



## Meghna Patel

Clinical Assistant Professor, Pediatrics - Cardiology

### CLINICAL OFFICE (PRIMARY)

- **Pediatric Cardiology - CVICU**

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### Bio

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#### BIO

Upon completing my undergraduate degree in chemistry, MS in biology, and medical degree all from Indiana University, and I spent 6 years in pursuing my pediatric residency and pediatric cardiology fellowship at Washington University in St. Louis. I then completed a fellowship in pediatric intensive care here at Stanford University. Currently, I am a Clinical Assistant Professor and pediatric cardiac intensivist at Stanford. My research focus is on outcomes in cardiac disease, primarily focusing on immune signatures and perturbations in various stages of heart failure and after surgical trauma.

#### CLINICAL FOCUS

- Pediatric Critical Care Medicine

#### ACADEMIC APPOINTMENTS

- Clinical Assistant Professor, Pediatrics - Cardiology
- Member, Cardiovascular Institute
- Member, Maternal & Child Health Research Institute (MCHRI)

#### PROFESSIONAL EDUCATION

- Board Certification: Pediatric Critical Care Medicine, American Board of Pediatrics (2018)
- Fellowship: Stanford University Pediatric Critical Care Fellowship (2018) CA
- Residency: St Louis Children's Hospital Washington University Pediatric Residency (2013) MO
- Board Certification, Pediatric Critical Care , American Board of Pediatrics (2018)
- Board Certification: Pediatric Cardiology, American Board of Pediatrics (2016)
- Fellowship: Washington University Pediatric Cardiology Fellowship (2016) MO
- Board Certification: Pediatrics, American Board of Pediatrics (2015)
- Medical Education: Indiana University School of Medicine (2010) IN

## Research & Scholarship

### CURRENT RESEARCH AND SCHOLARLY INTERESTS

My current academic focus is in end stage heart failure. Working with mentors Daniel Bernstein and Greg Hammer, and we will be using CyTOF (mass cytometry) to profile the immune system in heart failure and ventricular assist device therapy. We are funded internally by the Jackson Vaughan Research Fund and the NIH Cooperative Centers for Translational Research in Human Immunology (CCHI) Pilot Project Grant. We have recently been awarded as the first recipient of the Pediatric Cardiomyopathy Early Career Research Grant sponsored by the American Academy of Pediatrics and the Children's Cardiomyopathy Foundation for this work.

### Publications

#### PUBLICATIONS

- **Maturational patterns of left ventricular rotational mechanics in pre-term infants through 1 year of age.** *Cardiology in the young*  
Lehmann, G. C., Levy, P. T., Patel, M. D., Sekarski, T., Gu, H., Choudhry, S., Hamvas, A., Singh, G. K.  
2020: 1–9
- **Cardiac Dysfunction Identified by Strain Echocardiography Is Associated With Illness Severity in Pediatric Sepsis.** *Pediatric critical care medicine : a journal of the Society of Critical Care Medicine and the World Federation of Pediatric Intensive and Critical Care Societies*  
Patel, M. D., Mariano, K. n., Dunbar, T. n., Cornell, T. T., Pun, R. n., Haileselassie, B. n.  
2020
- **Two-Dimensional Strain is more Precise than Conventional Measures of Left Ventricular Systolic Function in Pediatric Patients.** *Pediatric cardiology*  
Patel, M. D., Myers, C., Negishi, K., Singh, G. K., Anwar, S.  
2019
- **Persistence of right ventricular dysfunction and altered morphometry in asymptomatic preterm Infants through one year of age: Cardiac phenotype of prematurity.** *Cardiology in the young*  
Erickson, C. T., Patel, M. D., Choudhry, S., Bisselou, K. S., Sekarski, T., Craft, M., Li, L., Khuffash, A. E., Hamvas, A., Kutty, S., Singh, G. K., Levy, P. T.  
2019: 1–9
- **Echocardiographic Assessment of Right Ventricular Afterload in Preterm Infants: Maturational Patterns of Pulmonary Artery Acceleration Time Over the First Year of Age and Implications for Pulmonary Hypertension.** *Journal of the American Society of Echocardiography : official publication of the American Society of Echocardiography*  
Patel, M. D., Breatnach, C. R., James, A. T., Choudhry, S., McNamara, P. J., Jain, A., Franklin, O., Hamvas, A., Mertens, L., Singh, G. K., El-Khuffash, A., Levy, P. T.  
2019; 32 (7): 884
- **Reply.** *The Journal of pediatrics*  
Levy, P. T., Patel, M. D., Singh, G. K.  
2018
- **Evidence of Echocardiographic Markers of Pulmonary Vascular Disease in Asymptomatic Infants Born Preterm at One Year of Age** *JOURNAL OF PEDIATRICS*  
Levy, P. T., Patel, M. D., Choudhry, S., Hamvas, A., Singh, G. K.  
2018; 197: 48–+
- **EVALUATION OF STRAIN ECHOCARDIOGRAPHY IN PEDIATRIC SEPSIS**  
Patel, M., Mariano, K., Dunbar, T., Haileselassie, B.  
LIPPINCOTT WILLIAMS & WILKINS.2018: 742
- **Pediatric and adult dilated cardiomyopathy represent distinct pathological entities** *JCI INSIGHT*  
Patel, M. D., Mohan, J., Schneider, C., Bajpai, G., Purejav, E., Canter, C. E., Towbin, J., Bredemeyer, A., Lavine, K. J.  
2017; 2 (14)
- **Pediatric and adult dilated cardiomyopathy represent distinct pathological entities.** *JCI insight*  
Patel, M. D., Mohan, J., Schneider, C., Bajpai, G., Purejav, E., Canter, C. E., Towbin, J., Bredemeyer, A., Lavine, K. J.

2017; 2 (14)

- **Maturational Patterns of Systolic Ventricular Deformation Mechanics by Two-Dimensional Speckle-Tracking Echocardiography in Preterm Infants over the First Year of Age** *JOURNAL OF THE AMERICAN SOCIETY OF ECHOCARDIOGRAPHY*  
Levy, P. T., EL-Khuffash, A., Patel, M. D., Breatnach, C. R., James, A. T., Sanchez, A. A., Abuchabe, C., Rogal, S. R., Holland, M. R., McNamara, P. J., Jain, A., Franklin, O., Mertens, et al  
2017; 30 (7): 685–U249
- **Pulmonary Artery Acceleration Time Provides a Reliable Estimate of Invasive Pulmonary Hemodynamics in Children** *JOURNAL OF THE AMERICAN SOCIETY OF ECHOCARDIOGRAPHY*  
Levy, P. T., Patel, M. D., Groh, G., Choudhry, S., Murphy, J., Holland, M. R., Hamvas, A., Grady, M. R., Singh, G. K.  
2016; 29 (11): 1056–+
- **MATURATIONAL PATTERNS OF VENTRICULAR SEPTAL DEFORMATION IN PRETERM AND TERM INFANTS IN THE FIRST MONTH OF LIFE**  
Levy, P., Abuchaibe, E., Patel, M., Singh, G.  
ELSEVIER SCIENCE INC.2016: 1789
- **LONGITUDINAL MATURATIONAL CHANGES IN PULMONARY HEMODYNAMICS IN PREMATURE INFANTS ASSESSED BY PULMONARY ARTERY ACCELERATION TIME: REFERENCE AND PREDICTIVE VALUES**  
Levy, P., Patel, M., Hamvas, A., Singh, G.  
ELSEVIER SCIENCE INC.2016: 1790
- **SHAPE OF THE RIGHT VENTRICULAR OUTFLOW TRACT DOPPLER ENVELOPE IS A SENSITIVE PREDICTOR OF ALTERED PULMONARY HEMODYNAMICS IN PEDIATRIC PATIENTS**  
Levy, P., Groh, G., Hamdy, A., Patel, M., Murphy, J., Singh, G.  
ELSEVIER SCIENCE INC.2016: 1791
- **MATURATIONAL CHANGES AND REFERENCE VALUES FOR TRICUSPID ANNULAR PLANE SYSTOLIC EXCURSION (TAPSE) FROM BIRTH TO ONE-YEAR CORRECTED AGE: RIGHT VENTRICULAR SYSTOLIC FUNCTION IN PRETERM NEONATES**  
Levy, P., Patel, M., Hamvas, A., Singh, G.  
ELSEVIER SCIENCE INC.2016: 1788
- **Reference Ranges of Left Ventricular Strain Measures by Two-Dimensional Speckle-Tracking Echocardiography in Children: A Systematic Review and Meta-Analysis** *JOURNAL OF THE AMERICAN SOCIETY OF ECHOCARDIOGRAPHY*  
Levy, P. T., Machevsky, A., Sanchez, A. A., Patel, M. D., Rogal, S., Fowler, S., Yaeger, L., Hardi, A., Holland, M. R., Hamvas, A., Singh, G. K.  
2016; 29 (3): 209–+