critically ill children with ALI/ARDS. *Amer J Respir Crit Care*. 2006;202a
10. Samransamruajkit R, Jitchaiwat S, Sritippayawan S, Deerojanawong J, Prapphal N. Plasma nitrate (NOx) levels and its clinical significance in septic shock. *Amer J Respir Crit Care*. 2006;499a
11. Samransamruajkit R, Jitchaiwat S, Deerojanawong J, Sritippayawan S, Prapphal N. Initial plasma interleukin-10 and nitrate levels among children with septic shock as poor prognostic parameters. *Pediatr Crit Care Med*. 2007;8(3):a15
12. Deerojanawong J, Samransamruajkit R, Suphapeetiporn K, Wangsaturaka D, Prapphal N. The new assessment system of the year 4th pediatrics rotation at

Chulalongkorn Medical School: The correlations of the seven instruments. AMEA 2007

13. Samransamruajkit R, Heiranrat T, Chieocharnsin S, Sritippayawan S, Deerojanawong J, Prapphal N, Poovorawan Y. The prevalence and clinical presentations of newly human bocavirus (HBoV) among children hospitalized with community acquired pneumonia. The 5th WSPID 2007
14. Trisorus T, Samransamruajkit R, Sritippayawan S, Deerojanawong J, Prapphal N. Treatment of PDR-VAP with high dose carbapenem and ampicillin-sulbactam. The 5th WSPID 2007
15. Samransamruajkit R, Heiranrat T, Chieocharnsin S, Sritippayawan S, Deerojanawong J, Prapphal N, Poovorawan Y. The clinical impact of influenza among children admitted with community acquired pneumonia. The 5th WSPID 2007
16. Samransamruajkit R, Heiranrat T, Chieocharnsin S, Sritippayawan S, Deerojanawong J, Prapphal N, Poovorawan Y. The prevalence, complications and cost of hospitalization among children admitted with influenza pneumonia in Thailand. The 8th International Congress on Pediatric Pulmonology - CIPP VIII (Nice, France)
17. Jirapaiboonsuk S, Samransamruajkit R, Tantivivat S, Deerojanawong J, Sritippayawan S, Prapphal N. Effect of frequency of ventilator circuit change (3 days vs 7 days) on the rate of VAP in PICU. Abstract - Amer J Respir Crit Care. 2008 (Toronto, Canada)
18. Samransamruajkit R, Jiraratavong K, et al. The use of high frequency oscillator ventilation (HFOV) in pediatric ARDS with open lung technique. Abstract - Amer J Respir Crit Care. 2009 (San Diego, CA, USA)
19. Samransamruajkit R, Tongnuan C, et al. Pulmonary coagulopathy in pediatric ALI/ARDS. ESICM 2009 (Vienna, Austria)
20. Samransamruajkit R, et al. Microbiology, antibiotics utilization and clinical outcomes of VAP in tertiary care PICU. ESICM 2009 (Vienna, Austria)
21. Samransamruajkit R, et al. Clinical, functional outcome and quality of life in children surviving from ARDS. CHEST 2010 (Vancouver, Canada)
22. Samransamruajkit R, et al. Fluids and medications usage in children admitted with severe sepsis/septic shock. CHEST 2010 (Vancouver, Canada)
23. Samransamruajkit R, Jiraratavong K, et al. Potent inflammatory cytokines response following lung volume recruitment maneuvers with HFOV in pediatric ARDS. PCCM 2011 (Sydney, Australia)
24. Samransamruajkit R, Uppala R, Pongsanon K, et al. Clinical outcomes after utilizing SSC guideline in children with septic shock. 2012 ATS Conference (San Francisco, CA, USA)
25. Samransamruajkit R, Nakornchai K, Pongsanon K, et al. Interleukin-10 polymorphisms and clinical risk factors in children with severe sepsis & septic shock. Annual Critical Care Conference 2013 (Manchester, UK)

26. Thongnual C, Hantragool S, Samransamriatkit R. Efficacy of non-invasive cardiac monitoring (Ultrasonic Cardiac Output Monitor) guide in management of fluid refractory pediatric septic shock. Pediatric Respiratory and Critical Care Medicine Association, Annual Scientific Meeting 2016; proceedings
27. Samransamruajkit R, Limprayoon K, Lertbunriam R, Uppala R, Samathakanee C, Jetanachai P, Thamsiri N. Clinical effectiveness of the utilization of bundled care for severe sepsis and septic shock in Thai children: A multicenter trial. WSPCCM 2016 (Toronto, Canada)
28. Samransamruajkit R, et al. Clinical risk factors and outcomes after a modified EGDT in pediatric septic shock. ATS Annual Meeting 2016 (San Francisco, CA, USA)
29. Samransamruajkit R. The epidemiology of pediatric sepsis in three Asian countries, oral presentation at ESPNIC 2019 (Salzburg, Austria)