

## CURRICULUM VITAE

### Binod Balakrishnan MBBS

Associate Professor  
Department of Pediatrics  
Division of Critical Care

#### OFFICE ADDRESS:

Children's Wisconsin - Milwaukee Hospital  
8915 W Connell Court  
Milwaukee, WI 53226  
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#### EDUCATION:

08/1992 - 01/1998 MBBS, All India Institute of Medical Sciences, New Delhi, India

#### POSTGRADUATE TRAINING AND FELLOWSHIP APPOINTMENTS:

06/1998 - 06/2001 Pediatric Resident, Department of Pediatrics, All India Institute of Medical Sciences, New Delhi, India  
11/2002 - 11/2005 Pediatric Resident, Department of Pediatrics, Women and Children's Hospital of Buffalo, Buffalo, NY  
07/2012 - 06/2015 Fellow, Department of Pediatrics, Pediatric Critical Care Medicine, Medical College of Wisconsin, Milwaukee, WI 53226

#### FACULTY APPOINTMENTS:

07/2012 - 06/2015 Clinical Instructor of Pediatrics, Department of Pediatrics, Division of Pediatric Critical Care Medicine, Medical College of Wisconsin, Milwaukee, WI 53226  
07/2015 - Present Assistant Professor, Department of Pediatrics, Pediatric Critical Care Medicine, Medical College of Wisconsin, Milwaukee, WI 53226

#### EDUCATIONAL ADMINISTRATIVE APPOINTMENTS:

07/2015 - Present Member, Fellowship Program Evaluation Committee, Pediatrics, Division of Critical Care, Medical College of Wisconsin  
2017 - Present Co-Director for the monthly Pediatric Multidisciplinary Neurocritical Care Conference., Pediatrics, Pediatric Critical Care Medicine, Children's Hospital of Wisconsin

#### RESEARCH ADMINISTRATIVE APPOINTMENTS:

2019 - Present Member - Critical Care Research Operations Committee, Pediatrics, Critical Care Medicine, Children's Wisconsin  
2020 - Present Member - Scholarship Oversight Committee Dr.Fatima Ajmal MD (Critical Care), Pediatrics, Pediatric Critical Care Medicine, Medical College of Wisconsin

#### SPECIALTY BOARDS AND CERTIFICATION:

<u>Board Certified</u>	<u>Issue Date</u>	<u>Expiration</u>
General Pediatrics	10/2006	12/2026
Critical Care Medicine	11/2016	12/2026

<u>Certificates</u>	<u>Issued By</u>	<u>Issue Date</u>	<u>Expiration</u>
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Patient Safety and Quality Improvement, Certified Professionals in Health Care	Quality Institute for Health Care Improvement (IHI)	2012	None
ACLS	American Heart Association		None
Pediatric Advanced Life Support	American Heart Association		None
Basic Life	American Heart Association		None
Advanced Trauma Life Support	Provider		None

#### **AWARDS AND HONORS:**

Summit Award for Excellence in Care – one of only 3 recipients in Indiana, Managed Health Services

#### **MEMBERSHIPS IN HONORARY AND PROFESSIONAL SOCIETIES:**

11/2002 - Present American Academy of Pediatrics (Member)  
07/2011 - Present Society of Critical Care Medicine (Member)  
10/2015 - Present Pediatric Neurocritical Care Research Group (Member)

#### **EDITORSHIPS/EDITORIAL BOARDS/JOURNAL REVIEWS:**

Journal Review

2019 - Present Neurocritical Care journal Review submitted manuscripts for suitability for publication - average 5-6 manuscripts per year

#### **LOCAL/REGIONAL APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:**

07/2019 - Present Member, Critical Care Research Operations Committee, Children's Wisconsin  
09/2020 - Present Member, Faculty Selection Committee - Division of Critical Care, Children's Wisconsin  
03/2021 - Present Member, Liver transplant resource team - Division of Critical Care, Children's Wisconsin

#### **NATIONAL ELECTED/APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:**

2019 - Present Member, PICU Advisory Committee, Virtual PICU Systems LLC

#### **RESEARCH GRANTS/AWARDS/CONTRACTS/PROJECTS:**

##### **Active**

##### **Peer Review**

Title: Evaluation of pupillometric changes in children with severe diabetic ketoacidosis  
Source: Internal funding  
Role: PI  
Dates: 07/2017 - Present  
Direct Funds: \$15,450

Title: Personalizing Outcomes after Child Cardiac Arrest  
Source: NIH  
Role: Site PI  
PI: Ericka Fink - Children's Hospital of Pittsburgh  
Dates: 08/2018 - Present

Title: Pediatric Influence of Cooling duration

on Efficacy in Cardiac Arrest Patients (P-ICECAP)  
 Source: NIH (Grant number UG3HL159134)  
 Role: Site PI (Subaward# SUBK00016611)  
 PI: Frank Moler MD (University of Michigan)  
 Dates: 09/15/2021 - 08/31/2028

Title: Percutaneous auricular neurostimulation for treatment of Paroxysmal sympathetic hyperactivity in children with acute severe brain injury  
 Source: Advancing Healthier Wisconsin Endowment  
 Role: PI  
 PI: Binod Balakrishnan  
 Dates: 05/01/2022 - 10/31/2023  
 Direct Funds: \$12,400

**Non-Peer Review**

Title: VPICU Performance System Clinical Team  
 Source: VPS, LLC  
 Role: Clinical Consultant  
 Dates: 07/01/2016 - Present  
 Direct Funds: \$2,500 (Annual support to MCW with no salary support)

**Prior  
Peer Review**

Title: Safety and Efficacy of Propofol in the treatment of refractory status epilepticus in children  
 Source: Internal funding  
 Role: PI  
 Dates: 07/2016 - 07/2017  
 Direct Funds: \$5,852

Title: A randomized double-blind placebo-controlled study to evaluate the efficacy and safety of SAGE-547 injection in the treatment of subjects with super-refractory status epilepticus  
 Source: SAGE  
 Role: Site co-investigator  
 Dates: 08/2016 - 09/2017

**INVITED LECTURES/WORKSHOPS/PRESENTATIONS:**

**Local**

Binod Balakrishnan, Brain Death evaluation in the PICU, Operating Room staff lecture series, Children's Wisconsin, 03/07/2022

**PEER REVIEWED WORKSHOPS/PRESENTATIONS:**

**National**

Ashby D, Gourlay D, BALAKRISHNAN B, Meyer MT, Nimmer M, Radowicz A, Yan K, Drendel AL, Investigating Skin Tone's Effect on Pediatric Near-Infrared Spectroscopy (NIRS) Values. (E-poster), Pediatric Academic Societies Annual Meeting, 04/2021 - 2021  
Personalizing Outcomes after Child Cardiac Arrest: A preliminary biomarker report., AHA meeting 2021 - Scientific Sessions, Boston MA, 11/13/2021 - 11/15/2021  
Snooks KC, McDermott KL, BALAKRISHNAN B, Hanson SJ, But What if there is no cough?, Society of Critical Care Medicine Congress, Virtual, 04/18/2022 - 04/21/2022  
Balakrishnan B, Zhang L, Simpson P, Hanson SJ, Digital pupillometry for noninvasive neurologic monitoring in pediatric severe diabetic ketoacidosis, Society of Critical Care Medicine Congress 2022, Virtual, 04/18/2022 - 04/21/2022

#### **COMMITTEE SERVICE:**

##### **Medical College of Wisconsin**

2020 - Present Faculty Interviewer, Child Neurology Resident Selection Committee, Child Neurology, Pediatrics, Medical College of Wisconsin  
01/2022 - Present Member, Chair of Neurology search committee, Neurology, Medical College of Wisconsin

##### **Hospital**

06/01/2022 - Present Leader - Neurocritical Care sub group, Committee to develop guidelines for PICU admission, Critical Care, Pediatrics, Children's Wisconsin

#### **MEDICAL COLLEGE TEACHING ACTIVITIES:**

##### **Medical Student Education**

07/2020 - Present Evaluator of History and Physical Exam write-ups for M3 students.

#### **EXTRAMURAL TEACHING:**

##### **Continuing Medical Education**

2015 - Present Children's Wisconsin, Lecture on Management of Severe Pediatric Traumatic Brain Injury - multiple times over the years

#### **MCW STUDENTS, FACULTY, RESIDENTS AND CLINICAL/RESEARCH FELLOWS MENTORED:**

##### **Medical Students**

Jarrett Judkins (M1), Medical College of Wisconsin, 06/01/2022 - 08/12/2022 Medical Student Summer Research Program, Ongoing

#### **PROGRAMMATIC DEVELOPMENTS:**

##### **Educational Programs**

###### **Faculty**

07/2020 - Present Director - monthly Advanced Practice Provider Physiology lecture series in the PICU. Design, Conceptualize and Coordinate the lectures.

#### **GUIDELINE DEVELOPMENT:**

10/2020 - Present Lead - Management of Paroxysmal Sympathetic Hyperactivity in pediatric patients with acute brain injury.

#### **BIBLIOGRAPHY**

### **Refereed Journal Publications/Original Papers**

1. Balakrishnan B, Hanson S Critical appraisal of “The Use of Near-Infrared Spectroscopy During an Extubation Readiness Trial as a Predictor of Extubation Outcome Foster CB, Spaeder MC, McCarter RJ et al *Pediatr Crit Care Med* 2013;14:587-92 for the PedsCCM Evidence-Based Journal Club. Published 11/2013.
2. Balakrishnan B, Dasgupta M, Gajewski K, Hoffmann RG, Simpson PM, Havens PL, Hanson SJ. Low near infrared spectroscopic somatic oxygen saturation at admission is associated with need for lifesaving interventions among unplanned admissions to the pediatric intensive care unit. *J Clin Monit Comput*. 2018 Feb;32(1):89-96.
3. Balakrishnan B, Flynn-O'Brien KT, Simpson PM, Dasgupta M, Hanson SJ. Enteral Nutrition Initiation in Children Admitted to Pediatric Intensive Care Units After Traumatic Brain Injury. *Neurocrit Care*. 2019 Feb;30(1):193-200.
4. Balakrishnan B, Zhang L, Simpson PM, Hanson SJ. Impact of the Timing of Placement of an Intracranial Pressure Monitor on Outcomes in Children with Severe Traumatic Brain Injury. *Pediatr Neurosurg*. 2018;53(6):379-386.
5. Petersen PC, Balakrishnan B (Corresponding author), Vitola B, Hong JC. Case report series of a novel application of neostigmine to successfully relieve refractory ileus status post-pediatric orthotopic liver transplantation *Pediatric Transplantation*. 2019.
6. VanDongen-Trimmer H, Sannagowdara K, Balakrishnan B, Farias-Moeller R. A Case of HIV Seroconversion Presenting Similarly to Anti-N-methyl-D-aspartate Receptor Encephalitis. *Neurocrit Care*. 2019 Oct;31(2):423-427.
7. Fink EL, Clark RSB, Panigrahy A, et al. Personalising Outcomes after Child Cardiac Arrest (POCCA): design and recruitment challenges of a multicentre, observational study. *BMJ Open* 2020;10:e039323. doi:10.1136/bmjopen-2020-039323 - Contributor
8. Balakrishnan B, VanDongen-Trimmer H, Kim I, Hanson SJ, Zhang L, Simpson PM, Farias-Moeller R. GCS-Pupil Score Has a Stronger Association with Mortality and Poor Functional Outcome than GCS Alone in Pediatric Severe Traumatic Brain Injury. *Pediatr Neurosurg*. 2021;56(5):432-439.
9. Kirschen MP, LaRovere K, Balakrishnan B, Erklauer J, Francoeur C, Ganesan SL, Jayakar A, Lovett M, Luchette M, Press CA, Wolf M, Ferrazzano P, Wainwright MS, Appavu B. A Survey of Neuromonitoring Practices in North American Pediatric Intensive Care Units *Pediatric Neurology*. January 2022;126:125-130.
10. Ashby DW, Gourlay DM, Balakrishnan B, Meyer MT, Drendel AL. Utilizing Near-Infrared Spectroscopy (NIRS) to Identify Pediatric Trauma Patients Needing Lifesaving Interventions (LSIs): A Retrospective Study. *Pediatr Emerg Care*. 2022 Jan 01;38(1):e193-e199.
11. Piantino JA, Ruzas CM, Press CA, Subramanian S, Balakrishnan B, Panigrahy A, Pettersson D, Maloney JA, Vossough A, Topjian A, Kirschen MP, Doughty L, Chung MG, Maloney D, Haller T, Fabio A, Fink EL, POCCA Investigators. Use of Magnetic Resonance Imaging in Neuroprognostication After Pediatric Cardiac Arrest: Survey of Current Practices. *Pediatr Neurol*. 2022 Sep;134:45-51. PMCID: PMC9883065
12. Fink EL, Kochanek PM, Panigrahy A, Beers SR, Berger RP, Bayir H, Pineda J, Newth C, Topjian AA, Press CA, Maddux AB, Willyerd F, Hunt EA, Siems A, Chung MG, Smith L, Wenger J, Doughty L, Diddle JW, Patregnani J, Piantino J, Walson KH, Balakrishnan B, Meyer MT, Friess S, Maloney D, Rubin P, Haller TL, Treble-Barna A, Wang C, Clark RRSB, Fabio A, Personalizing Outcomes After Child Cardiac Arrest (POCCA) Investigators. Association of Blood-Based Brain Injury Biomarker Concentrations With Outcomes After Pediatric Cardiac Arrest. *JAMA Netw Open*. 2022 Sep 01;5(9):e2230518. PMCID: PMC9459665
13. DeSanti RL, Balakrishnan B, Rice TB, Pineda JA, Ferrazzano PA. The Utilization of Critical Care Resources in Pediatric Neurocritical Care Patients. *Pediatr Crit Care Med*. 2022 Sep 01;23(9):676-686.
14. Ashby DW, Balakrishnan B, Gourlay DM, Meyer MT, Nimmer M, Drendel AL. Utilizing Near-Infrared Spectroscopy to Identify Pediatric Trauma Patients Needing Lifesaving Interventions: A Prospective Study. *Pediatr Emerg Care*. 2023 Jan 01;39(1):13-19.
15. Fink EL, Kochanek PM, Beers SR, Clark RRSB, Berger RP, Bayir H, Topjian AA, Newth C, Press C, Maddux AB, Willyerd F, Hunt EA, Siems A, Chung MG, Smith L, Doughty L, Diddle JW, Patregnani J, Piantino J, Walson KH, Balakrishnan B, Meyer MT, Friess S, Pineda J, Maloney D, Rubin P, Haller TL, Treble-Barna A, Wang C, Lee V, Wisnowski JL, Subramanian S, Narayanan S, Blüml S, Fabio A, Panigrahy A, POCCA Investigators . Assessment of Brain Magnetic Resonance and Spectroscopy Imaging Findings and Outcomes After Pediatric Cardiac Arrest. *JAMA Netw Open*. 2023 Jun

**Books, Chapters, and Reviews**

1. K. Jane Lee, **Binod Balakrishnan** “Brain death” – Nelson Textbook of Pediatrics, 21st edition