

CURRICULUM VITAE

Monica S. Vavilala, M.D.

Education:

1984-1987 University of Houston, Houston, TX B.S.
1987-1991 University of Texas Medical School, Houston, TX M.D.

Postgraduate Training:

1991-1994 University of Texas, Houston, TX Residency Pediatrics
1994-1997 University of Washington, Seattle, WA Residency Anesthesiology

Faculty Positions Held:

1997-2000 Acting Assistant Professor, Departments of Anesthesiology and Pediatrics,
University of Washington School of Medicine, Seattle, WA
2000- Assistant Professor, Departments of Anesthesiology and Pediatrics, University of
Washington School of Medicine, Seattle, WA
2003- Core Faculty. Harborview Injury Prevention and Research Center, Seattle, WA
2004- Associate Professor. Departments of Anesthesiology and Pediatrics. University of
Washington School of Medicine, Seattle, WA
2004- Adjunct Associate Professor. Department of Neurological Surgery. University of
Washington. Seattle, WA.
2008- Associate Director, Harborview Injury Prevention and Research Center. Seattle, WA.

Hospital Positions Held:

1992-1994 Attending Pediatrician, Mac Gregor Medical Association. Houston, TX
1992-1994 Flight Physician, Life Flight, Houston, TX
1994- Attending Pediatrician, Emergency Department, Children's Hospital and Regional
Medical Center, Seattle, WA
1997- Attending Anesthesiologist, Harborview Medical Center, Seattle, WA

Honors:

1983 Dr. Michael E. De Bakey Summer Research Fellowship
1984 Dr. Michael E. De Bakey Summer Research Fellowship
1986 Southwestern Sociological Association Writing Award
1990 American Cancer Society Fellowship
1992 Outstanding Medical Student Educator
1992 Pediatrics Resident of the Year
2005 EuroNeuro2005 Anesthesiology Poster Presentation Prize

2005 University of Washington Department of Anesthesiology B. Raymond Fink Award for Research

Board Certification:

1994 Pediatrics
1997 Anesthesiology
2000 Recertification in Pediatrics

Certifications:

1997- ATLS, ACLS, BLS, PALS

License to Practice:

1992 Texas
1994 Washington

Professional Organizations:

1987-1994 Harris County Medical Society
1991-2002 American Medical Association
1991-2002 American Academy of Pediatrics
1994- Washington State Society of Anesthesia
1995- American Society of Anesthesiologists
1999- Society for Pediatric Anesthesia
1999 International Anesthesia Research Society
1999- Society for Neuroanesthesia and Critical Care
2003- Society for Pediatric Research
2005 Association of University Anesthesiologists

Teaching Responsibilities:

1997-1999 University of Washington, Department of Anesthesiology, R2 Lectures, Inhalational Anesthetics, Seattle, WA
1997-1999 University of Washington, Department of Pediatrics, PICU Fellow Lectures, Pediatric Trauma, Seattle, WA
1997-2002 Harborview Medical Center, Department of Anesthesiology, Resident Weekly Case Conference Coordinator, Seattle, WA
1997- University of Washington, Department of Pediatrics, R2, R3 Lectures, Trauma Resuscitation, Seattle,
1998 University of Washington, Department of Anesthesiology, R4 Lectures, Oral Board Review, Seattle, WA

- 1999- Harborview Medical Center, Departments of Nursing and Respiratory Therapy, Newborn and Pediatric Resuscitation, Seattle, WA
- 1999- Harborview Medical Center, Departments of Anesthesiology, Anesthesia Technician Lecture, Newborn and Pediatric Resuscitation, Seattle, WA
- 2000-2004 American Society of Anesthesiologists Annual Meeting Problem Based Learning Discussion Sessions
- 2002- University of Washington, Department of Anesthesiology, Annual R4 Seminar, Newborn Resuscitation, Seattle, WA
- 2006- University of Washington, Department of Pediatrics, Quarterly Pain Conference, Seattle, WA

Mentorship: * denotes publications

2001	Jake Kleven, M.D. Use of Epidural Anesthesia During Pediatric Latissimus Dorsi Free Flap Procedure, Western Anesthesia Resident Conference Poster Presentation
2002	*Joshua C. Uffman, M.D. Blood Pressure and Outcome Following Severe Pediatric Traumatic Brain Injury.
2003	*Sean Kincaid, M.D. Feeding Intolerance Due to Jejuno-jejunal Intussusception in a Child with Severe Burns. Western Anesthesia Resident Conference Poster Presentation.
2003	Cecelia Roscigno, R.N.,M.N. PhD Dissertation Committee. Child Experiences after Pediatric Traumatic Brain Injury.
2003-2005	*Pilar Suz, M.D. Fever Following Severe Pediatric Traumatic Brain Injury. Published J Neurosurg Anesthesiol. 2004.
2003-2005	*Bria Coates, M.S. III. Pre-Hospital Hypotension and Outcome Following Pediatric Traumatic Brain Injury. Published Crit Care Med. 2005.
2003-2005	Nathalia Jimenez, M.D. Pediatric Anesthesiology Fellow. Cerebral Blood Flow and Autoregulation in Pediatric Craniosynostosis.
2003-2005	*Sean Kincaid, M.D. Cerebral Autoregulation Testing in Healthy Children Using Tilt Test Methodology.
2003-2005	*Saipin Muangman, M.D. Anesthesiologist. Research Fellow from Thailand. Cerebral Autoregulation in Traumatic Brain Injury.
2005	*Joshua Uffman, MD. Pediatric Anesthesiology Faculty. Pediatric Trauma.
2005	*Uma Samant, MD. Medical Student. FAER Award Winner. Hypotension Timing and Outcome Following Severe Pediatric Traumatic Brain Injury.
2005	Alan Kirsch. Student. Hypotension Burden and Outcome in Adult Traumatic Brain Injury.
2005	*Nuj Tontisirin, MD. Anesthesiologist. Research Fellow from Thailand. Gender Differences in Cerebral Blood Flow and Autoregulation in Healthy Children.
2006	*Yuthana Udomphorn, MD. Harborview Anesthesia Research Fellow. Cerebral Autoregulation and Pediatric Quality of Life.
2007	*Onuma Chaiwat. Harborview Anesthesia Research Fellow. Cerebral Autoregulation in Pediatric Traumatic Brain Injury.
2008	*Deepak Sharma, MD. Neuroanesthesia Fellow. Perioperative Hyperglycemia in Pediatric Traumatic Brain Injury.
2008	*Lin DiGenarro, MD. Pediatric Critical Care Fellow. Vasopressor Efficacy in Pediatric Traumatic Brain Injury
2008	*Amin Malakouti, MD. Harborview Anesthesiology Research Fellow. Nutrition in Pediatric Traumatic Brain Injury.
2008	Kris Deeter, MD. PICU Fellow. Hypertension in Pediatric Diabetic Ketoacidosis.
2008	Shaji Philip, MD. Harborview Anesthesia Research Fellow. Variation in Cerebral Blood Flow Velocity with Normal Cerebral Perfusion Pressure.

Editorial Responsibilities:**Ad Hoc Reviewer:**

1999 Stroke
 2000- Journal of Neurosurgical Anesthesiology
 2001 Archives of Pediatrics and Adolescent Medicine
 2002 Anesthesiology
 2003 Anesthesia & Analgesia
 2003 Pediatric Research
 2003- Critical Care Medicine
 2003- Pediatric Critical Care Medicine
 2004 Pediatric Rehabilitation
 2004- Canadian Medical Association Journal
 2007 Neuroscience Letters

Editorial Board:

2006 Journal of Neurosurgical Anesthesiology

Special National Responsibilities:

2001 Instructor, Transcranial Doppler Ultrasonography Workshop, Society of
 Neurosurgical
 Anesthesiology and Critical Care Breakfast Panel at the American Society of
 Anesthesiologists
 Meeting, Orlando, FL
 2002 Moderator, Society of Neurosurgical Anesthesiology and Critical Care Breakfast
 Panel at the
 American Society of Anesthesiologists Meeting, New Orleans, LA
 2002 Member, Society for Pediatric Anesthesia Research Committee
 2003 Member, Pediatrics Committee of the American Society of Anesthesiologists
 2005 Moderator, American Society of Anesthesiologists Neurotrack Workshop, Atlanta,
 GA
 2006- Vice President. Society of Neurosurgical Anesthesiology and Critical Care.
 2005-2006 Ad hoc Member Study Section, Pediatrics Subcommittee, NICHD, NIH October
 2005, March 2006
 2006-2010 Permanent Member Study Section, Pediatrics Subcommittee, NICHD, NIH
 2008- Pediatric Neurocritical Care Working Group Member.

Special Local Responsibilities:

1997-2000 Instructor, Yearly Seattle Paramedic Education Program
 1997 Pediatric Quality Assurance, Emergency Department, Harborview Medical Center,
 Seattle, WA

- 1997- Member, Academic Affairs Committee, Department of Anesthesiology. University of Washington, Seattle, WA
- 1997- Residency Interviews, Department of Anesthesiology, University of Washington, Seattle, WA
- 1999- Member, Subcommittee Pre-hospital Pediatric Trauma Task Force, Department of Health, WA
- 1999- Member, Hospital Pediatric Critical Care Committee, Harborview Medical Center, Seattle, WA
- 1999 Member, Sabbatical Committee, Department of Anesthesiology, University of Washington, Seattle, WA
- 1999 Member, Retreat Committee, Department of Anesthesiology, University of Washington, Seattle, WA
- 1999- Planning Committee. Harborview WWAMI Adult and Pediatric Trauma Conference, Seattle, WA
- 2000 Member Clinical Competence Committee, University of Washington, Seattle, WA
- 2001 WA State Governor's Pediatric Trauma Task Force
- 2004 Member, Recruitment Committee, Harborview Medical Center. Department of Anesthesiology, University of Washington, Seattle, WA
- 2004 Member, Harborview Medical Center Chief of Anesthesiology Search Committee
- 2005 Member, VA Chief of Anesthesiology Search Committee
- 2004 - Coordinator, Department of Anesthesiology Grand Rounds.
- 2005 - Core Faculty, Harborview Anesthesia Clinical Research Center
- 2005- Recruitment Committee, Harborview Department of Anesthesiology
- 2005- Pediatrics Committee, Harborview Medical Center
- 2008- Chair, Pediatric Traumatic Brain Injury Work Group, Harborview Medical Center

Research Funding:

PAST

HIPRC (Vavilala, M.S.) 1998-2001

Harborview Injury Prevention & Research Center – \$ 20,000

Thromboelastography Predicts Coagulation Status in Children with Head Injury.

RRF (Vavilala, M.S.) 03/01/02-8/31/03

Royalty Research Fund – \$30,056

“Cerebral Autoregulation Following Pediatric Traumatic Brain Injury”

The specific aims of this proposal are to determine: 1) the effects of age on cerebral autoregulation in unanesthetized children without neurological injury, 2) whether Traumatic Brain Injury (TBI) induced impairment of cerebral autoregulation is age dependent, and 3) if impaired cerebral autoregulation is associated with poor outcome. The results of our study can help form practice guidelines for the hemodynamic management of children with TBI.

AHA NW Affiliate (Vavilala, M.S.) 07/01/02-06/30/04

AHA Beginning Grant In Aid – \$80,000

“Cerebral Autoregulation During Sevoflurane Anesthesia in Children with Traumatic Brain Injury”

The specific aims of this proposal are to determine the effects of age on cerebral autoregulation in healthy anesthetized children, whether Traumatic Brain Injury (TBI) impairs cerebral autoregulation in children during general anesthesia, if the incidence of TBI induced impairment of cerebral autoregulation is age dependent and if impaired cerebral autoregulation during general anesthesia is associated with poor outcome.

WSSA (Vavilala, M.S.) 01/01/03-12/31/03

Washington State Society of Anesthesiologists – \$9,600

“Cerebral Perfusion Pressure and Outcome Following Severe Pediatric Traumatic Brain Injury”

The goal of the proposed pilot study is to prospectively characterize cerebral hemodynamics following severe TBI and to determine the relationship between cerebral hemodynamics and outcome following severe pediatric TBI. Results from this study will provide important pilot data for a larger prospective study to determine the relationship between cerebral hemodynamics and outcome in children with severe TBI.

Department Start up Fund (Vavilala, M.S.) 01/01/02-12/31/03

Anesthesia Research & Training – \$8,640

“Cerebral Autoregulation and Cerebral Oxygenation in Cerebral Edema due to Pediatric Diabetic Ketoacidosis” The specific aims of this proposal are: 1) to examine the relationship between impaired cerebral autoregulation and cerebral edema associated with diabetic ketoacidosis (DKA), 2) to examine the relationship between middle cerebral artery flow velocity (Vmca) and cerebral edema in children with DKA, and 3) to examine the association between cerebral edema secondary to DKA and cerebral oxygen desaturation.

HIPRC (Vavilala, M.S.) 08/01/2003 - 07/31/2004

Harborview Injury Prevention & Research Center – \$2,000

“Pre-hospital Hypotension and Outcome in Children with Traumatic Brain Injury”

The overall goals of the proposed study are to: 1) characterize the incidence of pre-hospital hypotension following pediatric TBI and 2) determine the relationship between pre-hospital blood pressure and outcome following TBI in children. Results from this study will provide important pilot data for a larger prospective study to determine the relationship between pre-hospital blood pressure and outcome in children with TBI. The specific aim of this study is to investigate the relationship between pre-hospital hypotension and outcome following pediatric TBI.

Departmental RFA (Vavilala, M.S.) 02/13/2004

Anesthesia Research & Training – \$34,972

Departmental RFA for shared equipment: Purchase of Research Equipment (Transcranial Doppler Ultrasonography) for Collaborative Departmental Use.

NINR/NIH/R01 (Vavilala, M.S. Co-Investigator) 04/01/2004 – 03/31/2008

National Institute of Nursing Research – \$1,295, 635

The purpose of this study is to evaluate the effect of CPP monitoring on Nursing Practice.

NICHHD/NIH/ K23 (Vavilala, M.S) 09/01/2003- 08/31/2008

National Institute of Child Health and Human Development – \$638,000

The purpose of the study is to examine the: 1) relationship between cerebral perfusion pressure and outcome, 2) relationship between persistent impairment of cerebral autoregulation and outcome, and 3) the age-related incidence of hyperemia. We will also examine the relationship between hyperemia and impaired cerebral autoregulation and the relationship between persistent hyperemia and outcome following severe pediatric TBI.

ACTIVE**CDC/R49 CE0010210-02 (PI Rivara, F.P.)**

09/01/2006 – 08/30/2011

Center for Disease Control

\$ 3,200,000

"Disability from Pediatric Trauma Brain Injury

The purpose is to examine disability after pediatric traumatic brain injury. Role: Co-investigator

CDC/R49 CE000197-05 (PI Ebel, Beth)

08/01/2004 – 07/31/2009

Center for Disease Control

\$ 4,500,000

"Harborview Injury Prevention & Research Center"

The purpose is to examine trauma care delivery and outcome. Role: Co-investigator

NICHD/NIH/R21 (Vavilala, M.S.)

04/01/2005 – 03/31/2009

National Institute of Child Health and Human Development \$275,000 (no-cost extension)

The purpose of the study is to examine the relationship between cerebral blood flow velocity, cerebral autoregulation and cerebral oxygenation and the development of cerebral edema in children with diabetic ketoacidosis.

BIBLIOGRAPHY

Manuscripts in Refereed Journals:

1. Sherman, N., Vavilala, M., Pollock, R., Romsdahl, M., Jaffe, N.: The Role of Radiotherapy in the Treatment of Alveolar Soft Part Sarcoma. *Med Pediatr Oncol.* 22:380-383, 1994.
2. Vavilala, M.S., O'Donnell, R.J., Conrad, E.U., Panos, A.L., Stephens, K.E., Cheney, F.W.: Paradoxical Air Embolism After Lower Limb Reconstruction. *Anesth Analg.* 83:654-655, 1996.
3. Vavilala, M.S., Geiduschek, J., Beck J.: Pneumococcal Epiglottitis- Laryngo-tracheitis. *Pediatr Rev.* 21(1):20-26, 2000.
4. Vavilala, M.S., Lam, A.M.: Intraoperative Intracranial Pressure Monitoring in Pneumococcal Meningitis. *Anesth Analg.* 90(1):107-108, 2000.
5. Vavilala, M.S., Bernards, C.M.: Urine Color As An Indicator of Urine Concentration in Surgical Patients. *American J Anesthesiol.* 27(6): 335-338, 2000.
6. Lam AM., Vavilala M.S.: Macroglossia-Compartment Syndrome of the Tongue? *Anesthesiology.* 92(6):1832-1835, 2000.
7. Vavilala, M.S., Dunbar, P.J., Lam, A.M., Rivara, F.P.: Coagulopathy Predicts Outcome in Head Injured Children. *J Neurosurg Anesthesiol.* 13:13-18, 2001.
8. Vavilala, M.S., Lee L.A., Lam, A.M.: Cerebral Autoregulation Before and After Blood Transfusion in A Child. *J Neurosurg Anesthesiol.*13:231-6, 2001.
9. Vavilala, M.S., Roberts J.O., Moore A.E., Newell, D.W., Lam A.M.: The Influence of Inhaled Nitric Oxide on Cerebral Blood Flow and Metabolism in a Child with Traumatic Brain Injury. *Anesthesia & Analgesia* 93:351-3, 2001.
10. Vavilala, M.S., Junger E., Douville C.A., Rivara, F.P.: Newell D., Lam A.M.: Dynamic Cerebral Autoregulation in Healthy Adolescents. *Acta Scanda Anes* 46:393-7, 2002.
11. Sharar, S.R., Carrougher, G.J., Selzer, K., O'Donnell, F., Vavilala, M.S., Lee, L.A.: A Comparison of Oral Transmucosal Fentanyl Citrate (OFTC) and Oral Oxycodone (OC) for Pediatric Outpatient Wound Care. *J Burn Care Rehabil* 23:27-31, 2002.
12. Vavilala, M.S., Nathens, A.B., Mackenzie, E., Jurkovich, G.J., Rivara, F.P.: Risk Factors for Venous Thromboembolism in Pediatric Trauma. *J Trauma* 52:922-7, 2002.
13. Boddu, K., Vavilala, M.S., Stevenson, G.J., Lam, A.M.: Pediatric Thoracic Nailgun Injury: A Case Report and Review of the Literature. *Anesthesia & Analgesia* 95:624-6, 2002.
14. Ransom, G., Mann, F., Vavilala, M.S., Rivara, F.P.: Cerebral Infarct in Head Injury: Relation to Child Abuse. *Child Abuse Negl* 27:381-92, 2003.
15. Vavilala, M.S., Lee, M., Lee L.A., Graham A., Visco E., Lam A.M.: Cerebral Autoregulation in Children During Sevoflurane Anesthesia. *Br J Anaesth* 90:636-41, 2002.
16. Vavilala, M.S., Bowen, A., Lam, A.M., Uffman, J.C., Powell, J.C., Winn, H.R., Rivara, F.P.: Blood Pressure and Outcome Following Severe Pediatric Traumatic Brain Injury. *J Trauma.* 55:1039-44, 2003.
17. Vavilala, M.S., Lee, L.A., Lam, A.M.: The Lower Limit of Cerebral Autoregulation in Children during <1 MAC Sevoflurane Anesthesia. *J Neurosurg Anesthesiol.* 15:307-12, 2003.
18. Lee, L.A., Vavilala, M.S., Douville, A.M., Newell, D.W., Lam, A.M.: Ophthalmic Artery Flow Velocity in Health Adult Volunteers. *Can J Anaesth.* Can J Anaesth 5:388-92, 2004.
19. Rozet, I., Vavilala, M.S., Souter M.J., Lam A.M.: Global Cerebral Edema and Subarachnoid Hemorrhage in Systemic Lupus Erythematosus. *J Neurosurg Anesthesiol* 16:182-3, 2004.

20. Vavilala, M.S., Cummings, P., Sharar, S., Quan, L.: Association of Hospital Trauma Designation with Admission Patterns of Injured Children. *J Trauma*. 57:119-24; discussion 124, 2004.
21. Vavilala, M.S., Lee, L.A., Newell D.W., Lam, A.M.: Cerebral Autoregulation in Children with Traumatic Brain Injury. *Pediatric Critical Care Medicine*. *Pediatr Crit Care Med*. 5:257-63, 2004.
22. Kincaid M.S., Vavilala, M.S., Faucher L., Zimmerman J., Heimbach D.: Feeding Intolerance Due to Small Intestine Intussusception in a Child with Major Burns. *AJBCR J Burn Care Rehabil*. 25:212-4, 2004.
23. Bhananker S.M., Paek R., Vavilala M.S.: Water Intoxication and Symptomatic Hyponatremia after Outpatient Surgery. *Anesth Analg*. 98:1294-6, 2004.
24. Todd, M.M., Hindman, M.D., Clarke, W.R., Torner, J.C.: For the Intraoperative Hypothermia for Aneurysm Surgery Trial. Mild Hypothermia During Surgery for Intracranial Aneurysm. *NEJM*. 352:135-45, 2005.
25. Vavilala, M.S., Souter M.J., Lam, A.M.: Hyperemia and Impaired Cerebral Autoregulation in a Surgical Patient with Diabetic Ketoacidosis. *Can J Anesth*. 52:323-26, 2005.
26. Shah, M., Vavilala M.S., Feldman K.W., Hallam, D.K.: Motor Vehicle Crash Brain Injury in Infants and Toddlers: A Suitable Model for Inflicted Head Injury? *Child Abuse Negl*. 29:953-67, 2005.
27. Vavilala, M.S., Kincaid, M.S., Muangman, S.L., Suz, P., Rozet, I., Lam, A.M.: Gender Differences in Cerebral Blood Flow Velocity and Autoregulation Between Anterior and Posterior Circulations in Healthy Children. *Pediatr Res*. 58:574-8, 2005.
28. Rozet, I., Vavilala, M.S., Lindley A., Visco E., Treggiari, M., Lam, A.M.: Cerebral Autoregulation and CO₂ in Anterior and Posterior Cerebral Circulation during Sevoflurane Anesthesia. *Anesth Analg*. 102(2):560-4, 2006.
29. Coates, B.M., Vavilala, M.S., Mack C., Muangman, S., Suz, P., Sharar, S.R., Bulger, E., Lam, A.M.: The Influence of Definition and Location of Hypotension on Outcome Following Severe Pediatric Traumatic Brain Injury. *Crit Care Med*. 33:2645-50, 2005.
30. Suz, P., Vavilala, M.S., Souter, M., Muangman, S., Lam, A.M.: Clinical Features of Fever Associated with Poor Outcome in Severe Pediatric Traumatic Brain Injury. *J Neurosurg Anesthesiol*. 18:5-10, 2006.
31. Vavilala, M.S., Muangman, S., Tontisirin, N., Fisk, D., Roscigno, C., Mitchell, P., Kirkness, C., Zimmerman, J.J., Chesnut, R., Lam, A.M.: Impaired Cerebral Autoregulation and 6-month Outcome in Children with Severe Traumatic Brain Injury: Preliminary Findings. *Develop Neurosci*. 28(4-5):348-53, 2006.
32. Roberts, J.S., Vavilala, M.S., Schenkman, K.A., Shaw, D., Martin, L.D., Lam, A.M.: Cerebral Hyperemia and Impaired Cerebral Autoregulation Associated with Diabetic Ketoacidosis in Critically Ill Children. *Crit Car Med*. 34(8):2217-23, 2006.
33. Miller, P., Vavilala, M.S., Lam, A.M.: The Incidence and Risk Factors for Hypotension During Emergent Decompressive Craniotomy in Children with Traumatic Brain Injury. *Anesth Analg*. 2006 Oct;103(4):869-75.
34. Rozet, I., Vavilala, M.S., Lam, A.M.: Clinical Experience with Dexmedetomidine for Implantation of Deep Brain Stimulators in Parkinson's Disease. *Anesth Analg*. 103(5):1224-8, 2006.
35. Vavilala, M.S., Muangman, S., Waitayawinyu, P., Fisk, D., Jaffe, K., Mitchell, P., Kirkness, C., Zimmerman, J., Ellenbogen, R., Lam, A.: Neurointensive Care; Impaired Cerebral

- Autoregulation in Infants and Young Children Early After Inflicted TBI: A Preliminary Report. *Pediatric Brain Injury. J Neurotrauma*. Jan;24(1):87-96, 2007.
36. Tontisirin, N., Muangman, S.L., Suz, P., Pihoker, C., Fisk, D., Moore, A., Lam, A.M., Vavilala, M.S.: Early Childhood Gender Differences in Anterior and Posterior Cerebral Blood Flow Velocity and Autoregulation. *Pediatrics*. Mar;119(3):e610-5, 2007.
 37. Vavilala, M.S. Cerebral Oximetry Patience is a Virtue but not a Virtue for the Patient, Yet?. Editorial. *Pediatr Crit Care Med*. March;8(2):192-3, 2007.
 38. Hollingworth, W., Vavilala M.S., Jarvik, J.G., Chaudhry, S., Johnston, B.D., Layman, S., Tontisirin, N., Wang, M.: The use of Repeated Head Computed Tomography in Pediatric Blunt Head Trauma: Factors Predicting New and Worsening Brain Injury. *Pediatr Crit Care Med*. July;8(4):348-56, 2007.
 39. Tontisirin, N., Armstead, W., Waitayawinyu, P., Moore, A., Udomphorn, Y., Zimmerman, J.J., Chesnut, R., Vavilala, M.S.: Change in Cerebral Autoregulation as a Function of Time In Children after Severe Traumatic Brain Injury: A Case Series. *Child's Nerv Syst*. Oct;23(10):1163-9, 2007.
 40. Rozet, I., Vavilala, M.S.: Risks and Benefits of Patient Positioning During Neurosurgical Care. *Anesthesiol Clin*. Sep;25(3):631-53, 2007.
 41. Armstead, W.M., Vavilala, M.S.: Adrenomedullin Reduces Gender-dependent Loss of Hypotensive Cerebrovasodilation after Newborn Brain Injury through Activation of ATP-dependent K Channels. *J Cereb. Blood Flow Metab*. Oct;27(10):1702-9, 2007.
 42. Olivar, H., Bramhall, J.S., Rozet, I., Vavilala, M.S., Souter, M.J., Lee, L.A., Lam, A.M.: Subarachnoid Lumbar Drains: a Case Series of Fractured Catheters and a Near Miss. *Can J Anaesth*. Oct;54(10):829-34, 2007.
 43. Brown, J.M., Udomphorn, Y., Suz, P., Vavilala, M.S.: Antipyretic Treatment of Noninfectious Fever in Children with Severe Traumatic Brain Injury. *Childs Nerv Syst*. 2008 Apr;24(4):477-83. Epub 2007 Oct 5.
 44. Rozet, I., Tontisirin, N., Muangman, S., Vavilala, M.S., Souter, M.J., Lee, L.A., Kincaid, M.S., Britz, G.W., Lam, A.M. Effect of Equiosmolar Solutions of Mannitol Versus Hypertonic Saline on Intraoperative Brain Relaxation and Electrolyte Balance. *Anesthesiology*. 2007 Nov;107(5):697-704.
 45. Curry R, Hollingworth W, Vavilala, M.S. Hyperventilation Before and After 2003 Brain Trauma Foundation Guidelines. *Pediatr Crit Care Med*. (in-press).
 46. King M, Vavilala, M.S., Zimmerman J.J., Rivara F.P. Complications of Arterial Cannulation in Critically Ill Children. *Pediatr Crit Care Med*. (in-press).
 47. Freeman, S., Udomphorn, Y., Armstead, W.M., Vavilala, M.S. Young Age as a Risk Factor for Impaired Cerebral Autoregulation in Children after Moderate to Severe Pediatric Traumatic Brain Injury. *Anesthesiology*. 2008 Apr;108(4):588-95.
 48. Samant, U.B., Mack, C.M., Koepsell, T., Rivara, F.P., Vavilala, M.S. Time of Hypotension and Discharge Outcome after Severe Pediatric Traumatic Brain Injury. *J Neurotrauma*. 2008 May;25(5):495-502.
 49. King MA, Garrison MM, Vavilala M.S., Zimmerman JJ, Rivara FP. Complications associated with arterial catheterization in children. *Pediatr Crit Care Med*. 2008 Jul;9(4):367-71.
 50. Curry R, Hollingworth W, Ellenbogen RG, Vavilala MS. Incidence of hypo- and hypercarbia in severe traumatic brain injury before and after 2003 pediatric guidelines. *Pediatr Crit Care Med*. 2008 Mar;9(2):141-6.

51. Vavilala M.S., Tontisirin N, Udomphorn Y, Armstead W, Zimmerman JJ, Chesnut R, Lam AM. Hemispheric Differences in Cerebral Autoregulation in Children with Moderate and Severe Traumatic Brain Injury. *Neurocrit Care*. 2008 ;9(1):45-54.
52. Sharma D, Jelacic J, Chaiwat O, Chandler W, Vavilala M.S.. Perioperative Hyperglycemia in Pediatric Traumatic Brain Injury. *Anesth & Analg* (in-press).
53. Chaiwat O, Lang J, Wang J, Jurkovich GJ, Rivara FP, Vavilala M.S. Effect of Red Blood Cell Transfusion on ARDS in Trauma Patients. *Anesthesiology*. (in-press). With editorial.
54. Relyea-Chew AM, King M, Vavilala, M.S. Hollingworth W. Radiation Risk and Cancer Estimates in Pediatric Traumatic Brain Injury. *Ped Radiol*. 2008 (in-press).

Book Chapters:

1. Vavilala, M.S.: Klein, E.J.: Emergency Airway Management in Pediatric Trauma. *Progress in Anesthesiology*. Vol XII, chapter 21:383-396, 1998.
2. Vavilala, M.S., Rivara, F.P.: Pediatric Trauma, in Bergman, A. (ed): *Twenty Common Problems in Pediatrics*. N.Y, McGraw-Hill, 2001, pp 117-134.
3. Vavilala, M.S., Lam, A.M.: Perioperative Management of Pediatric Traumatic Brain Injury, in *International Anesthesiology Clinics* 2002;40:69-87.
4. Vavilala, M.S., Lee L.A., Lam A.M.: Cerebral Blood Flow and Vascular Physiology, in *Anesthesiology Clinics of North America* 2002:20:247-64.
5. Vavilala, M.S.: Anesthesia for pediatric head trauma, *Strategies in Pediatric Anesthesia*. Edited by Litman RS. Philadelphia, Pocketmedicine.com, 2002.
6. Vavilala, M.S.: Perioperative Considerations in Pediatric Brain Injury. *Progress in Anesthesiology*. Vol XVI, Chapter 23:403-416, 2002.
7. Bhananker, S.M., Vavilala, M.S.: Perioperative Anesthetic Management for Neonatal Emergencies. *Progress in Anesthesiology*. Vol XVII, Chapter 7:107-120, 2003.
8. Vavilala, M.S.: Pediatric Trauma and Burns. *Pediatric Anesthesia*. Edited by Litman RS. *Requisites in Anesthesiology*. Mosby. 2004.
9. Joshua Uffman, MD., Vavilala, M.S.: Pediatric Trauma. *International Anesthesia Clinics* (in press).
10. Waitayawinyu P, Vavilala, M.S.: Pediatric Traumatic Brain Injury: Emergency Evaluation and Management. *Up To Date*.
11. Rozet, I., Vavilala, M.S.: Risks and Benefits of Patient Positioning During Neurosurgical Care. *Anesthesiol Clin*. Sep;25(3):631-53, 2007.
12. Udomphorn Y, Armstead WM, Vavilala M.S.: Cerebral Autoregulation in Pediatric Traumatic Brain Injury. *Ped Neurology*. 2008 Apr;38(4):225-34.
13. Philip S, Kirkham F, Vavilala M.S. Cerebral Blood Flow and Autoregulation in Pediatric Traumatic Brain Injury. *J Trauma*. (in-press).

Letters To The Editor:

1. Vavilala, M.S., Bramhall, J.S.: Suction Laryngoscope. *Anesth Analg* 83:664-665, 1996.
2. Vavilala, M.S., Lam, A.M.: Neostigmine for the Treatment of Colonic Pseudo-Obstruction. *NEJM* 18: 341(21):1622, 1999.
3. Vavilala, M.S., Lam A.M.: Propofol Decreases Cerebral Blood Flow Velocity in Children. *Can J Anaesth*. 50:527-8, 2003.

4. Vavilala M.S., Lam A.M.: CBF Reactivity to Changes in MAP (Cerebral Autoregulation) or CO₂ (CO₂ Reactivity) is Lost in Hypotensive, Ventilated, Preterm Infants (author reply). *Pediatr Res.* 55(5):898, 2004.
5. Vavilala, M.S., Lam, A.M.: Identification of Pressure Passive Cerebral Perfusion and Its Mediators After Infant Cardiac Surgery. *Pediatr Res.* 57(1):35, 2005.
6. Vavilala, M.S., Lam, A.M.: Cerebral Pressure Autoregulation and Vasoreactivity in the Newborn Rat. *Pediatr Res.* 57:294-8, 2005.

Manuscripts Submitted:

1. Lam, A.M., Bhatia, S.K., Lee, L.A., Visco, E., Vavilala, M.S.: The Effect of Dexmedetomidine on CO₂ Reactivity and Cerebral Autoregulation in Healthy Volunteers. *Anesthesiology* 2008.
2. Rozet I, Tontisirin N, Muangman S, Vavilala, M.S., Lam A.M. Lactate Levels During Prolonged Infusion of Propofol. *J Neuorsurg Anesthesiol.* 2008.
3. Vavilala, M.S., Richards, T.R. Roberts J.S. Deeter K, Lam, A.M. Brain Permeability in Pediatric Diabetic Ketoacidosis. *Ped Res.* 2008.
4. Philip S, Armstead W, Zimmerman J.J., Vavilala, M.S. Variation in Cerebral Blood Flow Velocity with Cerebral Perfusion Pressure > 40mmHg in Pediatric Traumatic Brain Injury. *Crit Care Med.* 2008.
5. Chaiwat O, Sharma D, Armstead W, Vavilala, M.S. Cerebral Hemodynamic Risk Factors for Poor Outcome in Severe Pediatric Traumatic Brain Injury. *J Neurotrauma.* 2008

Abstracts:

1. Vavilala, M.S.: The Role of IL2 on Autologous and Allogeneic Bone Marrow Transplantation. MD Anderson Cancer Center. Summer Research, 1986.
2. Vavilala, M.S.: Topical Diphenhydramine Hydrochloride Hypersensitivity in Ten Patients. Clin Res 40:850A, 1993.
3. Vavilala, M.S., Dunbar, P.J., Lam, A.M., Rivara, F.P.: Coagulopathy Predicts Outcome Following Head Injury in Children. J Neurosurg Anesthesiol 11(4): 315, 1999.
4. Vavilala, M.S., Dunbar, P.J., Lam, A.M., Rivara, F.P.: Coagulopathy Predicts Outcome Following Head Injury in Children. Anesthesiol 91,3A: A 1397, 1999.
5. Ransom, G., Mann, F., Vavilala, M.S., Rivara, F.P.: Cerebral Infarct in Head Injury: Relation to Child Abuse. APS/SPR, 2000.
6. Vavilala, M.S., Junger, E., Douville, C.A., Rivara, F.P., Newell, D., Lam, A.M.: Cerebral Autoregulation in Healthy Children. Pediatr Anesthesiol 87, 2000.
7. Vavilala, M.S., Junger, E., Douville, C.A., Rivara, F.P., Newell, D., Lam, A.M.: Cerebral Autoregulation in Healthy Children. Anesthesiol 93, 3A: A378, 2000.
8. Vavilala, M.S., Junger, E., Douville, C.A., Rivara, F.P., Newell, D., Lam, A.M.: Cerebral Autoregulation in Healthy Children. J Neurosurg Anesthesiol 12 (4) 405, 2000.
9. Lee, LA, Douville, C.A., Moore, A, Vavilala, M.S., Newell, D.W., Visco, E., Lam, A.M.: Hypocapnia Causes Increased Cerebral Blood Flow Velocity in the Ophthalmic Artery. J Neurosurg Anesthesiol 408, 2000.
10. Vavilala, M.S., Lee, M., Graham, A., Lee, L.A., Visco, E., Lam, A.M.: Static autoregulation in Children of various ages. J Neurosurg Anesthesiol 405, 2000.
11. Visco, E. Lee, M, Lee, L.A., Vavilala, M.S., Lam, A.M.: Influence of Phenylephrine Induced Bradycardia on Cerebral Autoregulation Testing. J Neurosurg Anesthesiol 406, 2000.
12. Sharar, S.R, Carrouger, G.J., Selzer, K., O'Donnell, F., Vavilala, M.S., Lee, L.A. : Oral Transmucosal Fentanyl Citrate (OFTC) vs. Oral Oxycodone (OC) for Pediatric Outpatient Wound Care. J Burn Care Rehabil. 2000: S81, 2001.
13. Vavilala, M.S., Lee, M., Graham, A., Lee, L.A., Visco, E., Lam, A.M.: Static Autoregulation in Children of Various Ages. Pediatr Anesth 89, 2001.
14. Vavilala, M.S., Lee, L.A., Visco, E., Newell, D.W., Lam, A.M.: Static Autoregulation in Children Following Traumatic Brain Injury. Pediatr Anesthesiol 90, 2001.
15. Roberts, J.S., Vavilala, M.S., Schenkman, K.A., Shaw, D., Martin, L.D., Lam, A.M.: Hyperemia in Pediatric Diabetic Ketoacidosis. Pediatr Res Vol 55(4); 64A, 2004.
16. Vavilala, M.S., Muangman, S., Zimmerman, J.J., Newell, D.W., Lam, A.M.: Cerebral Autoregulation in Pediatric Traumatic Brain Injury. Pediatr Res Vol 55(4); 64A, 2004.
17. Miller, P., Vavilala, M.S., Rozet, I., Lee, L., Muangman, S., Mack, C., Wang, M., Hollingworth, C.: Risk Factors for Intraoperative Hypotension During Emergency Decompressive Pediatric Craniotomy. J Neurosurg Anesthesiol 22, 2005.
18. Vavilala, M.S., Muangman, P., Suz, P., Kincaid, M.S., Lam, A.M.: Relationship Between Cerebral Autoregulation and Outcome in Children with Severe Traumatic Brain Injury. J Neurosurg Anesthesiol 220, 2005.
19. Muangman, S., Vavilala, M.S., Suz, P., Kincaid, M.S., Lam, A.M.: Return of Cerebral Autoregulation During the First Week Following Severe Pediatric Traumatic Brain Injury. J Neurosurg Anesthesiol 220, 2005.

20. Muangman, S., Rozet, I., Vavilala, M.S., Lee, L.A., Kincaid, M.S., Souter, M.J., Lam, A.M.: Iso-osmolar Solutions of Mannitol vs. Hypertonic Saline for Intraoperative Brain Relaxation. J Neurosurg Anesthesiol 243, 2005.

Invited Lectures:

1. "Pediatric Trauma." Washington State Society of Anesthesia, Seattle, WA 1998.
2. "Pediatric Trauma Resuscitation." Annual WWAMI HMC Trauma Conference, Seattle, WA 2000, 2001.
3. "Cerebral Autoregulation." Annual WWAMI HMC Trauma Conference, Seattle, WA 2000.
4. "Should We Use Ketamine in The ED?" Annual WWAMI HMC Trauma Conference, Seattle, WA 2001.
5. "Airway Management in Pediatric Trauma: CNS Implications." Washington State Society of Anesthesia, Seattle, WA 2000.
6. "Pediatric Trauma." American Society of Anesthesia Technicians, Seattle, WA 2000.
7. "Anesthesia for Head Injury." St. Joseph's Hospital, Tacoma, WA 2000.
8. "Pediatric Trauma." Providence Hospital, Everett, WA 2000.
9. "Pediatric Sedation and Rapid Sequence Intubation." Providence Hospital, Everett, WA 2001.
10. "Hemodynamic Management in Pediatric Traumatic Brain Injury." University of Texas Medical School at Houston, Houston, TX 2003.
11. "Cerebral Blood Flow and Autoregulation in Pediatric Diabetic Ketoacidosis" Loyola University Medical Center, Chicago, IL 2003.
12. "Hemodynamics in Pediatric Traumatic Brain Injury" Loyola University Medical Center, Chicago, IL 2003.
13. "Factors Governing Hemodynamic Management in Pediatric Traumatic Brain Injury." Children's Hospital and Regional Medical Center, Seattle, WA 2003.
14. "Hemodynamics and Outcome in Severe Pediatric Traumatic Brain Injury." Vanderbilt University, Nashville, TN 2004.
15. "Blood Pressure Management in Severe Pediatric Traumatic Brain Injury." Children's Hospital of Philadelphia, Philadelphia, PA 2005.
16. "Blood Pressure Management in Severe Pediatric Traumatic Brain Injury." SAFAR Institute, Pittsburgh, PA 2005.
17. "Blood Pressure and Cerebral Autoregulation in Pediatric Traumatic Brain Injury. Canadian Critical Care Conference, Whistler, CA 2006.
18. "Blood Pressure Management in Severe Pediatric Traumatic Brain Injury." University of Alabama, Birmingham, AL. 2006.

Invited Articles:

1. Vavilala, M.S. Autoregulation and 6 month Outcome in Severe Pediatric Traumatic Brain Injury. Develop Neurosci. 2006.
2. Vavilala, M.S. Impaired Cerebral Autoregulation in Inflicted Pediatric Brain Injury. J Neurotrauma. 2006.
3. Vavilala, M.S. Editorial. Cerebral Oximetry. Pediatr Crit Care Med. 2006.
4. Philip S, Kirkham F, Vavilala, M.S. Cerebral Autoregulation and CO₂ Reactivity in Pediatric Traumatic Brain Injury. J Trauma. 2008.

5. Vavilala, M.S., Sharma D. Transfusion in Traumatic Brain Injury. Critical Care Med. 2008

rev: 12/13/2008, MSV