



## Scott Sutherland

- Clinical Associate Professor, Pediatrics - Nephrology
- Clinical Associate Professor, Pediatrics - Systems Medicine

### CLINICAL OFFICES

- **Pediatric Nephrology Clinic**

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### Bio

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### CLINICAL FOCUS

- Pediatric Nephrology
- Pediatric Dialysis
- Pediatric Renal Transplantation
- Acute Kidney Injury

### ACADEMIC APPOINTMENTS

- Clinical Associate Professor, Pediatrics - Nephrology
- Clinical Associate Professor, Pediatrics - Systems Medicine
- Member, Child Health Research Institute

### ADMINISTRATIVE APPOINTMENTS

- Associate Chair, Departmental Clinical Services, Stanford School of Medicine, Department of Pediatrics, (2017- present)
- Medical Director, Acute Dialysis Therapies, Lucile Packard Children's Hospital, Stanford School of Medicine, (2017- present)
- Medical Director, Apheresis, Lucile Packard Children's Hospital, Stanford School of Medicine, (2017- present)
- Co-director, Cardiorenal Clinic, Lucile Packard Children's Hospital, Stanford School of Medicine, (2015- present)

### PROFESSIONAL EDUCATION

- Medical Education: Yale School Of Medicine Office of Student Affairs (2002) CT
- Board Certification: Pediatrics, American Board of Pediatrics (2005)
- Fellowship: Lucile Packard Children's Hospital (2008) CA
- Board Certification: Pediatric Nephrology, American Board of Pediatrics (2010)
- Residency: Lucile Packard Children's Hospital (2005) CA
- BA, Duke University , Chemistry/Economics (1997)

## Publications

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### PUBLICATIONS

- **Leveraging Big Data and Electronic Health Records to Enhance Novel Approaches to Acute Kidney Injury Research and Care.** *Blood purification*  
Sutherland, S. M., Goldstein, S. L., Bagshaw, S. M.  
2017; 44 (1): 68-76
- **Recovery From Acute Kidney Injury and CKD Following Heart Transplantation in Children, Adolescents, and Young Adults: A Retrospective Cohort Study.** *American journal of kidney diseases*  
Hollander, S. A., Montez-Rath, M. E., Axelrod, D. M., Krawczeski, C. D., May, L. J., Maeda, K., Rosenthal, D. N., Sutherland, S. M.  
2016; 68 (2): 212-218
- **Impact of ventricular assist device placement on longitudinal renal function in children with end-stage heart failure.** *journal of heart and lung transplantation*  
May, L. J., Montez-Rath, M. E., Yeh, J., Axelrod, D. M., Chen, S., Maeda, K., Almond, C. S., Rosenthal, D. N., Hollander, S. A., Sutherland, S. M.  
2016; 35 (4): 449-456
- **Utilizing electronic health records to predict acute kidney injury risk and outcomes: workgroup statements from the 15(th) ADQI Consensus Conference.** *Canadian journal of kidney health and disease*  
Sutherland, S. M., Chawla, L. S., Kane-Gill, S. L., Hsu, R. K., Kramer, A. A., Goldstein, S. L., Kellum, J. A., Ronco, C., Bagshaw, S. M.  
2016; 3: 11-?
- **AKI in Hospitalized Children: Comparing the pRIFLE, AKIN, and KDIGO Definitions** *CLINICAL JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY*  
Sutherland, S. M., Byrnes, J. J., Kothari, M., Longhurst, C. A., Dutta, S., Garcia, P., Goldstein, S. L.  
2015; 10 (4): 554-561
- **The Prospective Pediatric Continuous Renal Replacement Therapy (ppCRRT) Registry: a critical appraisal** *PEDIATRIC NEPHROLOGY*  
Sutherland, S. M., Goldstein, S. L., Alexander, S. R.  
2014; 29 (11): 2069-2076
- **Acute kidney injury in the pediatric cardiac patient** *PEDIATRIC ANESTHESIA*  
Axelrod, D. M., Sutherland, S. M.  
2014; 24 (9): 899-901
- **Initial Experience Using Aminophylline to Improve Renal Dysfunction in the Pediatric Cardiovascular ICU** *PEDIATRIC CRITICAL CARE MEDICINE*  
Axelrod, D. M., Anglemeyer, A. T., Sherman-Levine, S. F., Zhu, A., Grimm, P. C., Roth, S. J., Sutherland, S. M.  
2014; 15 (1): 21-27
- **AKI in Hospitalized Children: Epidemiology and Clinical Associations in a National Cohort.** *Clinical journal of the American Society of Nephrology*  
Sutherland, S. M., Ji, J., Sheikhi, F. H., Widen, E., Tian, L., Alexander, S. R., Ling, X. B.  
2013; 8 (10): 1661-1669
- **Continuous renal replacement therapy in children** *PEDIATRIC NEPHROLOGY*  
Sutherland, S. M., Alexander, S. R.  
2012; 27 (11): 2007-2016
- **Evidence-Based Medicine in the EMR Era** *NEW ENGLAND JOURNAL OF MEDICINE*  
Frankovich, J., Longhurst, C. A., Sutherland, S. M.  
2011; 365 (19): 1758-1759
- **Fluid Overload and Mortality in Children Receiving Continuous Renal Replacement Therapy: The Prospective Pediatric Continuous Renal Replacement Therapy Registry** *AMERICAN JOURNAL OF KIDNEY DISEASES*  
Sutherland, S. M., Zappitelli, M., Alexander, S. R., Chua, A. N., Brophy, P. D., Bunchman, T. E., Hackbarth, R., Somers, M. J., Baum, M., Symons, J. M., Flores, F. X., Benfield, M., Askenazi, et al  
2010; 55 (2): 316-325
- **Nephrotoxin exposure and acute kidney injury in critically ill children undergoing congenital cardiac surgery.** *Pediatric nephrology (Berlin, Germany)*  
Uber, A. M., Montez-Rath, M. E., Kwiatkowski, D. M., Krawczeski, C. D., Sutherland, S. M.

2018

- **Electronic Health Record-Enabled Big-Data Approaches to Nephrotoxin-Associated Acute Kidney Injury Risk Prediction.** *Pharmacotherapy*  
Sutherland, S. M.  
2018
- **Long-Term Consequences of Acute Kidney Injury in Children** *CLINICAL JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY*  
Sutherland, S. M.  
2018; 13 (5): 677–78
- **Failure to Improve Renal Function Following VAD Placement Predicts Renal Injury and Chronic Kidney Disease Following Cardiac Transplant**  
Hollander, S. A., Pruitt, E., Sutherland, S. M., Cantor, R. S., Kirklin, J., Ravekes, W. J., Ameduri, R., Chrisant, M., Hoffman, T., Lytrivi, I., Conway, J.  
ELSEVIER SCIENCE INC.2018: S117–S118
- **CHILDREN TOLERATE INTRADIALYTIC ORAL NUTRITION** *JOURNAL OF RENAL CARE*  
South, A. M., Fainman, B., Sutherland, S. M., Wong, C. J.  
2018; 44 (1): 38–43
- **Acute Kidney Injury and Big Data** *ACUTE KIDNEY INJURY - BASIC RESEARCH AND CLINICAL PRACTICE*  
Sutherland, S. M., Goldstein, S. L., Bagshaw, S. M., Ding, Rosner, M. H., Ronco, C.  
2018; 193: 55–67
- **Acute Kidney Injury in Children** *ADVANCES IN CHRONIC KIDNEY DISEASE*  
Sutherland, S. M., Kwiatkowski, D. M.  
2017; 24 (6): 380–87
- **Acute kidney injury in pediatric patients** *BEST PRACTICE & RESEARCH-CLINICAL ANAESTHESIOLOGY*  
Kwiatkowski, D. M., Sutherland, S. M.  
2017; 31 (3): 427–39
- **The Effect of Intradialytic Intralipid Therapy in Pediatric Hemodialysis Patients.** *Journal of renal nutrition*  
Haskin, O., Sutherland, S. M., Wong, C. J.  
2017; 27 (2): 132-137
- **Fluid overload independent of acute kidney injury predicts poor outcomes in neonates following congenital heart surgery.** *Pediatric nephrology (Berlin, Germany)*  
Mah, K. E., Hao, S., Sutherland, S. M., Kwiatkowski, D. M., Axelrod, D. M., Almond, C. S., Krawczeski, C. D., Shin, A. Y.  
2017
- **Incidence, risk factors, and outcomes of acute kidney injury in adults undergoing surgery for congenital heart disease.** *Cardiology in the young*  
Kwiatkowski, D. M., Price, E., Axelrod, D. M., Romfh, A. W., Han, B. S., Sutherland, S. M., Krawczeski, C. D.  
2016: 1-8
- **Management of Peritoneal Dialysis Catheters That Erode Into Bowel: Two Pediatric Case Reports and a Review of the Literature** *PERITONEAL DIALYSIS INTERNATIONAL*  
South, A. M., Crispin, M. K., Marqueling, A. L., Sutherland, S. M.  
2016; 36 (6): 680-700
- **Theophylline Population Pharmacokinetics and Dosing in Children Following Congenital Heart Surgery With Cardiopulmonary Bypass.** *Journal of clinical pharmacology*  
Frymoyer, A., Su, F., Grimm, P. C., Sutherland, S. M., Axelrod, D. M.  
2016; 56 (9): 1084-1093
- **The authors reply.** *Pediatric critical care medicine*  
Axelrod, D. M., Anglemyer, A., Sutherland, S. M.  
2016; 17 (8): 814-815
- **Letter to the Editor regarding "Arrhythmias in the paediatric ICU: a prospective study of the rates and predictors of arrhythmias in children without underlying cardiac disease" by Cassel-Choudhury et al.** *Cardiology in the young*  
Axelrod, D. M., Frymoyer, A. R., Sutherland, S. M.  
2016: 1-2

- **Electronic Health Record-Enabled Research in Children Using the Electronic Health Record for Clinical Discovery.** *Pediatric clinics of North America*  
Sutherland, S. M., Kaelber, D. C., Downing, N. L., Goel, V. V., Longhurst, C. A.  
2016; 63 (2): 251-268
- **Dexmedetomidine Is Associated With Lower Incidence of Acute Kidney Injury After Congenital Heart Surgery.** *Pediatric critical care medicine*  
Kwiatkowski, D. M., Axelrod, D. M., Sutherland, S. M., Tesoro, T. M., Krawczeski, C. D.  
2016; 17 (2): 128-134
- **A Double-Blinded, Randomized, Placebo-Controlled Clinical Trial of Aminophylline to Prevent Acute Kidney Injury in Children Following Congenital Heart Surgery With Cardiopulmonary Bypass.** *Pediatric critical care medicine*  
Axelrod, D. M., Sutherland, S. M., Anglemeyer, A., Grimm, P. C., Roth, S. J.  
2016; 17 (2): 135-143
- **Optimizing administrative datasets to examine acute kidney injury in the era of big data: workgroup statement from the 15(th) ADQI Consensus Conference.** *Canadian journal of kidney health and disease*  
Siew, E. D., Basu, R. K., Wunsch, H., Shaw, A. D., Goldstein, S. L., Ronco, C., Kellum, J. A., Bagshaw, S. M.  
2016; 3: 12-?
- **A Hyperpigmented Reticular Rash in a Patient on Peritoneal Dialysis.** *Peritoneal dialysis international*  
South, A. M., Crispin, M. K., Marqueling, A. L., Sutherland, S. M.  
2016; 36 (6): 699-700
- **Applications for detection of acute kidney injury using electronic medical records and clinical information systems: workgroup statements from the 15(th) ADQI Consensus Conference.** *Canadian journal of kidney health and disease*  
James, M. T., Hobson, C. E., Darmon, M., Mohan, S., Hudson, D., Goldstein, S. L., Ronco, C., Kellum, J. A., Bagshaw, S. M.  
2016; 3: 9-?
- **Acute kidney injury in the era of big data: the 15(th) Consensus Conference of the Acute Dialysis Quality Initiative (ADQI).** *Canadian journal of kidney health and disease*  
Bagshaw, S. M., Goldstein, S. L., Ronco, C., Kellum, J. A.  
2016; 3: 5-?
- **Establishing a continuum of acute kidney injury - tracing AKI using data source linkage and long-term follow-up: Workgroup Statements from the 15th ADQI Consensus Conference.** *Canadian journal of kidney health and disease*  
Mehta, R., Bihorac, A., Selby, N. M., Quan, H., Goldstein, S. L., Kellum, J. A., Ronco, C., Bagshaw, S. M.  
2016; 3: 13-?
- **Impact of electronic-alerting of acute kidney injury: workgroup statements from the 15(th) ADQI Consensus Conference.** *Canadian journal of kidney health and disease*  
Hoste, E. A., Kashani, K., Gibney, N., Wilson, F. P., Ronco, C., Goldstein, S. L., Kellum, J. A., Bagshaw, S. M.  
2016; 3: 10-?
- **Perioperative fluid management and postoperative hyponatremia in children** *PEDIATRIC NEPHROLOGY*  
Oh, G. J., Sutherland, S. M.  
2016; 31 (1): 53-60
- **Exploring Value in Congenital Heart Disease: An Evaluation of Inpatient Admissions.** *Congenital heart disease*  
Shin, A. Y., Hu, Z., Jin, B., Lal, S., Rosenthal, D. N., Efron, B., Sharek, P. J., Sutherland, S. M., Cohen, H. J., McElhinney, D. B., Roth, S. J., Ling, X. B.  
2015; 10 (6): E278-87
- **CRIT-LINE: a noninvasive tool to monitor hemoglobin levels in pediatric hemodialysis patients** *PEDIATRIC NEPHROLOGY*  
Garro, R., Sutherland, S., Bayes, L., Alexander, S., Wong, C.  
2015; 30 (6): 991-998
- **44-h ambulatory blood pressure monitoring: revealing the true burden of hypertension in pediatric hemodialysis patients.** *Pediatric nephrology*  
Haskin, O., Wong, C. J., McCabe, L., Begin, B., Sutherland, S. M., Chaudhuri, A.  
2015; 30 (4): 653-660
- **Utility of Clinical Biomarkers to Predict Central Line-associated Bloodstream Infections After Congenital Heart Surgery.** *Pediatric infectious disease journal*  
Shin, A. Y., Jin, B., Hao, S., Hu, Z., Sutherland, S., McCammond, A., Axelrod, D., Sharek, P., Roth, S. J., Ling, X. B.

2015; 34 (3): 251-254

- **Assessment of Worldwide Acute Kidney Injury, Renal Angina and Epidemiology in Critically Ill Children (AWARE): study protocol for a prospective observational study** *BMC NEPHROLOGY*  
Basu, R. K., Kaddourah, A., Terrell, T., Mottes, T., Arnold, P., Jacobs, J., Andringa, J., Goldstein, S. L.  
2015; 16
- **Reply: To PMID 23998517.** *journal of pediatrics*  
Anglemyer, A., Longhurst, C. A., Sutherland, S. M.  
2014; 165 (3): 644-645
- **Whole-body single-frequency bioimpedance analysis in pediatric hemodialysis patients** *PEDIATRIC NEPHROLOGY*  
Oh, G., Wong, C., Begin, B., Salsbery, K., Sutherland, S., Chaudhuri, A.  
2014; 29 (8): 1417-1423
- **Association between Maintenance Fluid Tonicity and Hospital-Acquired Hyponatremia.** *journal of pediatrics*  
Carandang, F., Anglemyer, A., Longhurst, C. A., Krishnan, G., Alexander, S. R., Kahana, M., Sutherland, S. M.  
2013; 163 (6): 1646-1651
- **Two-point normalized protein catabolic rate overestimates nPCR in pediatric hemodialysis patients** *PEDIATRIC NEPHROLOGY*  
Srivaths, P. R., Sutherland, S., Alexander, S., Goldstein, S. L.  
2013; 28 (5): 797-801
- **Hypertension Screening During Ambulatory Pediatric Visits in the United States, 2000-2009** *PEDIATRICS*  
Shapiro, D. J., Hersh, A. L., Cabana, M. D., Sutherland, S. M., Patel, A. I.  
2012; 130 (4): 604-610
- **Rituximab treatment for recurrence of nephrotic syndrome in a pediatric patient after renal transplantation for congenital nephrotic syndrome of Finnish type** *PEDIATRIC TRANSPLANTATION*  
Chaudhuri, A., Kambham, N., Sutherland, S., Grimm, P., Alexander, S., Concepcion, W., Sarwal, M., Wong, C.  
2012; 16 (5): E183-E187
- **Complement-fixing donor-specific antibodies identified by a novel C1q assay are associated with allograft loss** *PEDIATRIC TRANSPLANTATION*  
Sutherland, S. M., Chen, G., Sequeira, F. A., Lou, C. D., Alexander, S. R., Tyan, D. B.  
2012; 16 (1): 12-17
- **End-Stage Renal Disease and Cardiomyopathy in Children: Cardiac Effects of Renal Transplantation** *TRANSPLANTATION*  
Lal, A. K., de Biasi, A. R., Alexander, S., Rosenthal, D. N., Sutherland, S. M.  
2012; 93 (2): 182-187
- **Disseminated Intravascular Coagulation Due to IgM-Mediated Autoimmune Hemolytic Anemia** *PEDIATRIC BLOOD & CANCER*  
Bleakly, N. T., Fontaine, M. J., Pate, L. L., Sutherland, S. M., Jeng, M.  
2011; 57 (2): 329-331
- **Role of Twenty-Four-Hour Ambulatory Blood Pressure Monitoring in Children on Dialysis** *CLINICAL JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY*  
Chaudhuri, A., Sutherland, S. M., Begin, B., Salsbery, K., McCabe, L., Potter, D., Alexander, S. R., Wong, C. J.  
2011; 6 (4): 870-876
- **Enterococcal peritonitis in children receiving chronic peritoneal dialysis** *NEPHROLOGY DIALYSIS TRANSPLANTATION*  
Sutherland, S. M., Alexander, S. R., Feneberg, R., Schaefer, F., Warady, B. A.  
2010; 25 (12): 4048-4054
- **Protein microarrays identify antibodies to protein kinase C zeta that are associated with a greater risk of allograft loss in pediatric renal transplant recipients** *KIDNEY INTERNATIONAL*  
Sutherland, S. M., Li, L., Sigdel, T. K., Wadia, P. P., Miklos, D. B., Butte, A. J., Sarwal, M. M.  
2009; 76 (12): 1277-1283
- **Steroid-Free Immunosuppression in Pediatric Renal Transplantation: Rationale Outcomes Following Conversion to Steroid Based Therapy** *TRANSPLANTATION*  
Sutherland, S., Li, L., Concepcion, W., Salvatierra, O., Sarwal, M. M.

2009; 87 (11): 1744-1748

● **The challenge for the caregiver of the patient with chronic kidney disease** *NEPHROLOGY DIALYSIS TRANSPLANTATION*

Gayomali, C., Sutherland, S., Finkelstein, F. O.

2008; 23 (12): 3749-3751

● **Combined liver-kidney transplantation in children: Indications and outcome** *PEDIATRIC TRANSPLANTATION*

Sutherland, S. M., Alexander, S. R., Sarwal, M. M., Berquist, W. E., Concepcion, W.

2008; 12 (8): 835-846

● **Liposomal amphotericin B associated with severe hyperphosphatemia** *PEDIATRIC INFECTIOUS DISEASE JOURNAL*

Sutherland, S. M., Hong, D. K., Balagtas, J., Gutierrez, K., Dvorak, C. C., Sarwal, M.

2008; 27 (1): 77-79

● **Three cases of suspected antibody-mediated rejection.** *Clinical transplants*

Sutherland, S. M., Sarwal, M.

2006: 473-478