

# Stanford

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## David Scheinker

Clinical Associate Professor, Pediatrics - Endocrinology and Diabetes

### Bio

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#### BIO

David Scheinker is the Director of Systems Design and Collaborative Research at the Stanford Lucile Packard Children's Hospital. He is the Founder and Director of SURF Stanford Medicine, a group that brings together students and faculty from the university with physicians, nurses, and administrators from the hospitals to improve the quality of care using operations research methodology. He received a PhD in theoretical math from The University of California San Diego under Jim Agler. Before coming to Stanford, he was a Joint Research Fellow at The MIT Sloan School of Management and Massachusetts General Hospital. His current areas of research include applications of operations research in healthcare, healthcare policy, mathematical control theory, and functional analysis.

Concurrently with his university appointments, David has spent time teaching theoretical math to gifted 11 and 12 year old students for the Johns Hopkins Center for Talented Youth. He is writing a popular math book titled Infinity in Wonderland with the intent to bring the material of these courses to a wider audience.

#### ACADEMIC APPOINTMENTS

- Clinical Associate Professor, Pediatrics - Endocrinology and Diabetes

#### ADMINISTRATIVE APPOINTMENTS

- Founder and Director, SURF Stanford Medicine, (2015- present)
- Director of Systems Design and Collaborative Research, Lucile Packard Children's Hospital Stanford, (2015- present)
- Faculty, Clinical Excellence Research Center (CERC), (2018- present)

#### BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Advisor, Carta Healthcare (2017 - present)

#### LINKS

- My Research Group: <https://surf.stanford.edu/>

### Teaching

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#### COURSES

##### 2019-20

- Healthcare Operations Management: MS&E 263 (Win)
- Healthcare Systems Design: MS&E 463 (Spr)

##### 2018-19

- Healthcare Operations Management: MS&E 263 (Win)
- Healthcare Systems Design: MS&E 463 (Spr)

#### 2017-18

- Healthcare Operations Management: MS&E 263 (Win)
- Healthcare Systems Design: MS&E 463 (Spr)

#### 2016-17

- Healthcare Operations Management: MS&E 263 (Win)
- Healthcare Systems Design: MS&E 463 (Spr)

## Publications

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### PUBLICATIONS

- **Differences in Central Line-Associated Bloodstream Infection Rates Based on the Criteria Used to Count Central Line Days.** *JAMA*  
Scheinker, D., Ward, A., Shin, A. Y., Lee, G. M., Mathew, R., Donnelly, L. F.  
2020; 323 (2): 183–85
- **PERSONALIZED INTER-DONATION INTERVALS TO MANAGE RISK OF IRON-RELATED ADVERSE EVENTS IN REPEAT BLOOD DONORS**  
Russell, W., Scheinker, D., Custer, B.  
SAGE PUBLICATIONS INC.2020: E111–E112
- **Improving the efficiency of the operating room environment with an optimization and machine learning model** *HEALTH CARE MANAGEMENT SCIENCE*  
Fairley, M., Scheinker, D., Brandeau, M. L.  
2019; 22 (4): 756–67
- **Practice Characteristics of Board-certified Pediatric Anesthesiologists in the US: A Nationwide Survey** *CUREUS*  
Muffly, M., Scheinker, D., Muffly, T., Singleton, M., Agarwal, R., Honkanen, A.  
2019; 11 (9)
- **Personalized Diabetes Management Using Data from Continuous Glucose Monitors**  
Miller, D. R., Ward, A. T., Maahs, D. M., Scheinker, D.  
AMER DIABETES ASSOC.2019
- **Non-clinical delays in transfer out of the surgical ICU are associated with increased hospital length of stay and delayed progress of care** *JOURNAL OF CRITICAL CARE*  
Safavi, K., Furtado, J., Langle, A., Scheinker, D., Schmidt, U., Daily, B., Levi, R., Dunn, P.  
2019; 50: 126–31
- **EXPLAINING VARIATION IN US COUNTY-LEVEL OBESITY PREVALENCE**  
Valencia, A., Rodriguez, F., Scheinker, D.  
ELSEVIER SCIENCE INC.2019: 1762
- **Identification of Factors Associated With Variation in US County-Level Obesity Prevalence Rates Using Epidemiologic vs Machine Learning Models.** *JAMA network open*  
Scheinker, D., Valencia, A., Rodriguez, F.  
2019; 2 (4): e192884
- **CGM Initiation Soon After Type 1 Diabetes Diagnosis Results in Sustained CGM Use and Wear Time.** *Diabetes care*  
Prahallad, P., Addala, A., Scheinker, D., Hood, K. K., Maahs, D. M.  
2019
- **Anesthesiologist Surgery Assignments Using Policy Learning**  
Ward, A., Zhou, Z., Bambos, N., Scheinker, D., Wang, E., IEEE  
IEEE.2019
- **Practice Characteristics of Board-certified Pediatric Anesthesiologists in the US: A Nationwide Survey.** *Cureus*

Muffly, M., Scheinker, D., Muffly, T., Singleton, M., Agarwal, R., Honkanen, A.  
2019; 11 (9): e5745

- **Hemoglobin A1c Trajectory in Pediatric Patients with Newly Diagnosed Type 1 Diabetes.** *Diabetes technology & therapeutics*  
Pralhad, P., Yang, J., Scheinker, D., Desai, M., Hood, K., Maahs, D. M.  
2019
- **A Retrospective Review of a Bed-mounted Projection System for Managing Pediatric Preoperative Anxiety.** *Pediatric quality & safety*  
Caruso, T. J., Tsui, J. H., Wang, E., Scheinker, D., Sharek, P. J., Cunningham, C., Rodriguez, S. T.  
2018; 3 (4): e087
- **The Pediatric Anesthesiology Workforce: Projecting Supply and Trends 2015-2035** *ANESTHESIA AND ANALGESIA*  
Muffly, M. K., Singleton, M., Agarwal, R., Scheinker, D., Miller, D., Muffly, T. M., Honkanen, A.  
2018; 126 (2): 568–78
- **Constrained extremum seeking stabilization of systems not affine in control** *INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL*  
Scheinker, A., Scheinker, D.  
2018; 28 (2): 568–81
- **Promise and Perils of Big Data and Artificial Intelligence in Clinical Medicine and Biomedical Research.** *Circulation research*  
Rodriguez, F., Scheinker, D., Harrington, R. A.  
2018; 123 (12): 1282–84
- **A quality improvement initiative to optimize dosing of surgical antimicrobial prophylaxis.** *Paediatric anaesthesia*  
Caruso, T. J., Wang, E., Schwenk, H. T., Scheinker, D., Yeverino, C., Tweedy, M., Maheru, M., Sharek, P. J.  
2017; 27 (7): 702-710
- **Detecting Inaccurate Predictions of Pediatric Surgical Durations**  
Zhou, Z., Miller, D., Master, N., Scheinker, D., Bambos, N., Glynn, P., IEEE  
IEEE.2016: 452–57