



Valerie Chock

Associate Professor of Pediatrics (Neonatology) at the Lucile Salter Packard Children's Hospital

Pediatrics - Neonatal and Developmental Medicine

CLINICAL OFFICES

- **Neonatology**

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Bio

CLINICAL FOCUS

- Neonatal-Perinatal Medicine
- Neonatology

ACADEMIC APPOINTMENTS

- Associate Professor - Med Center Line, Pediatrics - Neonatal and Developmental Medicine
- Member, Cardiovascular Institute
- Member, Maternal & Child Health Research Institute (MCHRI)

ADMINISTRATIVE APPOINTMENTS

- Associate Professor, Division of Neonatal and Developmental Medicine, Stanford University, (2005- present)
- Associate Director for Neonatal Prenatal Consultation Services, Center for Fetal and Maternal Health, LPCH, (2010- present)
- Associate Program Director for Research, Neonatology Fellowship Program, Division of Neonatal and Developmental Medicine, Stanford University, (2016-present)

HONORS AND AWARDS

- Pilot Early Career Award, Stanford Pediatric Research Fund- Child Health Research Program (Jan 2008-2010)
- Pediatric Heart Center Research Award, Stanford Pediatric Research Fund-Lucile Packard Foundation for Children's Health (March 2010-March 2012)
- NIH Mentored Career Development Award (KL2), Stanford Center for Clinical Translational Education and Research (2009-2011)

PROFESSIONAL EDUCATION

- Residency: UCSF Pediatric Residency (2001) CA
- Internship: UCSF Pediatric Residency (1999) CA
- Medical Education: University of Hawaii John A Burns School of Medicine Registrar (1998) HI
- Board Certification: Pediatrics, American Board of Pediatrics (2001)

- Board Certification: Neonatal-Perinatal Medicine, American Board of Pediatrics (2005)
- M.S. Epi, Stanford University , Clinical Epidemiology (2011)
- Fellowship, Stanford Lucile Packard Children's Hospital , Neonatology (2005)

COMMUNITY AND INTERNATIONAL WORK

- Protecting Newborn Brains: U.S.-Brazil Telemedicine Initiative, Sao Paulo, Brazil

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Neurological monitoring in critically ill infants. Altered hemodynamics in neonates, especially in relation to prematurity, congenital heart disease, and central nervous system injury. Determination of the hemodynamic significance and effects of a patent ductus arteriosus in the preterm infant. Utilizing NIRS (near-infrared spectroscopy) and other technologies for improved monitoring in the NICU.

CLINICAL TRIALS

- Cerebral Oxygenation and Autoregulation in Preterm Infants, Not Recruiting

Teaching

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Neonatal-Perinatal Medicine (Fellowship Program)

Publications

PUBLICATIONS

- **Prenatally diagnosed omphalocele: characteristics associated with adverse neonatal outcomes.** *Journal of perinatology : official journal of the California Perinatal Association*
Chock, V. Y., Davis, A. S., Cho, S., Bax, C., Fluharty, E., Weigel, N., Homeyer, M., Hudgins, L., Jones, R., Rubesova, E., Sylvester, K. G., Blumenfeld, Y. J., Hintz, et al
2019
- **Differences in patient characteristics and care practices between two trials of therapeutic hypothermia** *PEDIATRIC RESEARCH*
Bonifacio, S. L., McDonald, S. A., Chock, V. Y., Wusthoff, C. J., Hintz, S. R., Laptook, A. R., Shankara, S., Van Meurs, K. P.
2019; 85 (7): 1008–15
- **Near-Infrared Spectroscopy in the Diagnostic Evaluation of Mitochondrial Disorders: A Neonatal Intensive Care Unit Case Series** *JOURNAL OF PEDIATRICS*
Niemi, A., Chock, V. Y.
2019; 208: 282–86
- **Differences in patient characteristics and care practices between two trials of therapeutic hypothermia.** *Pediatric research*
Bonifacio, S. L., McDonald, S. A., Chock, V. Y., Wusthoff, C. J., Hintz, S. R., Laptook, A. R., Shankara, S., Van Meurs, K. P.
2019
- **Near-Infrared Spectroscopy in the Diagnostic Evaluation of Mitochondrial Disorders: A Neonatal Intensive Care Unit Case Series.** *The Journal of pediatrics*
Niemi, A., Chock, V. Y.
2019
- **Birth Location of Infants with Critical Congenital Heart Disease in California** *PEDIATRIC CARDIOLOGY*
Purkey, N. J., Axelrod, D. M., McElhinney, D. B., Rigdon, J., Qin, F., Desai, M., Shin, A. Y., Chock, V. Y., Lee, H. C.
2019; 40 (2): 310–18
- **Immediate Postnatal Ventricular Performance Is Associated with Mortality in Hypoplastic Left Heart Syndrome** *PEDIATRIC CARDIOLOGY*

- Altit, G., Bhombal, S., Chock, V. Y., Tacy, T. A.
2019; 40 (1): 168–76
- **Birth Location of Infants with Critical Congenital Heart Disease in California.** *Pediatric cardiology*
Purkey, N. J., Axelrod, D. M., McElhinney, D. B., Rigdon, J., Qin, F., Desai, M., Shin, A. Y., Chock, V. Y., Lee, H. C.
2018
 - **Utility of prenatal MRI in the evaluation and management of fetal ventriculomegaly** *JOURNAL OF PERINATOLOGY*
Katz, J. A., Chock, V. Y., Davis, A. S., Blumenfeld, Y. J., Hahn, J. S., Barnes, P., Barth, R. A., Rubesova, E., Hintz, S. R.
2018; 38 (11): 1444–52
 - **Development of a NeuroNICU with a Broader Focus on All Newborns at Risk of Brain Injury: The First 2 Years** *AMERICAN JOURNAL OF PERINATOLOGY*
Van Meurs, K. P., Yan, E. S., Randall, K. S., Chock, V. Y., Davis, A. S., Glennon, C. S., Clark, C. L., Wusthoff, C. J., Bonifacio, S. L.
2018; 35 (12): 1197–1205
 - **NIRS improves hemodynamic monitoring and detection of risk for cerebral injury: cases in the neonatal intensive care nursery.** *The journal of maternal-fetal & neonatal medicine : the official journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians*
Chock, V. Y., Variane, G. F., Netto, A., Van Meurs, K. P.
2018: 1–191
 - **Immediate Postnatal Ventricular Performance Is Associated with Mortality in Hypoplastic Left Heart Syndrome.** *Pediatric cardiology*
Altit, G., Bhombal, S., Chock, V. Y., Tacy, T. A.
2018
 - **Renal Saturation and Acute Kidney Injury in Neonates with Hypoxic Ischemic Encephalopathy Undergoing Therapeutic Hypothermia** *JOURNAL OF PEDIATRICS*
Chock, V. Y., Frymoyer, A., Yeh, C. G., Van Meurs, K. P.
2018; 200: 232–+
 - **Utility of prenatal MRI in the evaluation and management of fetal ventriculomegaly.** *Journal of perinatology : official journal of the California Perinatal Association*
Katz, J. A., Chock, V. Y., Davis, A. S., Blumenfeld, Y. J., Hahn, J. S., Barnes, P., Barth, R. A., Rubesova, E., Hintz, S. R.
2018
 - **Renal Saturation and Acute Kidney Injury in Neonates with Hypoxic Ischemic Encephalopathy Undergoing Therapeutic Hypothermia.** *The Journal of pediatrics*
Chock, V. Y., Frymoyer, A., Yeh, C. G., Van Meurs, K. P.
2018
 - **Predictors of poor neonatal outcomes in prenatally diagnosed multicystic dysplastic kidney disease** *JOURNAL OF PERINATOLOGY*
Balasundaram, M., Chock, V. Y., Wu, H., Blumenfeld, Y. J., Hintz, S. R.
2018; 38 (6): 658–64
 - **Development of a NeuroNICU with a Broader Focus on All Newborns at Risk of Brain Injury: The First 2 Years.** *American journal of perinatology*
Van Meurs, K. P., Yan, E. S., Randall, K. S., Chock, V. Y., Davis, A. S., Glennon, C. S., Clark, C. L., Wusthoff, C. J., Bonifacio, S. L.
2018
 - **Predictors of poor neonatal outcomes in prenatally diagnosed multicystic dysplastic kidney disease.** *Journal of perinatology : official journal of the California Perinatal Association*
Balasundaram, M., Chock, V. Y., Wu, H. Y., Blumenfeld, Y. J., Hintz, S. R.
2018
 - **End-Organ Saturation Differences in Early Neonatal Transition for Left-versus Right-Sided Congenital Heart Disease** *NEONATOLOGY*
Altit, G., Bhombal, S., Tacy, T. A., Chock, V. Y.
2018; 114 (1): 53–61
 - **Effect of Therapeutic Hypothermia Initiated After 6 Hours of Age on Death or Disability Among Newborns With Hypoxic-Ischemic Encephalopathy A Randomized Clinical Trial** *JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*

- Laptook, A. R., Shankaran, S., Tyson, J. E., Munoz, B., Bell, E. F., Goldberg, R. N., Parikh, N. A., Ambalavanan, N., Pedroza, C., Pappas, A., Das, A., Chaudhary, A. S., Ehrenkranz, et al
2017; 318 (16): 1550–60
- **Changing Management of the Patent Ductus Arteriosus: Effect on Neonatal Outcomes and Resource Utilization.** *American journal of perinatology*
Chock, V. Y., Goel, V. V., Palma, J. P., Luh, T. M., Wang, N. A., Gaskari, S., Pun, R., Silverman, N. H., Benitz, W. E.
2017
 - **Prediction of neonatal respiratory distress in pregnancies complicated by fetal lung masses.** *Prenatal diagnosis*
Girsan, A. I., Hintz, S. R., Sammour, R., Naqvi, A., El-Sayed, Y. Y., Sherwin, K., Davis, A. S., Chock, V. Y., Barth, R. A., Rubesova, E., Sylvester, K. G., Chitkara, R., Blumenfeld, et al
2017
 - **Near-infrared spectroscopy for detection of a significant patent ductus arteriosus.** *Pediatric research*
Chock, V. Y., Rose, L. A., Mante, J. V., Pun, R.
2016; 80 (5): 675-680
 - **HDlive imaging of a giant omphalocele.** *Ultrasound in obstetrics & gynecology*
Blumenfeld, Y. J., E Milan, K., Rubesova, E., Sylvester, K. G., DAVIS, A. S., Chock, V. Y., Hintz, S. R.
2016; 48 (3): 407-408
 - **Management of the Preterm Infant with Congenital Heart Disease** *CLINICS IN PERINATOLOGY*
Axelrod, D. M., Chock, V. Y., Reddy, V. M.
2016; 43 (1): 157-?
 - **Management of the Preterm Infant with Congenital Heart Disease.** *Clinics in perinatology*
Axelrod, D. M., Chock, V. Y., Reddy, V. M.
2016; 43 (1): 157-171
 - **Failed endotracheal intubation and adverse outcomes among extremely low birth weight infants.** *Journal of perinatology*
Wallenstein, M. B., Birnie, K. L., Arain, Y. H., Yang, W., Yamada, N. K., Huffman, L. C., Palma, J. P., Chock, V. Y., Shaw, G. M., Stevenson, D. K.
2016; 36 (2): 112-115
 - **Perinatal Neuroprotection for Extremely Preterm Infants** *AMERICAN JOURNAL OF PERINATOLOGY*
Davis, A. S., Berger, V. K., Chock, V. Y.
2016; 33 (3): 290-296
 - **Prenatal hydrops foetalis associated with infantile free sialic acid storage disease.** *Journal of obstetrics and gynaecology*
Chock, V. Y., MILAN, K. E., Folkins, A. K., Hazard, F. K., Bernstein, J. A., Hintz, S. R.
2015; 35 (8): 850-852
 - **Red Blood Cell Transfusion Is Not Associated with Necrotizing Enterocolitis: A Review of Consecutive Transfusions in a Tertiary Neonatal Intensive Care Unit** *JOURNAL OF PEDIATRICS*
Wallenstein, M. B., Arain, Y. H., Birnie, K. L., Andrews, J., Palma, J. P., Benitz, W. E., Chock, V. Y.
2014; 165 (4): 678-682
 - **Red blood cell transfusion is not associated with necrotizing enterocolitis: a review of consecutive transfusions in a tertiary neonatal intensive care unit.** *journal of pediatrics*
Wallenstein, M. B., Arain, Y. H., Birnie, K. L., Andrews, J., Palma, J. P., Benitz, W. E., Chock, V. Y.
2014; 165 (4): 678-682
 - **Fetal centers and the role of the neonatologist in complex fetal care.** *American journal of perinatology*
Davis, A. S., Chock, V. Y., Hintz, S. R.
2014; 31 (7): 549-556
 - **Fetal Centers and the Role of the Neonatologist in Complex Fetal Care** *AMERICAN JOURNAL OF PERINATOLOGY*
Davis, A. S., Chock, V. Y., Hintz, S. R.
2014; 31 (7): 549-555
 - **Predictors of bronchopulmonary dysplasia or death in premature infants with a patent ductus arteriosus.** *Pediatric research*
Chock, V. Y., Pun, R., Oza, A., Benitz, W. E., Van Meurs, K. P., Whittmore, A. S., Behzadian, F., Silverman, N. H.

2014; 75 (4): 570-575

- **NIPT in a Clinical Setting: An analysis of Uptake in the First Months of Clinical Availability.** *Journal of genetic counseling*
Taylor, J. B., Chock, V. Y., Hudgins, L.
2014; 23 (1): 72-78
- **Variables Influencing Pregnancy Termination Following Prenatal Diagnosis of Fetal Chromosome Abnormalities** *JOURNAL OF GENETIC COUNSELING*
Hawkins, A., Stenzel, A., Taylor, J., Chock, V. Y., Hudgins, L.
2013; 22 (2): 238-248
- **Short-term Neurodevelopmental Outcomes in Neonates with Congenital Heart Disease: The Era of Newer Surgical Strategies** *CONGENITAL HEART DISEASE*
Chock, V. Y., Chang, I. J., Reddy, V. M.
2012; 7 (6): 544-550
- **Cerebral Autoregulation in Neonates with a Hemodynamically Significant Patent Ductus Arteriosus** *JOURNAL OF PEDIATRICS*
Chock, V. Y., Ramamoorthy, C., Van Meurs, K. P.
2012; 160 (6)
- **Cerebral Oxygenation during Different Treatment Strategies for a Patent Ductus Arteriosus** *NEONATOLOGY*
Chock, V. Y., Ramamoorthy, C., Van Meurs, K. P.
2011; 100 (3): 233-240
- **Inhaled Nitric Oxide for Preterm Premature Rupture of Membranes, Oligohydramnios, and Pulmonary Hypoplasia** *AMERICAN JOURNAL OF PERINATOLOGY*
Chock, V. Y., Van Meurs, K. P., Hintz, S. R., Ehrenkranz, R. A., Lemons, J. A., Kendrick, D. E., Stevenson, D. K.
2009; 26 (4): 317-322
- **Inflammation and NF kappa B activation is decreased by hypothermia following global cerebral ischemia** *NEUROBIOLOGY OF DISEASE*
Webster, C. M., Kelly, S., Koike, M. A., Chock, V. Y., Giffard, R. G., Yenari, M. A.
2009; 33 (2): 301-312
- **Neurologic events in neonates treated surgically for congenital heart disease** *JOURNAL OF PERINATOLOGY*
Chock, V. Y., Reddy, V. M., Bernstein, D., Madan, A.
2006; 26 (4): 237-242
- **Antegrade cerebral perfusion reduces apoptotic neuronal injury in a neonatal piglet model of cardiopulmonary bypass** *JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY*
Chock, V. Y., Amir, G., DAVIS, C. R., Ramamoorthy, C., Riemer, R. K., Ray, D., Giffard, R. G., Reddy, V. M.
2006; 131 (3): 659-665
- **Development of neonatal murine microglia in vitro: Changes in response to lipopolysaccharide and ischemia-like injury** *PEDIATRIC RESEARCH*
Chock, V. Y., Giffard, R. G.
2005; 57 (4): 475-480
- **Developing microglia are sensitive to injury in an in vitro model of neonatal ischemia**
Chock, V. Y., Giffard, R. G.
KARGER.2005: 270
- **Susceptibility to apoptosis varies with time in culture for murine neurons and astrocytes: changes in gene expression and activity** *NEUROLOGICAL RESEARCH*
Xu, L. J., Chock, V. Y., Yang, E. Y., Giffard, R. G.
2004; 26 (6): 632-643
- **Neurologic events in neonates with congenital heart disease**
Chock, Bernstein, D., Reddy, M. V., Madan, A.
INT PEDIATRIC RESEARCH FOUNDATION, INC.2004: 39A
- **REMOVAL OF SIALIC-ACID FROM A GLYCOPROTEIN IN CHO CELL-CULTURE SUPERNATANT BY ACTION OF AN EXTRACELLULAR CHO CELL SIALIDASE** *BIO-TECHNOLOGY*
Gramer, M. J., Goochee, C. F., Chock, V. Y., BROUSSEAU, D. T., Sliwkowski, M. B.

