

David Oren Kessler, MD, MSc

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Personal data

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Birth Place: Queens, NY
Citizenship: USA

Academic Appointments, Hospital Appointments, and Other Work Experience

Academic Appointments

04/2023 – present Professor of Pediatrics (in Emergency Medicine) at CUMC
Columbia University Vagelos College of Physicians and Surgeons

03/2019 – 03/2023 Associate Professor of Pediatrics (in Emergency Medicine) at CUMC
Columbia University Vagelos College of Physicians and Surgeons

07/2013 – 02/2019 Assistant Professor of Pediatrics at CUMC
Columbia University College of Physicians and Surgeons

07/2010 – 06/2013 Assistant Clinical Professor of Pediatrics
Columbia University College of Physicians and Surgeons

11/2009 - 06/2010 Clinical Instructor in Pediatrics
Weill Cornell Medical College

3/2009 - 6/2010 Instructor of Pediatrics
New York University Langone Medical Center

Hospital Appointments

7/2010 – present Assistant Attending, Pediatrics
New York-Presbyterian Morgan Stanley Children's Hospital

12/2008 - 7/2010 Attending Physician, Pediatric Emergency Medicine
Cohen Children's Medical Center

10/2007 - 8/2009 Attending Physician, Pediatrics
New York University Hospital for Joint Diseases

Education

7/2007 - 5/2009 New York University

David Kessler, MD, MSc

Degree awarded 5/2009: Master of Science in Clinical Investigation

8/2000 - 5/2004 Mount Sinai School of Medicine
Degree awarded 5/2004: Doctor of Medicine

9/1994 - 5/1999 Princeton University
Degrees awarded 5/1999: Bachelor of Arts, Psychology
Certificate in Theater and Dance

Training

Post-Doctoral Training

7/2007 - 6/2010 Fellow, Pediatric Emergency Medicine & Emergency Ultrasound
New York University / Bellevue Hospital Center
New York, NY

7/2004 - 6/2007 Resident, Pediatrics/Global Health track
Mount Sinai Hospital
New York, NY

Explanation of any gaps in work/training/education:

1999 - 2000 Theater production, directing, acting, singing, dancing, NYC

Licensure and Board Certification:

Licensure

2021 Pennsylvania State License
2006 New York State Medical License

Inactive

2020 Connecticut State License
2020 New Jersey State License
2017 Emergency Medicine Point of Care Ultrasound Certification - Alliance for
Physician Certification and Advancement
2012 Registered Diagnostic Medical Sonographer

Board qualification

2011 - present Board Certified Pediatric Emergency Medicine, ABP
2007 - present Diplomate of the American Board of Pediatrics, ABP

Honors & Awards:

1/2026 Presidential citation for service to the Research Committee as Vice Chair,

Society for Simulation in Healthcare

- 1/2023 Presidential citation on behalf of the Research Summit leaders, Society for Simulation in Healthcare
- 5/2021 Columbia Biomedical Engineering Technology Accelerator (BIOMEDx) *Team project finalist "SONO-PATCH the world's first wearable imaging device" Awarded Ignition grant (\$25,000) for continued development of wearable ultrasound prototype with Professor Ken Shepard.*
- 4/2021 Excellence in Ultrasound Innovations Award; *awarded by Ultrasound Division Department of Emergency Medicine at Columbia University Vagelos College of Physicians and Surgeons.*
- 9/2020 Inducted as a Fellow in the Society for Simulation in Healthcare Academy *Competitive selection process (Academy includes fewer than 100 fellows worldwide)*
- Fellows of the SSH Academy are a group of leaders and renowned simulationists who have made outstanding and sustained contributions to the field of healthcare simulation. Fellows are:*
- Are highly recognized by peers in the simulation community*
 - Serve as role models, mentors and ambassadors in healthcare simulation*
 - Contribute their time and talent to advance the mission and goals of SSH and the Academy*
 - Participate on internal and external invitational thinks tanks, advisory task forces and committees*
 - Contribute to the growth of SSH and to the discipline of healthcare simulation*
- 5/2018 Friends of Child Life Award (for the Simulation Committee)
New York Presbyterian Morgan Stanley Children's Hospital
- 1/2017 Presidential citation on behalf of INSPIRE, Society for Simulation in Healthcare *In recognition of an Effective, Sustained, World-Wide Network of Inquiry and Scholarship Utilizing Simulation to Improve the Healthcare Delivered to Neonates, Infants and Children.*
- 1/2017 Research Award on behalf of INSPIRE
Emergency Medicine interest group/Society for Simulation in Healthcare *For outstanding contribution to research in the field of Emergency Medicine.*
- 11/2016 Selected to Virginia Apgar Academy of Educators
Columbia University College of Physicians and Surgeons
Selection: competitive, peer review of quantity and quality of educational contributions at Columbia.

- 5/2013 Medical Hero Award, Rbaby Foundation
First ever recipient of the “Hero” award from this non-profit foundation, awarded for supporting the mission to save the lives of ill or injured children.
- 10/2009 PEMpix winner, Section of Emergency Medicine,
American Academy of Pediatrics (publication #53, abstract #89)

International Academic Service:

- 2025 – 2027 Vice Chair of the Research Committee, Society for Simulation In Healthcare
- 2011 – present Co-founder, International Network for Simulation-Based Innovation, Research, and Education (INSPIRE)
Current role: Advisory board member, 2020 – present
Prior roles: Co-chair, 2017 – 2020, Founding research director, 2011 – 2017
INSPIRE’s mission is to improve the lives of children through healthcare simulation science and is the largest pediatric simulation research network in the world. As a co-founder, I was instrumental in drafting the mission, vision, and strategic growth of this network to over 1000 members across 50 countries. Network members have collectively received millions of dollars in grant funding and published hundreds of manuscripts and educational materials. Over 60% of projects mentored through INSPIRE have resulted in academic scholarship. As co-director (and previously as research director) I have organized and led one to four in-person meetings each year with over 200 attendees since 2011 (and virtually for 2020 and 2021). During my tenure as co-chair, I oversaw the development of bylaws, policies, and the formal incorporation of INSPIRE as an independent 501c non-profit.
- 2021 Grant reviewer, INSPIRE Diversity Equity & Inclusion award
- 2020 – 2022 Senior Mentor, Simulation for Simulation in Healthcare Virtual Scholars program
Chosen as a senior mentor and recognized expert in simulation science to mentor scholars in this highly selective international academic society longitudinal mentoring program
- 2015 Invited education expert, Procedural Skill Training in Canadian Internal Medicine, International Pre-Conference on Residency Education meeting (Toronto, Canada)

National Academic Service:

- 2019 Scientific Reviewer, FY20 NASA / TRISH Biomedical Research Advances for Space Health (BRASH) peer review panel

Selected as an established and recognized international expert in simulation science

2018 Scientist Reviewer, FY18 Department of Defense sponsored Trauma Resilience Immersive Adaptive Gaming Environment Award (TRIAGE) peer review panel
Selected as an established and recognized international expert in simulation science

2016 - 2017 Member, Point-of-Care Ultrasound task force for the Alliance for Physician Certification and Advancement

2010 - 2017 Faculty advisor, PEMnetwork.org/PEMfellows.com

2008 - 2011 Founding Co-director, Patient Outcomes In Simulation Education (POISE) *Collaborative research network committed to studying educational projects with direct clinical implications. POISE was merged with the research network (EXPRESS) in 2011 to become INSPIRE.*

Regional Academic Service:

2016 - 2017 Member, Solutions for Patient Safety Planning Committee

2013 - 2016 Member, Advisory Council for Interprofessional Education, Rutgers University School of Health Related Professions

2012 - present Simulation Chair, Steering Committee, Pediatric Emergency Physicians Network *Non-profit educational website for Emergency Medicine*

Local Academic Service:

Columbia University Irving Medical Center

2025- 2027 Senator (elected non-tenure term position), Columbia University Senate
Member, Commission on the status of Health Sciences
Member, htion Tecnology committee

2025 – present Academic Infractions Committee (VP&S)

2024- present Member, School of Nursing Simulation Advisory Board

2024 – 2025 Member, Trans-departmental Children’s Council-Faculty Practice Organization

2023 – 2024 Member, Dean’s Strategic Planning workgroup- Role for Artificial Intelligence

2022- present Member, APGAR grant review committee

2021 - present Member, Columbia Commons Interprofessional Education Committee (qualifying committee subgroup)

2020 – present	Member, Columbia University Industry Relations Committee
2018 – 2021	Voting Member, Faculty Council of Medicine (3-year term)
2013 – 2018	Member, Faculty Practice Organization/Columbia Doctors Quality Committee

Department of Emergency Medicine

2018 – present Vice Chair of Innovation & Strategic Initiatives
Oversees: Simulation Division, Artificial Intelligence Community

My mission in this inaugural departmental role is to lead change by spearheading novel program developments in operations, education, quality, or research. In this role, I have fostered a culture of innovation & collaboration to address complex challenges in the department.

Major accomplishments include:

- *Leading the development of a virtual health division, organizational structure, mission, vision, strategic planning, faculty development, and core faculty*
 - *Virtual Urgent Care (VUC) annual growth from 2,399 (2018) to 7,573 patients (2021)*
 - *Led VUC workflow transition from AmWell to EPIC*
 - *Unique covid initiatives: e.g. co-led the creation and implementation of remote patient monitoring program for hypoxia.*
 - *Partnered with marketing to launch social media (twitter) campaign) for pediatric and adult VUC*
- *Formation of a new simulation division, organizational structure, mission, vision, strategic planning, and core programming*
 - *Initiated in situ simulation programs at 4 campuses (Lawrence, Allen, Milstein, CHONY)*
 - *Pioneered novel hands-on faculty development sessions*
 - *Procedural skills refreshers (semi-annual)*
 - *Interprofessional communication workshop (“E³: Empathy, Equity, Empowerment)*
 - *FORTIFY (Faculty Orientation Refresher to Invest in Future Resiliency) – Standardized patient encounters designed to practice communication skills and normalize culture of feedback and self-improvement for all new faculty hires*
 - *Professionalism refresher program- Standardized patient encounters for individuals referred from quality/safety team to help refresh specific interprofessional skills*
- *Formation of “catalyst” award to jump-start innovation. Sample projects include:*
 - *Design of a novel 3d printed ultrasound training model*
 - *Creation of a digital simulation display interface and library*
- *Solicited philanthropic award for MakerSpace (3d printers, materials, laser cutter)*

- 2023 – present Member, Committee on Appointment and Promotions
Member, CV-squared working group 2023-2024
- 2021 – 2023 Chair, Simulation Division Leadership Committee
As the inaugural chair, I led the new simulation leadership team through mission, vision, and strategic planning sessions and guided the formation and organizational structure for a new simulation division
- 2021 – 2023 Member, Diversity, Equity, & Inclusion Committee
As a member of the DEI committee I led the formation of an immersive communication workshop for vital DEI related skills-development and practice
- 2021 – 2024 Member, Education Division Meeting
- 2020 – present Member, ACGME Core Faculty in Emergency Medicine
- 2019 – 2022 Chair, Telehealth Leadership Committee
As the inaugural chair, I led the new telehealth leadership team through mission, vision, and strategic planning sessions and guided the formation and organizational structure for the division of virtual health
- 2019 – 2020 Member, Pediatric Emergency Medicine Chief Search Committee
- 2018 – present Member, Executive Leadership Committee
Support the Chair to define departmental strategic priorities, proactively brainstorm solutions, support implementation, and participate in communication and change management strategies. Steward in both soliciting diverse viewpoints from department and in providing reciprocal messaging of departmental mission, vision, and strategic priorities and progress
- 2018 – 2024 Member, Wellness Committee
- 2018 – 2019 Member, Space Committee

Department of Pediatrics

- 2014 - 2015 Member, Signature Research Programs- Program in Quality, Safety and Outcomes Research, Department of Pediatrics
- 2013 - 2020 Member, ACGME Core Faculty in Pediatrics
- 2011 - 2018 Interviewer, Pediatric Residency Program

Division of Pediatric Emergency Medicine

- 2012 – present Interviewer, Pediatric Emergency Medicine Physician Recruitment
- 2010 – 2020 Interviewer, Pediatric Emergency Medicine Fellow Program
- 2010 – present Member, Pediatric Emergency Medicine Leadership Committee (weekly)
Interdisciplinary leaders of the Pediatric Emergency Department who meet to discuss operations
- *Weekly physician administrator on call (2018-present)*
 - *Help spearhead and contribute to improvement projects and new clinical programs including (2010-2019):*
 - *Trauma 5s redesign project to improve our trauma room setup*
 - *CPR point-of-care training station*
 - *Signage to inform patients about standard wait times*
 - *Development and production of a “Welcome Video” for patients & families*
 - *New design for ultrasound equipment storage in pods*
 - *Development of a new “Stat Anesthesia” pager*
 - *Development of a new trauma activation system (minor/major trauma with new pager system)*
- 2013 - present Member, ACGME Core Faculty in Pediatric Emergency Medicine

Vagelos College of Physicians and Surgeons

- 2025 - present Invited Member, Academic Infractions subcommittee
- 2025 - present Invited Member, Emerging Technology & Informatics subcommittee (FPO)
- 2025 - present Invited Member, Peer messenger program (tripartite PRIME program)
- 2021 - 2023 Invited Member, Columbia University Irving Medical Center Office of Innovation in Health Professions, Equity & Justice / Simulation & Technology Community of Practice Collaborative
Established in 2021 to integrate the University’s institutional resources in health care, business, law, journalism, and beyond to develop cutting-edge health professions education. As an invited member of two focus areas, I contribute to collaboration and growth in these domains.

- 2017 - 2019 Member, Fundamentals Curriculum Committee
Oversaw the operation of Fundamentals to ensure quality and consistency. Manages educational policies in this curriculum phase.
- 2017 - present Member, CARE Curriculum Committee
Oversee clinical skills teaching and assessment across the curriculum, including the Core EPA program and simulation activities.
- 2015 - 2017 Member, Major Clinical Year Curriculum Committee
Oversaw the operation of major clinical year to ensure quality and consistency. Managed educational policies in this curriculum phase.
- 2012 - 2019 Interviewer, Columbia University College of Physicians & Surgeons

New York Presbyterian Hospital

- 2019 – 2022 Member, Enterprise Telehealth Committees
- Remote Patient Monitoring (2019 – 2021) *Rapidly developed and deployed a novel clinical program for remote monitoring of patients with suspected COVID being discharged home during initial COVID surge in NYC partnering with other sites in enterprise*
 - Telehealth Advisory Committee (2019 – 2021)
 - Telehealth Quality Advisory Committee
 - ED Quality subgroup (2020 – 2021) *Developed quality metrics for Virtual Urgent Care / Emergency Medicine*
 - COVID-19 Ambulatory Covid Meeting (2019 – 2020)
 - Cross-Enterprise Weekly Telehealth Meeting (2019 – present)
- 2014 -2015 Team member, Bio containment Intensive Care Unit (BICU)
New York-Presbyterian Hospital was selected by the governor to be a receiving hospital for any patient infected with Ebola. BICU volunteers received didactic education, established competency in donning and doffing of personal protective equipment (PPE), and psychomotor skills via low and high-fidelity simulations.

NYP Morgan Stanley Children’s Hospital

- 2022- present Ad hoc clinical debriefing lead. *Leading warm debriefing for challenging clinical situations at the request of operations and quality team*
- 2016 - 2019 Member, ED/Inpatient communication workgroup

2013 - 2014	Physician Champion for Sepsis Safety
2013 - 2016	Member, Pediatric Sepsis Workgroup
2013 - 2014	Division representative, Annual Pediatric Residency Educational Retreat
2013 -2014	Member, Pediatric Emergency Department NCC interview committee
2012 - 2013	Member, Emergency Department Room Stocking Committee
2012 - 2013	Leader, Emergency Preparedness Committee for new ED
2011 - 2016	Founding Leader, Pediatric ED In-Situ Mock Code Committee <i>Interprofessional working group for simulation in the Pediatric ED</i>
2010 - 2015	Member, Children's Comfort Committee

Professional Organizations and Societies:

Memberships and Positions

International

2014 – 2024	Member, P2Network <i>International organization committed to promoting and researching topics pertaining to pediatric emergency ultrasound http://p2network.com</i>
2014 - 2018	Founding Chair, Education Committee <i>As a founding chair of the education committee, I developed conference programming and mentored network wide education scholarship projects</i>
2011-present	Member, International Pediatric Simulation Society
2015, 2017	Chair, Professor rounds, International Pediatric Simulation Society Meeting
2012 - 2018	Co-chair, Articles and Bylaws Committee
2012 - 2013	Co-chair, Nominations Committee
2012	Abstract Reviewer
2010-present	Member, Society for Simulation in Healthcare
2026-2029	At-Large Director, Board of Directors
2025-2027	Vice Chair, Research Committee <i>Liason to ILCOS, ISDR sub-committee member</i>
2021- 2023	Workgroup Leader, 2023 Research Summit, 23 rd International Meeting on Simulation in Healthcare

Invited to serve as group co-lead for “mastery learning & technical skills”. This decadal event is a major undertaking for the society and the field of simulation in collaboration with the other major simulation societies. The role of group leader is offered to specific experts in the field who are considered true leaders and research innovators. As leader for this workgroup – I am overseeing an expert panel that will compose standard setting practice guidelines, and conducting a systematic review on the topic of simulation-based training and skill development in health professions education.

2017 - present Member, grants committee, International Simulation Registry
 2014, 2016 Abstract reviewer, International Meeting for Simulation in Healthcare

National

2010 – present Member, American College of Emergency Physicians
 2020 - 2022 Member, Ultrasound Emerging Technology Subcommittee
 2020 - 2022 Member, Emergency Ultrasound Simulation Subcommittee
 2010- present Member, Society for Academic Emergency Medicine
 2019 – present Member, Vice chair interest group
 2004-present Member, American Academy of Pediatrics, Section on Emergency Medicine
 2016 - present Member, Section on Simulation and Innovative Learning Methods
 2016 - present Member, Education Committee
 2016 Grant reviewer, Ken Graff Award
 2014 - 2018 Co-chair, Ad hoc Point-of-care Ultrasound Committee
 2013 Fellow (selected)
 2012 - 2018 Member, Pediatric Point-of-care Ultrasound Task Force
International collaboration between American Academy of Pediatrics, Society for Academic Emergency Medicine, American College of Emergency Physicians
 2011 - 2013 Judge, PEMPIX competition
 2011 - 2016 Member, Patient Safety Task Force, Committee for Quality Transformation
 2005 - 2007 Program Delegate for Mount Sinai
 2004 - 2007 Liaison, Residency Advocacy Group

Regional

2007-2014 Member, New York Society for Pediatric Emergency Medicine

Journal Reviewer

2015 - 2018 Deputy Editor, Teaching & Learning in Medicine

2010 – present Ad hoc peer reviewer
BMJ Simulation & Technology Enhanced Learning
Resuscitation
Pediatrics
Pediatric Emergency Care

Fellowship and Grant Support:

Present Support

The Dalio Center for Health Justice, 2025 Research Grant PI:Kessler 2025 - 2026

Title: Found in Translation: Comparing Human to Machine Translation for Safer Emergency
Department Discharge Instructions Direct Costs: \$50,000

INSPIRE -Research Award PI:Li 2025 - 2026
Title: Natural Language Processing to Identify Communication Patterns Associated with High Quality
CPR in Simulation Direct Costs: \$22,000
Role: Senior investigator

Levmax Health Grant - <https://albertainnovates.ca/funding/levmax-health/>
Cheng (PI), Role: Co-investigator 8/2024 – 8/2025
Design, Development and Evaluation of an Augmented Reality and Screen-based Decision Support
System for Cardiopulmonary Arrest: A Multicenter, Randomized Controlled Trial

AHRQ -R21-R33 1R21HS029372-01 PI: Keith Kleinman & Justin Jeffers 2023-2028
Title: AR-CPR: Refinement and Large-Scale Simulation-Based Testing of a Novel Augmented
Reality Point of Care Chest Compression Feedback System Agency for Healthcare Research and
Quality (AHRQ) Direct costs: \$750,000
Role: co-investigator
Overall Goal: To test performance of a novel augmented-reality based CPR feedback device

BARDA 75A50120C000097 PI: Gregory 2021-2025
Biomedical Advanced Research and Development Authority (BARDA) via subcontract from Philips
Research, and Oregon Health & Science University Direct costs: \$868,000
Parent Award Title: An AI-Based Multi-Functional Hand-Held Lumify Ultrasound for Automatic and
Intelligent Quantitative Assessment of Lung Injuries, Diseases and Traumatic Injuries in a Mass-
Casualty Incident

Title (project 1): Use of Point of Care Ultrasound to Collect Lung Images in Suspected
COVID-19 Positive Subjects
Overall Goal: To collect lung ultrasound images in suspected COVID-19 positive subjects.
These images will be used to develop an algorithm for automated interpretation of lung
ultrasound data.
Role: Co-investigator

Title (project 2): Merged (coalescent) B-line Study

Overall goal: To perform video annotation of lung ultrasound images to confirm the ultrasound features in each video. Annotation will be used to create machine learning algorithms.
Role: Co-investigator

Title (project 3): Lung Ultrasound for COVID and Smoke Inhalation Lung Injury
Overall goal: To perform video annotation of lung ultrasound images to confirm the ultrasound features in each video. Annotation will be used to create machine learning algorithms.
Role: Co-investigator

Title (project 4): Use of Point of Care Ultrasound to Collect Lung Images in Subjects with Lower Respiratory Symptoms
Overall goal: To collect lung images in subjects with lower respiratory symptoms for use in training artificial intelligence algorithms.
Role: Co-investigator

Title (project 5): Use of Point of Care Ultrasound to Collect Images in Subjects with Trauma or Positive Fluid
Overall goal: To collect eFAST images in subjects with positive findings or trauma for training artificial intelligence algorithms.
Role: Co-investigator

Past Support

Emerging Tech- Artificial Intelligence PI: Kessler 2023-2024
Title: Machine Learning for Infant Lumbar Puncture Direct costs: \$20,000
Overall Goal: To design an artificially Intelligent Algorithm to Detect Key Features on Infant Spinal Ultrasound

The Russell Berrie Foundation PI:Shin-Kim/Kessler 2022-2024
Title: Diabetes and Medical Simulation: Enhancing the Management of Diabetic Emergencies in an Acute Setting through Innovative Training Direct costs: \$400,000
Overall Goal: To design an interactive simulation curriculum focused on the acute recognition and stabilization of diabetic emergencies.

Clinical Innovation Lab PI:Kessler/Maniker/Feiner 2022-2023
Title: Virtual Reality Training for Ultrasound-Guided Central Line Placement Direct costs: \$20,000
Overall Goal: Design a virtual reality training module for training in ultrasound-guided central line placement.

Emerging Technologies Consortium PI: Kessler / Maniker 2022-2023
Title: Transforming Cardiac Arrest Education Through Virtual Reality Direct costs: \$25,000
Overall Goal: Design a virtual reality training module for operating the Zoll defibrillator, and evaluate transfer of skills to the simulated environment.

DARPA PA-20-02-02PI Eslami / Netrias LLC 2021-2022
Title: ULTRON: ULTrasound Oriented Neural network Direct costs: \$62,087
Overall goal: To build a set of novel, specialized neuronal blocks designed specifically to identify the static and dynamic patterns used by experts for ultrasound image interpretation.

Role: Co-investigator

Butterfly, LLC PI: Kessler 2021-2022
Title: Feasibility/Acceptability of Patient Sonography for home-monitoring Direct costs: \$18,776
Overall Goal: To measure quality of images obtained by patients/parents and assess the feasibility and acceptability of self-directed home ultrasound acquisition.

INSPIRE Clinical Outcomes Award PI: Hunt 2020-2022
Title: CPR Optimization and Achievement (CPR COACH) Direct costs: \$200,000
Overall Goal: Testing impact of a CPR coach on quality of CPR across a collaborative resuscitation network (PediRESQ) using a stepped-wedge design.
Role: Co-investigator

Inventive Government Solutions, LLC PI: Kessler 2020-2020
Title: Identifying Childhood Pneumonia on a Portable Ultrasound Device Direct costs: \$91,470
Overall Goal: To capture ultrasound videos of pediatric pneumonia, effusion, and pneumothorax to train a convolutional neural network to automatically recognize features of pediatric pneumonia.

Global Good Fund/Oregon Health & Science University PI: Kessler 2020-2020
Title: Expert Video and Frame Level De-Identified Lung Ultrasound Image Annotation for Machine Learning and Testing Direct costs: \$107,767
Overall Goal: To annotate lung pathology on ultrasound videos to serve as ground truth for training a convolutional neural network to automatically recognize features of pulmonary disease.

DARPA W911NF-16-2-0035 PI: Shaman 2018-2020
Title: The Virome of Manhattan: A Testbed for Radically Advancing Understanding Viral Respiratory Infections Sub-study direct costs: \$190,000
Overall goal: This sub-study of the virome project aims to identify precise biomarkers predictive of transmission of illness and patient prognosis. I served as leader of sub-study focused on artificial intelligence/machine learning for pulmonary ultrasound interpretation. To evaluate the utility of chest ultrasound in predicting the severity of disease in pediatric patients with respiratory distress.
Role: Co-Investigator

Health Practice Research Pilot Award PI: Kessler 2017-2018
Irving Institute / Dept. of Biomedical Informatics Direct costs: \$25,000
Title: Real-time Dashboard for Emergency Department Overcrowding
Overall Goal: To obtain and compare validity evidence for emergency department overcrowding scores and develop a real-time dashboard. *Internal award supported by UL1TR000040.*

Columbia University Provost's Award PI: Moitra 2016-2017
Title: Crisis Resource Management / Massive Open Online Course Direct costs: \$25,000
Overall goal: To develop a massive open online course for "Crisis resource management"
Role: Co-investigator-Contributed to content, curriculum, assessment methods, and storyboarding.

Rbaby Foundation PI: Kessler 2017-2018
Title: Dynamic vs Static Ultrasound Images for Learning Intussusception Direct costs: \$80,000
Overall goal: To develop an online learning module for intussusception sonographic interpretation

and test whether dynamic or static images are more efficient training strategies.

American Heart Association / Affiliate Award PI: Chang 2015-2017
Title: In-Hospital Q CPR Competition: An International Leaderboard Study Direct costs \$600,000
Overall goal: To determine the impact of a leaderboard on quality and quantity of CPR practice.
Role: Co-investigator

Risk reduction award PI: Kessler 2015-2016
Medical Center Insurance Company (MCIC) Direct costs: \$31,250
Title: Stress Testing the System for Sepsis Recognition
Overall goal: To improve sepsis response via practice with standardized patient scenarios.

Rbaby Foundation PI: Kessler 2015-2016
Title: INSPIRE Network Training for Pediatric Emergency Care Direct costs: \$55,318
Overall goal: To disseminate of curricula and research findings from various projects incubated within INSPIRE.

N00014-14-C-0046 PI: Gerard 2014-2016
Department of Defense –Office of Naval Research Direct costs: \$541,807
Title: Medical Modeling and Simulation (MM&S) for Military Training and Education; A Virtual Pediatric Simulator for Emergency Scenario Training of Military Medical Personnel.”
Overall goal: To develop and validate a game-based, virtual pediatric simulator for training on high-stakes pediatric emergency medicine.
Role: Subject Matter Expert *Provided expertise in pediatric emergency medicine, simulation and gaming theory to develop a virtual pediatric simulator.*

Rbaby Foundation PI: Auerbach 2014-2015
Title: IMPACTS (Improving Pediatric Acute Care Through Simulation) Direct costs: \$150,000
Overall goal: To utilize standardized simulation to assess and compare performance between general emergency medicine departments in the community and pediatric emergency medicine-staffed departments.
Role: Co-investigator

Clinical Trials Office Pilot Award PI: Kessler 2014-2015
Irving Institute, Columbia University Direct costs: \$50,000
Title: Sonographic Visualization vs Palpation Technique for Infant Lumbar Puncture
Overall goal: To obtain pilot data for definitive trial investigating the utility of point-of-care sonography in improving success rates with the infant lumbar puncture procedure. *Internal award supported by ULTR1000040.*

Rbaby Foundation PI: Auerbach 2013-2014
Title: IMPACTS (Improving Pediatric Acute Care Through Simulation) Direct costs: \$300,000
Overall goal: To utilize standardized simulation to assess and compare performance between general emergency medicine departments in the community and pediatric emergency medicine staffed departments.
Role: Co-investigator

Heart & Stroke Foundation of Canada PI: Cheng 2012-2015

Canadian Institute of Health Research Institutes of Circulatory and Respiratory Health (CIHR)
Title: Assessing and Improving the Quality of CPR Delivered during Pediatric Cardiac Arrest Using a Novel Pediatric CPR Feedback Device Direct costs: \$450,000 CAD
Overall goal: To compare CPR performance with and without the use of a novel CPR feedback device and explore whether pre-training with the device improves outcomes.
Role: Co-investigator

Rbaby Foundation PI: Kessler 2012-2013
Title: The INSPIRE Skills Training Initiative: Improving Infant Lumbar Puncture Clinical Outcomes Among Novices Direct costs: \$100,000
Overall goal: To demonstrate improvement in clinical outcomes for infant lumbar puncture after a training intervention and a competency assessment across an educational network of pediatric and emergency medicine training programs.

Core Imaging Grant PI: Kessler 3/2012-12/2012
Irving Institute, Columbia University Direct costs: \$10,000
Title: Sonographic Features that Predict Success or Failure with Infant Lumbar Puncture
Overall goal: To explore the utility of ultrasound to identify safe and feasible spaces for needle cannulation in the infant lumbar puncture procedure and describe and validate novel measurements of the thecal canal. *Internal award supported by UL1 TR000040.*

Rbaby Foundation PI: Auerbach 2011-2012
Title: Lumbar Puncture Training to Improve Clinical Success Rates Amongst Interns Direct costs: \$150,000
Overall goal: To compare clinical success rates between trainees who received a simulation-based training protocol and those who received a more standard training.
Role: Co-investigator

Loan Repayment Program PI: Kessler 2008-2012
National Institutes of Health (NIH) Health Disparities Research Direct costs: \$13,235
Title: Using Simulation to Decrease Disparities in Medical Education
Overall goal: To create standardized training protocols to improve trainee skill prior to practice and thus reduce the unbalanced use of patients in underserved communities as "practice" for trainees.

Rbaby Foundation PI: Auerbach 2010-2011
Title: POISE collaboration (Pediatric Outcomes In Simulation Education) Direct costs: \$90,000
Overall goal: To develop and disseminate new skill training paradigms.
Role: Co-investigator

Medical Education Innovation and Research PI: Kessler 2008-2009
Internal Grants Program, NYU Direct costs: \$15,000
Title: Recurrent Pediatric Simulation Airway Resuscitation Training
Overall goal: To test a novel mode of simulation training.

Industry sponsor (PI: Kessler) 2005-2006
GenProbe Direct costs: \$2,000
Title: Sexual health disparities between emergency department patients with and without primary care

David Kessler, MD, MSc

				students, RNs, RTs, child life, radiology techs		
2007-2010	Pediatric transport Medicine course- NYU	Workshop	Small group leader	Pediatric Residents	15	Annual (6hr/yr)
2007-present	PALS-Bellevue	Small group	PALS instructor	Residents, Attendings, RNs	14	Annual (4hr/yr)

Advising and Mentorship

Scholarly Oversight Committee- Pediatric Emergency Medicine Fellows

2023-2026 Andzelica Dechnik
2019-2022 Joshua Belfer
2014-2017 Madeline Renny
2011-2014 Zohar Shamash
2010-2013 John Babineau

Junior Faculty Advising

Advisee name	Advisory role	Status of mentee
Rachel Elkin 2023 - present	Simulation research	Assistant professor at CUMC
Janice Shin-Kim 2021 - present	Simulation mentorship	Assistant professor at CUMC
Almaz Dessie 2018-2022	Ultrasound research	DEI director at Brown
Adam Blumenberg 2019 - present	Simulation mentorship	Associate professor at CUMC
Laurie Malia 2018-present	Ultrasound research	Assistant professor at CUMC
Selin Sagalowsky 2016-2021	Simulation mentorship	Director, Pediatric Emergency Medicine Fellowship Program Assistant Professor, Departments of Emergency Medicine and Pediatrics New York University Grossman School of Medicine
Angela Maxwell 2015-2016	PEM Ultrasound fellow	Ultrasound Attending at Children's National Medical Center
Daniel Fenster 2015-present	Simulation mentorship	Director, Pediatric simulation Associate Professor of Pediatrics (in Emergency Medicine) Department of Emergency Medicine Division of Pediatric Emergency Medicine
Lorraine Ng 2013-2020	Ultrasound mentorship	Assistant Director, Emergency Ultrasound Director, Pediatric Emergency Ultrasound Associate Professor of Pediatrics (in Emergency Medicine) Department of Emergency Medicine Division of Pediatric Emergency Medicine Division of Emergency Ultrasound

		Columbia University Vagelos College of Physicians & Surgeons
Anthony Amorese 2013-2017	Simulation mentorship	RN, CPEN Clinical education specialist at Patient Safety Institute-Center for Learning and Innovation, Northwell Health
Lindsey Chaudoin 2012-2017	PEM ultrasound fellow	Assistant professor of Emergency Medicine at Carolinas Medical Center

Mentorship

Research mentorship

Mentee name	Level of learner	Project	Status of mentee
Polina Orlova	Master's student at Teacher's College	GROVE (Generative Restorative Outdoor Virtual Environment)	Student
Joshua Faber	EM resident	RETRACE: Revenue Enhancement through Targeted Recoding and Automated Chart Evaluation	Awarded Silverman Fellowship
Erin Hannon	PEM fellow	Found in Translation: Comparing Human to Machine Translation for Safer Emergency Department Discharge Instructions	Awarded Dalio Award
Ariel Sugarman	PICU fellow	Causes for pauses during simulated ECMO	Columbia PICU 1 manuscript 1 abstract
Ann Pagnam 2023-present	RN	Safety huddles to prevent cardiac arrest in the PCICU	Columbia RN
Rachel Elkin 2019-2022	PEM Fellow	Quantifying learner expertise using unobtrusive measurements of cognitive load during Virtual Reality Training	Applying for jobs 1 manuscript pending 3 abstracts presented (abstracts #26, 27, 30)
Elaine Chiang 2020-2022	PEM Fellow	Diaphragm Ultrasounds in Children with Asthma Exacerbations presenting to the Pediatric Emergency Department	Matched Columbia Ultrasound Fellowship ('22- 23) 1 oral presentation, 1 poster (abstract #3)
Cristian Treat 2021-2022	Medical Student	Feasibility and Acceptability of a Virtual Reality Training Model for Advanced Life Support Defibrillators	Medical School 1 abstract presented (abstract#1) 1 manuscript pending
Frank Parisi 2021-2022	Medical Student	Impact of a crisis resource response online course on medical student self-reported psychological safety, help-seeking behavior, situational awareness, and information sharing during major clinical year	Medical School 1 abstract presented (#12)

Robert Spencer 2019-2020	Cardiology Fellow	Critical Event Checklists for Pediatric In-hospital Cardiac Arrests. Oral Presentation	Assistant Professor, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell 1 poster, 1 oral presentation (abstract #18) 1 manuscript submitted
Zoe Grabinski 2017- 2020	PEM Fellow	Reporting of Unsafe Conditions at an Academic Women and Children's Hospital.	Assistant Service Chief for Pediatric Quality & Patient Safety Assistant Professor, Departments of Emergency Medicine and Pediatrics New York University Grossman School of Medicine 1 poster (abstract #28) 2 manuscripts (#7, #18)
Anna Silberman 2018-2020	PICU fellow	Essential Components of a Pediatric Critical Care Transport Communication Curriculum.	Assistant Professor of Pediatrics at UT South Western Medical Center 1 poster (abstract #19) 1 manuscript (#7)
Kai Jones 2018-2020	Medical student	Using Natural Language Processing to Compare Task-Specific Verbal Cues in Coached versus Non-Coached Cardiac Arrest Teams during Simulated Pediatrics Resuscitation	Medical Intern, Beth Israel Deaconess Medical Center/Harvard Medical School (2021) 1 manuscript (#9)
Karan Jani 2018-2020	Medical student	Using Natural Language Processing to Compare Task-Specific Verbal Cues in Coached versus Non-Coached Cardiac Arrest Teams during Simulated Pediatrics Resuscitation	Medical Intern, Massachusetts General Hospital (2021) 1 manuscript (#9)
Zian "Sam" Zhao 2013-2015	Pediatric resident	Assessing the Use of a Musical Mnemonic To Teach CPR Compression Rate	Co-director of resident and medical student education, Assistant Professor, Division of Emergency Medicine, Children's National Medical Center, Washington D.C. 1 manuscript (manuscript #17) 1 poster (abstract #48)
Lindsay Nadkarni (Shepard) 2017-2020	Medical Student, Pediatric Resident	The Development and Validation of a Concise Tool for Assessing Team Leader Performance During Pediatric Simulated Resuscitations.	Pediatric resident at Columbia University, NY 2 manuscripts (manuscripts #3, #26 as Nadkarni) 2 posters (abstracts #13, #35)
Carrie Ng 2014-2017	PEM Fellow	Nurse attitudes towards three Ultrasound-guided IV techniques	Emergency Ultrasound fellow at Children's National Medical Center 1 poster (abstract #32) 1 manuscript (manuscript #42)
Ariel Daube 2014- 2016	PICU Fellow	The Cuff Puff: A novel Method to Confirm Endotracheal Tube Depth Using Color Doppler Ultrasound	PICU attending at NYU 1 manuscript (manuscript #3) 1 poster (abstract #45)
Alice Ruscica 2012-2015	PEM fellow	1. Novel Feedback card for pediatric residents 2. Post-resuscitation process review	PEM attending at Columbia 2 posters presented (abstracts #47, #61)
Peggy	Medical Student	The Sonographic Appearance	1 manuscript (manuscript #36)

Tseng 2012-2013		of Spinal Fluid at Clinically Selected Interspaces in Sitting Versus Lateral Positions	2 oral presentations, 3 posters (abstracts #57, #58)
Yaffa Vitberg 2011-2014	PEM fellow	The Sonographic Appearance of Spinal Fluid at Clinically Selected Interspaces in Sitting Versus Lateral Positions	PEM Attending Cornell 1 manuscript (manuscript #37) 2 oral presentations, 3 posters (abstracts #57, #58)

Development of Instructional Material and Curricular Design Used Locally (CUIMC / NYP)

- 2019- present Co-Author, Faculty Orientation Refresher To Invest in Future Resiliency (Learner: Faculty / Attending Physicians)
This curriculum is designed to help practice and refresh the communication skills that are central to relationship building and maintenance in a busy & stressful environment like the Emergency Department. Standardized patients are trained to play roles in scenarios that allow the learner to practice various communication skills. All new faculty hires undergo this experience at orientation. The experience has also been adapted to provide refresher opportunities for faculty with professionalism grievances from patients or staff.
- 2017-2019 Contributor, Foundations of Clinical Medicine- Tutorials (Learner: pre-clinical medical students)
Tutorials spans three semesters at the start of medical school to cover all aspects of the medical history, physical exam, note writing, and oral presentation. All medical students pass through this annual course. I co-designed the large-scale integration of standardized patients into the curriculum to teach and assess physical exam maneuvers in a more standardized fashion.
- 2013-2015 Co-Author, Ultrasound Mini-Fellowship curriculum (Learner: Pediatric Emergency Medicine Attendings)
Contributed to the content, instructional design strategy, and curricular objectives. This 3-month curriculum aims to jump-start skills with point-of-care ultrasound performance and interpretation via one-on-one coached learning sessions and image review sessions. This program was pivotal in increasing the core faculty of sonographers to help drive clinical and academic ultrasound programs.
- 2012-2018 Co-author, “First 5 minutes” Simulation curriculum (Learner: Pediatric Interns)
Contributions to the instructional design strategy, curricular objectives, and content. This curriculum aims to prepare first-year pediatric residents for management of common emergent or urgent scenarios they will encounter in their role. It continues to be a core experience for all pediatric interns.
- 2012-2014 Co-author, “Project Mockingbird” Simulation curriculum (Learner: CHONY ED night staff, physicians, nurses, technicians)

Contributions to the instructional design strategy, curricular objectives, and content. This curriculum aims to prepare front-line night staff in the emergency department for managing high-stakes resuscitation scenarios.

- 2012-2019 Primary author, Pediatric Emergency Ultrasound Fellowship curriculum (Learner: pediatric emergency ultrasound fellow)
This curriculum cultivates highly trained pediatric emergency ultrasound specialists as clinical experts and scholars in the use of point-of-care ultrasound for improved clinical care of acutely ill and injured children.
- 2010-2017 Co-Author, Intern procedure workshop (IV, splinting, suturing, lumbar puncture) (Learner: Pediatric Interns)
Contributions to the instructional design strategy, curricular objectives, and content. This curriculum aims to prepare new pediatric interns for some common procedural skills they will need during their first year.
- 2010-2019 Primary author, Ultrasound core curriculum for pediatric emergency medicine (Learner: Pediatric emergency medicine fellows)
Provides fellows with basic competency in performing, interpreting and implementing the core applications for emergency point-of-care ultrasound.
- 2011-2019 Primary author, In Situ mock code curriculum (Learner: Pediatric Emergency Medicine Attendings/fellows, Pediatric/EM residents, medical students, RNs, RTs, child life, radiology techs)
This curriculum primarily trains team members to effectively evaluate and manage critically ill children. Secondary objectives include:
 - 1. To train pediatric emergency fellows to use simulation as a teaching tool*
 - 2. To train pediatric emergency fellows to lead effective debriefing sessions*
 - 3. To train pediatric emergency fellows to identify latent safety threats*
- 2011-2018 Co-author, CHONY- In Situ mock trauma curriculum (Learner: Surgery Attendings/fellows, Pediatric Emergency Medicine Attendings/fellows, Pediatric/EM residents, medical students, RNs, RTs, child life, radiology techs)
Contributions to the instructional design strategy, curricular objectives, and content. This curriculum teaches members to effectively evaluate and manage critically injured children.

Development of instructional material and curricular design used regionally/nationally

- 2013 Co-author, Improving Pediatric Acute Care Through Simulation (IMPACTS) simulation curriculum.
(Learner: community emergency medicine providers)
Contributions to the instructional design strategy and content. This standardized curriculum was created as part of a grant-funded project. It has been utilized at over 45 emergency department sites with iterations adapted for even wider audiences. <https://www.impactscollaborative.com/>

2010 Co-author, Base Camp; immersive simulation leadership & skills training (Learner: Pediatric emergency medicine fellows)
Contributions to the instructional design strategy, curricular objectives, and content. This curriculum aims to enhance first year fellows' skills in pediatric emergency medicine resuscitation, teamwork, and procedures via an immersive simulation experience with multiple opportunities for repetitive practice. Over 10 programs around the region are invited and participate each year.
<http://pembasecamp.org/>

Educational Administration and Leadership

Department of Emergency Medicine

2019 – present Director of Ultrasound Research
Department of Emergency Medicine
Direct overall research strategy, mentor faculty members on research projects, generate and promote academic scholarship within the division.
2020-2021 scholarly productivity: >20 publications, >5 funded grants, 15 active IRBs, >25 national presentations

Division of Pediatric Emergency Medicine

2010 - 2013 Founding Director of Ultrasound Fellowship
Created the nation's first pediatric ultrasound fellowship in a pediatric department. Responsible for program creation, curriculum development, recruitment, mentorship, and quality assurance.

Vagelos College of Physicians and Surgeons

2017 – 2019 Associate Course Director, Foundations of Clinical Medicine-Tutorials
Vagelos College of Physicians & Surgeons
Collaboratively oversee design and implementation of course that introduces first year students to essentials of compassionate medical care including proper history taking, note writing and physical exam techniques.

2015 – present Associate Medical Director, Mary & Michael Jaharis Simulation Center
In this inaugural role, I contributed to the strategic planning, vision, fundraising efforts, new initiatives, and program development for this new center. Since its inception, I have specialized in system integration initiatives and interprofessional learning. I have been instrumental in leading change and cultivating the initiation and growth of numerous hospital-based in situ simulation programs through curriculum planning, faculty development, and assessment.

Professional Educational Materials or Reports, in print or other media

2019 Co-author, Crisis Resource Management
This Massive Open Online Course (MOOC) makes crisis resource management

concepts accessible, moving away from theoretical and abstract presentations of the topics. It also contextualizes medical experiences in real-life examples or simulations. The basic and more elaborate concepts of CRM and utility of non-technical skills have a broad application across global health care environments, a curriculum that often is not exposed to health care students, residents, and fellows. <https://www.edx.org/course/crisis-resource-management>

- 2016 Content expert, Virtual Pediatric Simulator
Developed a first-person game to teach and assess performances on seven critical pediatric emergency medicine scenarios (anaphylaxis, bronchiolitis, diabetic ketoacidosis, respiratory failure, seizure, septic shock and supraventricular tachycardia).
1. Presented at the serious games arcade at the International Meeting for Simulation in Healthcare. Orlando, USA. January 30, 2017.
- 2016 Content expert, 60 Seconds to Survival: A Video Game for Pediatric Disaster Triage Learning
60 Seconds to Survival is a serious game with a pediatric focus. It was developed to improve EMS disaster triage, limiting instances of dangerous over- and under triage.
1. Presented at the serious games arcade at the International Meeting for Simulation in Healthcare. Orlando, USA. January 30, 2017.
 2. Poster presentation at the International Meeting for Simulation in Healthcare. Orlando, USA. January 30, 2017.
- 2015 Primary Author, Champagne Tap (interactive lumbar puncture APP, iTunes) (400 downloads as of January 2017)
The objective of this game is to augment education and practice with the infant lumbar puncture procedure. The Infant Lumbar Puncture Champagne Tap app allows learners to explore the infant lumbar puncture procedure in various ways.
1. Presented at the serious games arcade at the International Meeting for Simulation in Healthcare. Orlando, USA. January 30, 2017.
- 2013 Co-author, Infant endotracheal intubation, (interactive intubation APP, iTunes) (1075 downloads as of January 2017).
- 2007 Contributing Author, PEMGUIDES (evidence based guide to pediatric emergency medicine topics-published on pemnetwork.com) available for download at: <https://itunes.apple.com/us/book/pem-guides/id1039923332?mt=11> (3500 downloads as of January 2017).

Community Education

2010 – 2019 Volunteer educator
David Kessler, MD, MSc

Steven Z Miller Annual Pediatric Emergency Medicine Fair
Annual event for local schoolchildren to educate about various aspects of healthcare, environment, and prevention.

Report of Clinical Activities or Direct Public Health Interventions and/or Innovations

Practice or Public Health Activities

- 2016 Contributor, Keepsafe “unsafe conditions” field
Co-created language for new unsafe conditions field within Keepsafe (error reporting system) including tracking unsafe conditions discovered via in situ simulation activities at Columbia/NYP.
- 2013 – 2017 Site director, Improving Pediatric Acute Care Through Simulation (IMPACTS)
Oversee all administrative aspects and outreach for the Columbia IMPACTS site. IMPACTS is the largest national effort to describe, measure and improve the quality of care provided to critically ill and injured pediatric patients in community emergency departments using simulation.
- 2010 – 2018 Development of several guidelines for clinician performed point-of-care
Emergency ultrasound to improve care in Pediatric Emergency Department
These guidelines (1. First trimester pregnancy, 2. Acute Appendicitis, 3. Intussusception, 3. Soft tissue/ abscess assessment) have improved throughput, diagnostic accuracy, and patient care.
- 2010 – 2018 Developed Quality Assurance program for Pediatric Emergency Ultrasound
This robust system has enabled us to systematically train fellows and faculty, growing into one of the largest faculty groups trained in the use of point-of-care ultrasound.
- 2010 – present Developed Interprofessional In situ simulation program, & Clinical debriefing culture, Pediatric Emergency Department. *This innovative program of interprofessional teamwork, communication, and safety culture has been scaled to multiple clinical sites within the Department of Pediatrics, Emergency Medicine, and other hospital units.*
- 2010 - present Attending physician, Pediatric Emergency Department
NY-Presbyterian Morgan Stanley Children’s Hospital
*Provide direct patient care to acutely ill pediatric patients in an academic, inner-city, quaternary care, ACS-accredited Level 1 Trauma Center, volume ~55,000 patients/year.
Hours: 10-24 hours per week*
- 2006 – present Volunteer, Medical Reserve Corps, New York City

Clinical or Public Health Administration and Leadership

Division of Pediatric Emergency Medicine

David Kessler, MD, MSc

- 2011 – 2018 Inaugural Director of Pediatric Emergency Ultrasound
Oversaw all aspects of program administration including faculty and fellow recruitment (1-2 per year), faculty credentialing, equipment planning and purchasing, academic mentorship, and curriculum design.
- 2011 – 2018 Inaugural Director of Clinical Simulation
Oversaw all administrative aspects, curriculum design and assessment, faculty development, system integration, and program expansion.
- 2010 - 2013 Director of Clinical Operations
Clinical pathways, policies, and daily operational logistics. Direct report to division chief.

International Clinical or Public Health Service Activities

- 2007 Santiago, Dominican Republic,
Designed and implemented trauma surveillance program at the Emergency Department in Santiago.
- 2004 Pop Wuj, Xela, Guatemala *clinical rotations, community service.*
- 2001 Child Family Health International, Quito, Ecuador *clinical rotations, community service.*

Publications:

Peer-reviewed Publications in Print or Other Media

Research Investigations:

1. Vermylen JH, Cohen ER, Cook DA, McGaghie WC, Issenberg SB, Arnold J, Ballard H, Bayoumi M, Beestrum M, Bremner R, Crawford S, Einstein N, Mannarino C, Misra A, Tomita TM, Waldron H, Yanko F, **Kessler DO**. Competency-Based Simulation Training for Procedural Skills: A systematic Review and Meta-analysis. *Simul Healthc*. 2025 Nov 11. doi: 10.1097/SIH.0000000000000895. Online ahead of print. PMID: 41217357
2. Hicks B, Schnittke N, Baloesescu C, Moore C, Shupp J, **Kessler D**, Gregory K, Kruecker J, Raju B, Chen A, Balaraju N. 5 Artificial Intelligence Model for Automated Assessment of Lung Ultrasound Image View Quality. *Annals of Emergency Medicine*. 2025 Sep 1;86(3):S3.
3. Stefanidis D, Cook D, Kalantar-Motamedi SM, Muret-Wagstaff S, Calhoun AW, Lauridsen KG, Paige JT, Lockey A, Donoghue A, Hall AK, Patocka C, Palaganas J, Gross IT, Kessler D, Vermylen J, Lin Y, Aebersold M, Chang TP, Duff J, Kolbe M, Rutherford-Hemming T, Decker S, Collings A, Toseef Ansari M. Society for Simulation in Healthcare Guidelines for Simulation Training. *Simul Healthc*. 2024 Jan 1;19(1S):S4-S22. doi: 10.1097/SIH.0000000000000776. PMID: 38240614.

4. Kanjanaptom P, **Kessler D**, Khongjaroensakun S, Darunaitorn S, Kriengsoontornkij W. Pediatric Difficult Intravenous Access Scores in a Low-Resource Setting: An External Validation Study. *Pediatr Emerg Care*. 2025 Mar 3. doi: 10.1097/PEC.0000000000003332. Epub ahead of print. PMID: 40028719.
5. McKinley KW, Bregstein JS, Perotte R, Fenster D, Kwok M, Rose J, Nye M, Sonnett M, **Kessler DO**. The National Emergency Department Overcrowding Scale and Perceived Staff Workload: Evidence for Construct Validity in a Pediatric Setting. *Pediatric Emergency Care*. 2025 Feb 1;41(2):e5-9.
6. **Kessler D**, Zhu M, Gregory CR, Mehanian C, Avila J, et al. (2024) Development and testing of a deep learning algorithm to detect lung consolidation among children with pneumonia using hand-held ultrasound. *PLOS ONE* 19(8): e0309109.
7. Malia L, Nye ML, **Kessler DO**. Exploring the Feasibility of At-Home Lung Ultra-Portable Ultrasound: Parent-Performed Pediatric Lung Imaging. *Journal Of Ultrasound in Medicine*. 2024 Apr;43(4):723-8
8. Maniker, R., Treat, C., Feiner, S., Alleyne, S., Gordon, R. J., Cloyd, T., & **Kessler, D.** (2024). Defibrillator Training in the Virtual Setting is Feasible and Improves Medical Student Self-Efficacy; A Pilot Study. *Simulation & Gaming*, 0(0). <https://doi.org/10.1177/10468781241268766>
9. Stone KP, Rutman L, Calhoun AW, Reid J, Maa T, Bajaj K, Auerbach MA, Cheng A, Davies L, Deutsch E, Harwayne-Gidansky I, **Kessler DO**, Ogrinc G, Patterson M, Thomas A, Doughty C; And for the International Network in Simulation-Based Innovation, Research and Education (INSPIRE) SQUIRE-SIM Reporting Guidelines Investigators. SQUIRE-SIM (Standards for Quality Improvement Reporting Excellence for SIMulation): Publication Guidelines for Simulation-Based Quality Improvement Projects. *Simul Healthc*. 2024 Aug 16. doi: 10.1097/SIH.0000000000000819. Epub ahead of print. PMID: 39162794.
10. Elkin RL, Beaubien JM, Damaghi N, Chang TP, **Kessler DO**. Dynamic Cognitive Load Assessment in Virtual Reality. *Simulation & Gaming*. 2024 Apr 20.
11. LaPrad, A. S., Joseph, B., Chokshi, S., Aldrich, K., Kessler, D., & Oppenheimer, B. W. (2024). A smartwatch-based CPR feedback device improves chest compression quality among health care professionals and lay rescuers. *Cardiovascular Digital Health Journal*.
12. Baloescu C, Rucki AA, Chen A, Zahiri M, Ghoshal G, Wang J, Chew R, **Kessler D**, Chan DKI, Hicks B, Schnittke N, Shupp J, Gregory K, Raju B, Moore C. Machine Learning

Algorithm Detection of Confluent B-Lines. *Ultrasound Med Biol.* 2023 Sep;49(9):2095-2102. PMID: 37365065

13. Nawathe PA, **Kessler DO**, Yurasek G, Sawyer TL, Halamek LP, Stone K, Ramachandra G, Maa T, Tofil N, Doughty C, Thyagarajan S, White ML, Damazo R, Calhoun A. The Need for Simulation-Based Procedural Skills Training to Address Proposed Changes in Accreditation Council for Graduate Medical Education Requirements for Pediatric Residency Programs. *Simul Healthc.* 2023 Dec 1;18(6):416-418. doi: 10.1097/SIH.0000000000000757. Epub 2023 Nov 3. PMID: 37922251.
14. Blumenberg A, **Kessler D**. Authoring and distributing simulation cases via the software innovation Med Sim Studio. *International Journal of Healthcare Simulation.* 2023 Jul 7:1-3.
15. Auerbach MA, Whitfill T, Montgomery E, Leung J, **Kessler D**, Gross IT, Walsh BM, Fiedor Hamilton M, Gawel M, Kant S, Janofsky S, Brown LL, Walls TA, Alletag M, Sessa A, Arteaga GM, Keilman A, Van Ittersum W, Rutman MS, Zaveri P, Good G, Schoen JC, Lavoie M, Mannenbach M, Bigham L, Dudas RA, Rutledge C, Okada PJ, Moegling M, Anderson I, Tay KY, Scherzer DJ, Vora S, Gaither S, Fenster D, Jones D, Aebersold M, Chatfield J, Knight L, Berg M, Makharashvili A, Katznelson J, Mathias E, Lutfi R, Abu-Sultaneh S, Burns B, Padlipsky P, Lee J, Butler L, Alander S, Thomas A, Bhatnagar A, Jafri FN, Crellin J, Abulebda K. Factors Associated With Improved Pediatric Resuscitative Care in General Emergency Departments. *Pediatrics.* 2023 Jul 7:e2022060790. doi: 10.1542/peds.2022-060790. Epub ahead of print. PMID: 37416979.
16. Baloesu C, Chen A, Schnittke N, Hicks B, Zhu M, Kaili M, Shupp J, Chan DK, Malia L, Coneybeare D, Gregory K, **Kessler D**, Raju B, Moore C. Development and interobserver reliability of a rating scale for lung ultrasound pathology in lower respiratory tract infection. *WFUMB Ultrasound Open.* 2023 Dec 1;1(2):100006.
17. Rivzi M, **Kessler D**, Rabiner J, Role of Regional Anesthesia in Patients with Acute Sickle Cell Pain: A Scoping Review. *Pediatr Blood Cancer.* 2023 Jan;70(1):e30063. doi: 10.1002/pbc.30063. Epub 2022 Oct 29. PMID: 36308736.
18. Blumenberg, A., **Kessler, D.** (2022). Med Sim Studio: An Open-Access Simulation Platform for Running and Sharing Dynamic Display of Patient Data in Package Scenarios. *Simulation & Gaming*, 0(0). <https://doi.org/10.1177/10468781221147467>
19. Elloian J, Jadwyszczak J, Arslan V, Sherman J, **Kessler D**, Shepard K. Flexible ultrasound transceiver array for non-invasive surface-conformable imaging enabled by geometric phase correction. *Sci Rep* 2022 Sept 28;12(1):1-12.

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22. *Daube A, Phillips L, West E, Lorraine N, Chaudoin LT, Smerling A, **Kessler D**. A Novel Approach to Confirm Endotracheal Tube Depth Using Ultrasound Color Doppler: A Cadaveric Model. *Int J Respir Pulm Med*. 2022;9:167.
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25. Calhoun AW, Gross IT, Mallory LB, Shepard LN, Adler MD, Maa T, Auerbach MA, Cheng A, **Kessler DO**, Whitfill TM, Duff JP. From Concept to Publication: Effectiveness of the International Network for Simulation-Based Pediatric Innovation, Research, and Education Project Development Process at Generating Simulation Scholarship. *Simul Healthc*. 2022 Dec;17(6):385-393. Dec 27. PMID: 34966128
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27. Oriot D, Trigolet M, **Kessler DO**, Auerbach MA, Ghazali DA. Stress: A Factor Explaining the Gap Between Simulated and Clinical Procedure Success. *Pediatr Emerg Care*. 2021 Dec 1;37(12):e1192-e1196. doi: 10.1097/PEC.0000000000001962. PMID: 31977780.
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31. Duff JP, Bhanji F, Lin Y, Overly F, Brown LL, Bragg EA, **Kessler D**, Tofil NM, Bank I, Hunt EA, Nadkarni V, Cheng A; INSPIRE CPR Investigators. Change in Cardiopulmonary Resuscitation Performance Over Time During Simulated Pediatric Cardiac Arrest and the Effect of Just-in-Time Training and Feedback. *Pediatr Emerg Care*. 2021 Mar 1;37(3):133-137. doi: 10.1097/PEC.0000000000002359. PMID: 33651758.
32. Kim JW, Lame M, Szalay L, Lefchak B, Johnsson B, Gogia K, Clark S, **Kessler D**, Leyden D, Sharma R, Platt S. Telemedicine Surge for Pediatric Patients in Response to the COVID-19 Pandemic in New York City. *Telemed J E Health*. 2021 Jan 11. doi: 10.1089/tmj.2020.0413. Epub ahead of print. PMID: 33428513.
33. Sahyoun C, Siliciano C, **Kessler D**. Use of Capnography and Cardiopulmonary Resuscitation Feedback Devices Among Prehospital Advanced Life Support Providers. *Pediatr Emerg Care*. 2020. Dec;36(12):582-585. doi: 10.1097/PEC.0000000000001685. PMID: 30601348.
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in Kids (PEAK): A Multicenter Simulation-Based Study. *The Journal of Allergy and Clinical Immunology: In Practice*. 2019 Nov 23.

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 28. Pusic M, Brydges R, **Kessler D**, Szyld D, Nachbar M, Kalet A. What's Your Best Time? Chronometry in the Learning of Medical Procedures. *Medical Education.* 2014; 48(5):479-488.
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 30. Auerbach M, Chang T, Fein D, White M, Mehta R, Gerard J, Zaveri P, Kou M, Reid J, Agrawal D, Van Ittersum W, Scherzer D, Vasquez E, Iyer S, Thomas A, Sawyer T, **Kessler D**. A Comprehensive Infant Lumbar Puncture Novice Procedural Skills Training Package: An INSPIRE Simulation-Based Procedural Skills Training Package. MedEdPORTAL; 2014. Available from: www.mededportal.org/publication/9724 (43 downloads, 8 countries, last checked report 11/2014)
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 32. Pusic M, **Kessler D**, Szyld D, Kalet A, Pecaric M, Boutis K. Experience Curves as an Organizing Framework for Deliberate Practice in Emergency Medicine Learning. *Academic Emergency Medicine.* 2012;(12):1476-80.

Case Reports

1. Kennedy TK, Malia L, Dessie A, **Kessler DO**, Ng L, Chiang EL, Rabiner JE. Lung Point-of-Care Ultrasound in Pediatric COVID-19: A Case Series. *Pediatr Emerg Care.* 2020 Sep 10.doi: 10.1097/PEC.0000000000002254.
2. *Halm B, **Kessler D**. Color Flow Doppler Point of Care Ultrasound to Evaluate Vessels before Infant Lumbar Puncture. *The Journal of Emergency Medicine.* 2017;52(1):70-73.
3. *Tsze D, **Kessler D**, Rapid evaluation of urinary retention and penile pain using point-of-care ultrasound. *Pediatr Emerg Care.* 2014;30(8):580-2.

4. *Tilt L, **Kessler D**, Rapid Evaluation of an Inguinal Mass in a Female Neonate Using Point-of-Care Ultrasound. *Pediatr Emerg Care*. 2014;30(5):366-367.
5. *Hamburg L, **Kessler D**. Rapid Evaluation of Ventriculoperitoneal Shunt Function in a Pediatric Patient using Point of Care Ultrasound. *Pediatr Emerg Care*. 2012;28(7):726-727.
6. **Kessler D**. The 2009 PEMPix photo competition award winner: David Kessler, MD, MSc: hey doc, what's this bump? A 3-month-old male infant with tender bony growths on his extremities. *Pediatr Emerg Care*. 2010;26(11):854-5.
7. **Kessler D**, Gurwitz A, Tsung J. Point-of-care Sonographic Detection of Intestinal *Ascaris lumbricoides* in the Pediatric Emergency Department. *Pediatr Emerg Care*. 2010;26(8):586-7.
8. **Kessler D**, Francis D, Esernio-Jenssen D. Bladder Rupture After Minor Accidental Trauma: Case reports and a review of the literature. *Pediatr Emerg Care*. 2010;26(1):43-45.

Non-Peer Reviewed Publications (Reviews, Chapters, Editorials)

1. **Kessler D**, (2022) Expert Corner: Toward Truer System Integration. In Maxworthy J, Palaganas JC, Epps CA, Manicini ME. (eds) Defining Excellence in Simulation Programs. Lipincott Williams & Wilkins.
2. **Kessler D**, Auerbach M, (2021) Simulation for Infant Lumbar Puncture Training. In Soghier L, Robin B. (eds) Neonatal Simulation A Practical Guide. American Academy of Pediatrics.
3. **Kessler D.O.**, Schubert C.C., Calhoun A.W. (2021) Working with Simulation Experts. In: Deutsch E.S., Perry S.J., Gurnaney H.G. (eds) Comprehensive Healthcare Simulation: Improving Healthcare Systems. Comprehensive Healthcare Simulation. Springer, Cham. https://doi.org/10.1007/978-3-030-72973-8_26
4. *Romney M, Gavin N, Chang B, **Kessler D**. Tame Your Inbox Like an ER Doctor. June 5, 2020. *Harvard Business Review*. <https://hbr.org/2020/06/tame-your-inbox-like-an-er-doctor>.
5. **Kessler DO**, Auerbach M, Chang TP (2019) Seeking, Reviewing and Reporting on Healthcare Simulation Research. In: Nestel D, Hui J, Kunkler K, Scerbo M, Calhoun A. (eds) Healthcare Simulation Research. Springer, Cham.
6. **Kessler D**. Abdominal Ultrasound for Pediatric Blunt Trauma FAST Is Not Always Better. *JAMA*. 2017;317(22):2283-2285. *Invited editorial as ultrasound expert*.
7. **Kessler D**, Fine J, (2009). Abscess Packing. In MA Mojica (Ed.), PEM CARS 2017 (Version 1.0): New York: New York University Langone Health.

8. **Kessler D**, Fine J, (2009). Rapid Infusion Techniques for Shock. In MA Mojica (Ed.), PEM CARS 2017 (Version 1.0): New York: New York University Langone Health.
9. **Kessler D**, Ching K, (2007). Compression Only CPR vs Standard CPR in Children. In MA Mojica (Ed.), PEM CARS 2017 (Version 1.0): New York: New York University Langone Health.
10. **Kessler D**, Nigrovic LE. X Marks the Spot (or Does It?): Ultrasonography-Assisted Site Marking for Lumbar Puncture in Children: Answers to the May 2017 Journal Club Questions. *Annals of Emergency Medicine*.2017;70(4):592-596. *Invited author as ultrasound expert*.
11. **Kessler D**, Nigrovic LE. X Marks the Spot (or Does It?): Ultrasonography-Assisted Site Marking for Lumbar Puncture in Children. *Annals of Emergency Medicine*. 2017;69(5):657-8. *Invited author as ultrasound expert*.
12. **Kessler D**, Auerbach M, Chang T, Lin Y, Cheng A. "Simulation Research" in *Comprehensive Healthcare Simulation: Pediatrics*, ed. Vincent J Grant and Adam Cheng (Cham: Springer International Publishing, 2016), 387-398.
13. **Kessler D**, (2015). Extended FAST exam in Trauma. In MA Mojica (Ed), PEM guides: New York: New York University Langone Medical Center. Available on iTunes.
14. **Kessler D**, (2015). Central Venous Access. In MA Mojica (Ed), PEM guides: New York: New York University Langone Medical Center. Available on iTunes.
15. **Kessler D**, (2015). Lyme Disease. In MA Mojica (Ed), PEM guides: New York: New York University Langone Medical Center. Available on iTunes.
16. **Kessler D**, "Renal, Bladder" in *Pediatric Emergency and Critical Care Ultrasound*, ed. Doniger SJ. (Cambridge University Press, 2014), 119-134.
17. **Kessler D**. Testicular Torsion. In: Wang VJ, Scarfone RJ, editors. *Fleisher and Ludwig's 5 minute Pediatric Clinical Consult*. London: Lippincott Williams & Wilkins; 2011
18. **Kessler D**. Altitude Sickness. In: Wang VJ, Scarfone RJ, editors. *Fleisher and Ludwig's 5 minute Pediatric Clinical Consult*. London: Lippincott Williams & Wilkins; 2011
19. **Kessler D**. Gluteal Abscess. In: Wang VJ, Scarfone RJ, editors. *Fleisher and Ludwig's 5 minute Pediatric Clinical Consult*. London: Lippincott Williams & Wilkins; 2011
20. **Kessler D**, Shah V, Weiner H, Foltin J. Evaluation of Ventriculoperitoneal Shunt Emergencies. *Journal of Pediatric Rehabilitation Medicine*. 2009. 2(2): 107-113

Letters to the Editor

1. *Sagalowsky ST, Woodward H, Evins J, **Kessler DO**. Responding to Microaggressions: Further Frameworks From Simulation Debriefing. *Ann Emerg Med*. 2021 Mar;77(3):381-382. doi: 10.1016/j.annemergmed.2020.10.006. PMID: 33618815.
2. *Sagalowsky ST, **Kessler DO**. Structural Competency as a Simulation Performance Domain. *Simul Healthc*. 2020 Apr;15(2):133. doi: 10.1097/SIH.0000000000000420. PMID: 32235264.
3. Ng L, **Kessler D**, Teng D, Dayan P, Sonnett M. Bedside Ultrasound in Pediatric Practice: Pioneering New Opportunities While Growing Our Responsibilities. Published March 6th, 2014. <https://pediatrics.aappublications.org/content/133/1/1/tab-e-letters>

Other Published Media

1. **Kessler D**, Debriefing. For the Association of Pulmonary and Critical Care Medicine Program Directors. (Online Video Module). 2018.
2. Photo Credit (2018): <https://www.wsj.com/articles/hospitals-address-widespread-doctor-burnout-1528542121>
3. Emerson B, Auerbach M, **Kessler D**, Lynch R, Patterson M. Facilitating Safety Culture with Simulation Science. *MedSim Magazine*. 2017.
https://www.bluetoad.com/publication/?i=409369&article_id=2788933&view=articleBrowser&ver=html5##{%22issue_id%22:409369,%22view%22:%22articleBrowser%22,%22article_id%22:%222788933%22}
4. **Kessler D**, Pemnetwork.com BLOG contributor
 - a. *“How about some time off to reflect?”*
<http://www.pemfellows.com/blog/how-about-some-time-off-to-reflect/> December 20, 2016
 - b. *“Healthcare- heal thyself”*
<http://www.pemfellows.com/blog/healthcare-heal-thyself> September 4, 2015
 - c. *“The Drones are coming”*
<http://www.pemfellows.com/blog/the-drones-are-coming> July 21, 2015
 - d. *“Hospital cited in cut baby handoff fiasco”*
<http://www.pemfellows.com/blog/hospital-cited-after-intern-forgets-to-include-how-cute-baby-is-in-handoff/> June 8, 2015
 - e. *“Improv or Shakespeare”*
<http://www.pemfellows.com/blog/improv-or-shakespeare> May 27, 2014
 - f. *“Do You Pray With Your Patients?”*
<http://www.pemfellows.com/blog/?p=744> April 13, 2014
 - g. *“Wait, am I being bullied “*
<http://www.pemfellows.com/blog/?p=569> February 2014
 - h. *“The Little Red Hen was not a great team leader“*

<http://www.pemfellows.com/blog/?p=384> December 2013

5. *Ng Lorraine, **Kessler D**, The rise of pediatric emergency ultrasound training programs. Pemnetwork newsletter December, 2012
6. **Kessler D**, Auerbach M. "INSPIRE Infant Lumbar Puncture Procedure Video" *Youtube*, YouTube, 19 May 2011, http://www.youtube.com/watch?v=0G-u1Q-Sb_c (40,362 views as of 1/17/2017)
Vimeo, 20 July 2010, <http://vimeo.com/12291456> (1392 views as of 1/17/2017)
7. **Kessler D**. Report from Dominican Republic Establishing Injury Surveillance: No Need to Reinvent the Wheel. Headlines newsletter, Spring 2007
http://www.whohelmets.org/headlines/07_spring_dr.htm
8. **Kessler D**. Columnist for medical website <http://drhem.com/category/mini-me/> (2008).
9. **Kessler D**. 'ghost' writer for medical website <http://www.everydayhealth.com/> (2007-08).

Non-authored Publications:

(Publications with formal acknowledgement of contribution)

1. Byrnes R, Chipman M, Priest Z, Schreiber C, Michaud J, Barbour T, Ferguson M, Craig W, Mallory L. Factors associated with interprofessional engagement in debriefing following pediatric simulation-based team training. *Journal of interprofessional care*. 2021 Jun 10:1-7.
2. Cheng A, Hunt E, Grant D, Lin Y, Grant V, Duff J, White M, Peterson D, Zhong J, Gottesman R, Sudikoff S, Doan Q, Nadkarni V. Variability in Quality of Chest Compressions Provided During Simulated Cardiac Arrest Across Nine Pediatric Institutions. *Resuscitation* 97 (2015), 13-19.
3. Vieira, R. L., Hsu, D., Nagler, J., Chen, L., Gallagher, R., & Levy, J. A. Pediatric Emergency Medicine Fellow Training in Ultrasound: Consensus Educational Guidelines. *Academic Emergency Medicine*, 2013;20(3):300-306.
4. Friedman LM, Tsung JW. Extending the focused assessment with sonography for trauma examination in children. *Clinical Pediatric Emergency Medicine*. 2011;12(1):2-17.

Media Appearances

1. 2020, "Life is Short" Quarantine episodes (multiple podcast appearances)
2. 2020, Newsy (multiple appearances) – medical expert
3. June 2009 CBS "The Early Show" Healthwatch segment – intern for Dr. Jennifer Ashton
4. July 15, 2009 Foltin G, Kowalsky R., **Kessler D**. "Summer hazards" *On Call for Kids*. Sirius Radio channel #114
5. Nov 12, 2008 Foltin G, **Kessler D**. "Healthcare reform/advocacy for kids" *On Call for Kids*.

Sirius Radio channel #114

6. August 20, 2008 Foltin G, Auerbach M., **Kessler D.** "Real Emergencies- worth an ER visit"
On Call for Kids. Sirius Radio channel 114

Published Abstracts, Poster Presentations

1. Chou, Y.C., Li, G.Y., Chen, L., Zahiri, M., Balaraju, N., Patil, S., Hicks, B., Schnittke, N., Parker, M., **Kessler, D.O.** and Shupp, J., 2025, April. Ultrasound Image Synthesis Using Generative AI for Lung Consolidation Detection. In *2025 IEEE 22nd International Symposium on Biomedical Imaging (ISBI)* (pp. 1-5). IEEE.
2. Li, G.Y., Chen, L., Hicks, B., Schnittke, N., **Kessler, D.O.**, Shunp, J., Parker, M., Baloescu, C., Moore, C., Gregory, C. and Gregory, K., 2025, April. Spatiotemporal Learning with Context-Aware Video Tubelets for Ultrasound Video Analysis. In *2025 IEEE 22nd International Symposium on Biomedical Imaging (ISBI)* (pp. 1-5). IEEE.
3. Evaluating Technical Capabilities and Limitations of Haptic Gloves for Enhanced Healthcare Simulation Training
 - a. 2025 International Symposium on Human Factors and Ergonomics in Health Care (2025 International Symposium on Human Factors and Ergonomics in Health Care
 - b. Innovation Showcase, Society for Simulation in Healthcare National Meeting, Orlando, Florida, 2025.
2. Sugarman A, Fischman E, **Kessler DO**, Sen AI, Choudhury T. Pauses In Chest Compressions During ECPR: Using Simulation to Determine the Cause.
 - a. Pediatric Resuscitation Quality Collaborative (pediRES-Q), February 2024
 - b. Critical Care Congress, Phoenix, Az January 2024
3. Nawathe PA, **Kessler DO**, Yurasek G, et al. The Need for Simulation-Based Procedural Skills Training to Address Proposed Changes in Accreditation Council for Graduate Medical Education Requirements for Pediatric Residency Programs. *LWW*; 2023. p. 10.1097.
4. **Kessler D**, Eslami M, Verbitsky A, Artificial Intelligence for Rapid Image Annotation of Infant Spinal Ultrasound
 - a. oral presentation at Pediatric Academic Society Meeting, Toronto, Canada, May 2024
2. **Kessler D**, Khandelwal R, Liu, Penmetsa S, De Souza J, Fritz A, Artificial Intelligence to Detect Spinal Fluid and Spinal Cord on Ultrasound
 - a. Poster presentation at Data Science Day, Columbia University, April 2024
 - b. Poster presentation at Pediatric Academic Society Meeting, Toronto, Canada, May 2024
 - c. Demonstration at AI at VP&S Initiative Kickoff, Columbia University Vagelos College of Physicians and Surgeons, February 24, 2025

- d. Poster presentation at Columbia University AI Summit, Columbia University Vagelos College of Physicians and Surgeons, March 4, 2025
 - e. Poster presentation at Data Science Day, Columbia University, April 2025
3. Sukumar P, Ananth S, Friberg R, Gopalakrishan R, **Kessler D**, , R< Schlager B, Feiner S. Visual Guidance for Infant Lumbar Puncture Training in XR. 2024 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW). March, 2024
4. Hicks B, **Kessler D**, et al. "Detection of Smoke Inhalation Lung Injury Using Hand-Held Ultrasound: A Multi-Center Clinical Study" was accepted for an oral presentation in the MHSRS breakout session "Advanced Battlefield Care of Severe Burn Casualties at the Point of Need: Prehospital to Definitive Care" Oral presentation at Military Health System Research Symposium. Abstract # MHSRS-23-09197. August 2023.
5. Chiang E, Liebman M, **Kessler D**, Rabiner J. Interrater Reliability of Diaphragmatic Ultrasounds in Children. Oral presentation. Society for Academic Emergency Medicine, Phoenix, AZ, May 2023
6. *Treat C, Maniker R, **Kessler D**. All Clear! Virtual Reality Defibrillator Training For Medical Students Is Feasible, Liked, And Improves Perceived Knowledge, Comfort, And Skills. Live presentation at the American College of Emergency Physicians (ACEP) Annual Meeting, San Francisco, CA. October, 2022.
7. Baloesu C, Chen A, Schnittke N, Hicks B, Zhu M, Kaili M, Chan D, Malia L, Coneybeare D, Gregory K, **Kessler D**, Moore C, Raju. B. Multisite Interobserver Agreement of Lung Ultrasound Findings in COVID-19 Pulmonary Disease. Live presentation at the American College of Emergency Physicians (ACEP) Annual Meeting, San Francisco, CA. October, 2022.
8. Eslami M, Verbitsky A, Zheng G, **Kessler D**, Training a Neural Network to Detect Lung Sliding on Ultrasound Using Minimal Expert Annotation. Military Health System Research Symposium. Abstract # MHSRS-22-05791 September 2022
9. Chiang E, Liebman M, **Kessler D**, Rabiner J. Diaphragmatic Ultrasound in Children with Asthma Exacerbations
 - a. Oral presentation. Society for Academic Emergency Medicine, New Orleans, LA, May 2022
 - b. Poster presentation. Pediatric Academic Society Meeting, Denver, Colorado, April, 2022.

10. Rizvi, M, Rabiner J, Kessler D. Role of Regional Anesthesia in Patients with Acute Sickle Cell Pain: A Scoping Review. Poster presentation. Mount Sinai West/ Morningside Regional Ultrasound Symposium, NY, NY, April 2022
11. Parisi F, Moita V, Spellman J, Kingon A, Matiz M, **Kessler D**. The Impact of an Online Self-Directed Medical Crisis Resource Management Course on Perceived Confidence and Behavior. Poster presentation. Celebration of Teaching and Learning Symposium, March, 2022.
12. Florez A, Calhoun A, Shepard L, **Kessler D**, Kerrey B, Justice L, Frey M, The Concise Assessment of Leader Management Tool: Evaluation of Healthcare Provider Leadership During Real-Life Pediatric Emergencies. Research Presentation. The Pediatric Cardiac Intensive Care Society (PCICS) September 2021 Virtual Annual International Meeting.
13. Zhu M, **Kessler D**, Gregory K, Zhang Y, Cao A, Hostetler K, Gregory C, Can Point-of-Care Lung Ultrasound Differentiate SARS Cov-2 Viral Pneumonia from Bacterial and Non-SARS-Cov-2 Viral Pneumonias? Military Health System Research Symposium. (Abstract # MHSRS-21-04322) August, 2021
14. He F, Li M, Maniker RB, **Kessler DO**, Feiner SK. Augmented Reality Guidance for Configuring an Anesthesia Machine to Serve as a Ventilator for COVID-19 Patients. 2021 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (Virtual Conference March 2021)
15. *Conybeare D, Truong J, Avitabile N, Chamarti S, Kennedy T, Vryhof D, Flores S, Huynh P, Lema P, **Kessler D**. Impact of Point-of-Care Ultrasound on Clinical Decision Making in Patients Under Investigation for COVID. Poster presentation.
 - c. Society for Academic Emergency Medicine, Virtual meeting, May 2021.
 - d. America College of Emergency Physicians, July 2021
16. Siegal J, Steel P, Zhang Y, Cato K, Park J, Melville L, Greenwald P, Chiricolo G, Schultebrucks K, Sacco D, Kenny J, Suh E, **Kessler D**, Chang B, McCarty M, Gogia K, Smith Z, Dinapoli C, Javier D, Sharma M, Farmer B, Sharma R, Romney M. Exertional Hypoxia and Virtual Follow-up in Emergency Department Patients Discharged with COVID-Like Illness. Oral presentation. Society for Academic Emergency Medicine, Virtual meeting, May 2021.
17. Spencer F, Sen A, **Kessler D**, Salabay K, Compagnone D, Choudhury T. Critical Event Checklists for Pediatric In-hospital Cardiac Arrests in Children with Heart Disease.
 - e. Oral Presentation. Leonard Steinfeld Pediatric Cardiology Research Symposium. May, 2021

- f. Virtual Poster. American Academy of Pediatrics National Meeting Cardiology Section. September, 2021
18. *Silberman A, Rozenfeld R, **Kessler D**. Essential Components of a Pediatric Critical Care Transport Communication Curriculum. Poster presentation. Pediatric Academic Society, Virtual meeting Phase 1, May 2021
19. Greenwald P, Olsen E, **Kessler D**, Fenster D, Heravian A, Leyden D, Sharma R, Lame M, Kim JW. Telemedicine Response to COVID-19 Surge in New York City: How ED Telemedicine Changed with the Curve. Virtual Poster, ACEP October 2020.
- g. Greenwald P, Telehealth Working Group, Olsen E, et al. 203 Telemedicine Response to COVID-19 Surge in New York City: How Emergency Department Telemedicine Changed With the Curve. *Ann Emerg Med*. 2020;76(4): S78-S79. doi: 10.1016/j.annemergmed.2020.09.216
20. Mehanian C, Gregory C, Hersh A, **Kessler D**, Wilson B, Zhu M, Madar C, Forbes D, Shahan B, Shupp J, Kulhare S, Zheng X, Millin R, Banik D, Lazar J, Halse A, Jones J, Cao A, Hostetler K, Zhang Y, Weimersheimer P, Dwyer K, Avila J, Gregory K. Artificial Intelligence, Robotics & Autonomous Systems – Enhancing Casualty Care on Tomorrow’s Battlefield – Automated, Rapid, Point-of-Care Lung Ultrasound Interpretation for Pneumothorax, Pleural Effusion and Pneumonia Detection using Artificial Intelligence/Deep Learning: Latest Algorithms and Results. MHSRS Military Health System Research Symposium. August 2020 (*cancelled for COVID-19*)
21. Mehanian C, Gregory C, Hersh A, Stone M, Hulhare S, **Kessler D**, Zhu M, Zheng L, Wilson B, Millin R, Lazar J, Halse A, Jones A, Gregory K. Artificial Intelligence for Automated Lung Ultrasound Imaging Interpretation is Approaching Expert-Clinician Lung Ultrasound Image Interpretation and May Become More Accurate than a Diagnosis Based on Chest X-ray Imaging. MHSRS Military Health System Research Symposium August 2019.
22. McKinley KW, Perotte R, Nye M, Kwok MY, Bregstein JS, Fenster DB, Sonnett FM, **Kessler DO**. The National Emergency Department Overcrowding Scale and Perceived Staff Workload: Evidence for construct validity in a pediatric setting. Accepted for poster presentation at American College of Emergency Physicians Research Forum, October 2019; Denver CO.
23. Fenster D, Olsen E, Heravian A, **Kessler D**. Speed and Satisfaction of Virtual Care for Low Acuity Patients in a Pediatric Emergency Department. Poster Presentation. Pediatric Academic Society Meeting, Philadelphia, Pennsylvania, May, 2020.
24. Greenwald P, Olsen E, **Kessler D**, Fenster D, Heravian A, Leyden D, Sharma R, Lame M, Kim JW. Telemedicine Response to COVID-19 Surge in New York City: How ED Telemedicine Changed with the Curve. Virtual Poster, ACEP October 2020.
- h. Greenwald P, Telehealth Working Group, Olsen E, et al. 203 Telemedicine Response to COVID-19 Surge in New York City: How Emergency Department

25. Beaubien JM, Elkin RL, **Kessler DO**, Chang TP, Damaghi N, Feeney J, & DePriest WN (2020). Quantifying learner expertise using unobtrusive measures of cognitive load during training. Paper No. 20224. In *Proceedings of the 2020 Interservice/Industry Training, Simulation, and Education Conference*. Alexandria, VA: National Training and Simulation Association.
26. *Elkin R, Beaubien J, Damaghi N, Chang T, **Kessler D**. Dynamic Cognitive Load Assessment in Virtual Reality. International Pediatric Simulation Symposium and Workshops. Virtual Meeting, 2020 - **Top rated poster**
27. *Grabinski Z, Babineau J, Jamal N, Dufault J, Ford B, **Kessler D**. In-Situ Simulation and System-level Unsafe Condition Reporting. Poster Presentation. International Pediatric Simulation Symposium and Workshops. Virtual Meeting, 2020.
28. Kwok M, Dessie A, Mills L, Sivitz A, Melkhunovich E, Nti B, Constantine E, Bergmann K, Toney A, Dayan P, **Kessler D**. Puylart staging to differentiate complicated and uncomplicated appendicitis. Poster Presentation. Pediatric Academic Society Meeting, Philadelphia, Pennsylvania, May, 2020.
29. *Elkin R, Beaubien J, Chang T, Damaghi N, **Kessler D**. Ascertaining Learner Expertise Using Cognitive Load. Poster Presentation. Pediatric Academic Society Meeting, Philadelphia, Pennsylvania, May, 2020.
30. *Dessie AS, Calhoun AW, Gilbert GE, Lewiss RE, Rabiner J, Uya A, Tsze DS, Kanjanaptom P, **Kessler DO**. Development and Validation of a Point-of-care Ultrasound Image Quality Assessment Tool: The POCUS IQ Scale. Poster presentation at the American College of Emergency Physicians (ACEP) Annual Meeting, Denver, CO. October, 2019.
31. Knight L, Sweberg T, Mullan P, Sen A, Braga M, Jani P, Su F, Balikai S, **Kessler D**, Roberts J, Donoghue A, Wenger J, Niles D, Nadkarni VM, Berg M. Accuracy of Team Perception of Performance with Actual CPR Quality Metrics in Children. Poster Presentation. Resuscitation Science Symposium (ReSS). Chicago, Illinois. November, 2018.
32. Chang T, Raymond T, Dewan M, Whitfill T, Harwayne-Gidansky I, Doughty C, Frisell K, Mälarsjukhuset E, **Kessler D**, Wolfe H, Auerbach M, Rutledge C, MacKinnon R. The Effect of Competitive Gamification on Self-Directed CPR Training among Healthcare Professionals: A Multi-National Randomized-Control Study. Poster Presentation. Resuscitation Science Symposium (ReSS). Chicago, Illinois. November, 2018.
33. Ng C, Ng L, **Kessler D**. Pediatric Emergency Nurses Attitudes Towards Three Techniques for Ultrasound-guided Vascular Access. 5th World Congress Ultrasound in Medical Education. Montreal, Quebec. October, 2017.

34. Nadkarni L, Roskind C, Auerbach M, Calhoun A, Adler M, **Kessler D**, The Development and Validation of a Concise Tool for Assessing Team Leader Performance During Pediatric Simulated Resuscitations. International Meeting for Simulation in Healthcare. Orlando, Florida. January, 2017.
35. Marohn K, Cheng A, Tofil N, Peterson D, Brown L, Bragg E, Hunt E, Nadkarni V, **Kessler D**, Sudikoff S, Barriers to Performance of High Quality Chest Compressions Among Pediatric Providers: A Qualitative Multicenter Study. International Meeting for Simulation in Healthcare. Orlando, Florida. January, 2017.
36. Cheng A, Lin J, Nadkarni V, Duff J, Brown L, Bhanji F, **Kessler D**, Tofil N, Hecker K, Hunt E, for the INSPIRE CPR Investigators. Impact of Stepstool Use and Provider Height on Quality of Chest Compressions: A Multicenter Study. International Pediatric Simulation Symposium and Workshops. Glasgow, Scotland. May, 2016
37. Cheng A, **Kessler D**, MacKinnon R, Chang T, Nadkarni V, Hunt EA, Duval-Arnould J, Lin Y, Cook DA, Pusic M, Hui J, Moher D, Auerbach M for the INSPIRE Network Reporting Guidelines Working Group. Reporting Guidelines for Health Care Simulation Research: Extensions for the CONSORT and STROBE Statements. International Meeting for Simulation in Healthcare. San Diego, California. January, 2016.
38. **Kessler D**, Peterson D, Lin Y, Bragg A, Cheng A for the INSPIRE CPR Investigators. Causes for Pauses: An Analysis of Simulated Cardiac Arrest. International Pediatric Simulation Symposium and Workshops. Glasgow, Scotland. May, 2016.
39. T Whitfill, M Gawel, **D Kessler**, B Walsh, L Butler, S Gangadharan, M Hamilton, B Schultz, A Nishisaki, V Nadkarni, K-Y Tay, M Lavoie, J Katznelson, J Baird, L Brown, M Auerbach. The Quality of Pediatric Resuscitative Care in United States Emergency Departments. International Pediatric Simulation Symposium and Workshops. Glasgow, Scotland. May, 2016.
40. B Walsh, M Gawel, **D Kessler**, S Gangadharan, M Hamilton, T Whitfill, J Katz-Nelson. Mobile In Situ Simulation Connecting Academic Centers and Community Hospitals: Bridging Gaps in Care. International Pediatric Simulation Symposium and Workshops. Glasgow, Scotland. May, 2016.
41. Brown L, Tofil NM, Overly F, Lin Y, Duff J, Bhanji F, Nadkarni V, Hunt E, Charnovich A, **Kessler D**, Bank I, Cheng A. Impact of a CPR Feedback Device on Healthcare Provider Workload During Simulated Cardiac Arrest. 16th Annual Meeting on Simulation in Healthcare. San Diego, California, January 2016.
42. T Whitfill, M Gawel, **D Kessler**, B Walsh, L Butler, S Gangadharan, M Hamilton, B Schultz, A Nishisaki, V Nadkarni, K-Y Tay, M Lavoie, J Katznelson, J Baird, L Brown, M Auerbach. The Quality of Pediatric Resuscitative Care in United States Emergency Departments. Pediatric Academic Society Meeting, Baltimore, Maryland, 2016.

43. T Whitfill, M Gawel, **D Kessler**, B Walsh, L Butler, S Gangadharan, M Hamilton, B Schultz, A Nishisaki, V Nadkarni, K-Y Tay, M Lavoie, J Katznelson, J Baird, L Brown, M Auerbach, Gerard J, Scalzo A, Borgman M, Watson C, Byrnes C, Chang T, Auerbach M, Feldman B, Payne B, Nibras S, Loprieto J. Validity Evidence for a Serious Game to Assess Performance on Critical Pediatric Emergency Scenarios Abstract Number: 752217 Publication No: 3840.378. Pediatric Academic Society Meeting, Baltimore, Maryland, 2016.
44. *Daube A, Smerling A, Phillips L, West E, Chaudoin L, Ng L, **Kessler D**. The Cuff Puff: A novel Method to Confirm Endotracheal Tube Depth Using Color Doppler Ultrasound. *Critical Care Medicine*, 43 (12) SUPPL 1:48. Nov 2015. Society of Critical Care Medicine 45th Annual Congress; Orlando, Florida, 2016.
45. Duff, Bhanji, Lin, Overly, Brown, Charnovich, **Kessler**, Tofil, Hunt, Nadkarni, Cheng, INSPIRE CPR Investigators Quality of CPR within simulated cardiac arrest and influence of JIT training and feedback. International Pediatric Simulation Society Meeting, Vancouver, Canada, 2015.
46. *Ruscica A, **Kessler D**. Impact of a Novel Card on Formative Feedback Provided To Residents in the Pediatric Emergency Department. *Poster presentation at Pediatric Academic Society Meeting*, San Diego, California, 2015.
47. *Zhao S, Nadkarni L, Ford B, **Kessler D**. Keepin' Time With "Stayin' Alive:" Assessing the Use of a Musical Mnemonic To Teach CPR Compression Rate. Pediatric Academic Society Meeting, San Diego, California, 2015.
48. *Zaveri P, Kou M, Stryjewski G, Van Ittersum W, McAninch B, Auerbach M, Chang T, **Kessler D** Improving Infant Lumbar Puncture Clinical Outcomes Among Novices. Pediatric Academic Society Meeting, San Diego, California, 2015.
49. Cheng A, Brown L, Duff J, Davidson J, Overly F, Tofil N, Peterson D, Whie M, Bhanji, Bank I, Gottesman R, Adler M, Zhong J, Grant V, Grant D, Sudikoff S, Marohn K, Charnovich A, Hunt E, **Kessler D**, Wong H, Robertson N, Lin J, Ouynh D, Nadkarni V. Improving CardioPulmonary Resuscitation with a CPR Feedback Device And Refresher Simulations (CPRCARES Study): A Multicenter, Randomized Trial. 15th Annual International Meeting on Simulation in Healthcare (IMSH), New Orleans, Louisiana, 2015. **Best abstract**
50. Kahne K, ElSheriff A, Lin S, **Kessler D**, Ward M, Platt S. The Use of Sonographic Measurement of Optic Nerve Sheath Diameter to Predict Raised Intracranial Pressure in Children with Ventriculoperitoneal Shunts. Society for Academic Medicine Meeting, San Diego, California, 2015.
51. Thai, Sutton, Mclario, Cross, Warkentine, Wiedemann, Foster, **Kessler**, Horowitz, Abo, Cohen, Kim. Cost-effectiveness of Implementation of Point-of-care Ultrasound in a Pediatric Emergency Department. American Academy of Pediatrics National Conference, San Diego, California, 2014.

52. **Kessler D**, Auerbach M, Fein D, Chang T, Lee M, Mehta R, Gerard J, Trainor J, Pusic M. Implementation and Impact of a Just-in-Time Assessment to Determine Intern Readiness to Perform Their First Infant Lumbar Puncture. American Academy of Pediatrics National Conference, San Diego, California, 2014.
53. *Pasternack J, Dadiz R, McBeth R, Gerard J, Scherzer D, Kamdar G, Zaveri P, Chang T, Auerbach M, **Kessler D**. Research Abstract Working through Barriers to Simulation-Based Just-In-Time Training and Competency Assessments for Infant Lumbar Punctures. Pediatric Academic Society National Meeting, Vancouver, Canada, 2014.
54. Auerbach M, **Kessler D**, Walsh B, Walsh S, Gawel M, Katznelson J, Jang J, Lavoie M, Khoon-Yen T, Dudas R, Schultz B, Hamilton M, Gangadharan S, Brown L. Standardized Simulation Assessment of the Quality of Pediatric Cardiopulmonary Resuscitation Across a Spectrum of Emergency Department Pediatric Academic Society National Meeting, Vancouver, Canada, 2014.
55. Auerbach M, **Kessler D**, Walsh B, Walsh S, Gawel M, Katznelson J, Jang J, Lavoie M, Khoon-Yen T, Dudas R, Schultz B, Hamilton M, Gangadharan S, Brown L. Standardized Simulation Assessment Reveals Disparities in Pediatric Sepsis Quality of Care Indicators Across a Spectrum of Emergency Departments. Pediatric Academic Society National Meeting, Vancouver, Canada, 2014.
56. *Vitberg T, Tseng P, **Kessler D**. Comparing Novice to Experienced Providers' Approach to the Infant Lumbar Puncture. Pediatric Academic Society National Meeting, Vancouver, Canada, 2014.
57. *Vitberg Y, Tseng P, **Kessler D**. The Sonographic Assessment of Spinal Fluid for Infant Lumbar Puncture. Pediatric Academic Society National Meeting, Vancouver, Canada, 2014.
58. Cheng A, Auerbach M, Hunt E, **Kessler D**, Pusic M, Chang T, MacKinnon R, Duval-Arnould J, Chime N, Nadkarni V, Robertson N. The International Network for Simulation-Based Pediatric Innovation, Research and Education (INSPIRE): Collaboration to Enhance the Impact of Simulation-Based Research Simulation in Healthcare. 14th Annual International Meeting on Simulation in Healthcare (IMSH), San Francisco, California, 2014.
59. Lee White M, Zaveri P, Seelbach B, Mehta R, McAninch B, Fein D, Chang T, Burns R, Auerbach M, Jang J, **Kessler D**, Research Abstract Infant Lumbar Punctures Success Rates Reported by Upper Level Residents. 14th Annual International Meeting on Simulation in Healthcare (IMSH), San Francisco, California, 2014.
60. *Ruscica A, **Kessler D**. Pediatric Resuscitation Review. 14th Annual International Meeting on Simulation in Healthcare (IMSH), San Francisco, California, 2014.
61. Seelbach E, **Kessler D**, Mehta R, Chime N, Pusic M, Chang T. Examining Variability in

Infant LP Decision Making Using a Novel Script Concordance Testing Approach. Pediatric Academic Society National Meeting, Washington D.C., 2013.

62. *Fein D, Avner J, Auerbach M, **Kessler D**. Analgesia Use for Infant Lumbar Puncture after an Educational Intervention. Pediatric Academic Society National Meeting, Washington D.C., 2013.
63. Boureau-Voultoury A, Trigolet M, Ghazali A, LeFranc V, Breque C, Scepi M, Auerbach M, **Kessler D**, Oriot D. Residents Performance And Stress During Simulated and Real Lumbar Punctures in Infants. International Pediatric Simulation Society Conference, New York, NY, 2013.
64. Kim J, **Kessler D**, Auerbach M, Danziger C, Shah N, Overly N, Brown L, Falk M, Weinberg E, Santiago K, Ching K. Base Camp: Pediatric Emergency Medicine Fellow Simulation-Based Procedural Skills Training. International Pediatric Simulation Society Conference, New York, NY, 2013.
65. Kim J, **Kessler D**, Auerbach M, Danziger C, Shah N, Overly N, Brown L, Falk M, Weinberg E, Santiago K, Ching K. Base Camp: Pediatric Emergency Medicine Fellow Simulation-Based Multi-Disciplinary Teamwork Training. International Pediatric Simulation Society Conference, New York, NY, 2013.
66. MacKinnon RJ, Anderson M, Kennedy C, Auerbach M, **Kessler D**, Patterson M, Grant V, Duff J, Norman D, Hunt E, Nadkarni V. Pediatric Trauma In-Situ Inter Professional Simulation Training Targeted to Directly Improve Patient Care: Needs Analysis Assessment By Interactive Survey of Trauma Team Members. International Pediatric Simulation Society Conference, New York, NY, 2013.
67. MacKinnon RJ, Lecky F, Kennedy C, Auerbach M, **Kessler D**, Patterson M, Grant V, Duff J, Norman D, Hunt E, Nadkarni V. Pediatric Trauma In-Situ Inter Professional Simulation Training Targeted to Directly Improve Patient Care: Needs Analysis Assessment By Direct Observation & Self Reflection. International Pediatric Simulation Society Conference, New York, NY, 2013.
68. MacKinnon RJ, Dalglish K, Kennedy C, Auerbach M, **Kessler D**, Patterson M, Grant V, Duff J, Norman D, Hunt E, Nadkarni V. In-Situ High Fidelity Simulation For High Level Clinical Incidents in a Tertiary Pediatric Theater: A Tool for Improving Teamwork and Reducing Risk. International Pediatric Simulation Society Conference, New York, NY, 2013.
69. Ching K, **Kessler D**, Auerbach M, Danziger C, Shah N, Overly F, Brown L, Falk M, Howell J, Weinberg E, Kim J, Santiago K. Going to Camp: A Survival Guide For Planning A Simulation-Based Pediatric Resident Boot Camp. International Pediatric Simulation Society Conference, New York, NY, 2013.
70. MacKinnon RJ, Lecky F, Kennedy C, Auerbach M, **Kessler D**, Patterson M, Grant V, Duff J, Norman D, Hunt E, Nadkarni V. Pediatric Trauma Identification of In Situ

Interprofessional Pediatric Trauma Simulation Training Targeted To Directly Improve Patient Care. International Pediatric Simulation Society Conference, New York, NY, 2013.

71. Doughty C, **Kessler D**, Zuckerbraun N, Stone K, Reid J, Kennedy C, Nypaver M, Auerbach M. State of Simulation-Based Medical Education in Pediatric Emergency Medicine Fellowships in 2012, International Pediatric Simulation Society Conference, New York, NY, 2013.
72. **Kessler D**, Chang T, Mehta R, Agrawal D, Zaveri P, Grossman D, Seelbach B, Lavoie M, Gerard J, Fein D, Trainor J, Lee M, Srivastava G, Iyer S, White M, McQueen A, Auerbach M. INSPIRE Network. Does a Just-In-Time Simulation-Based Competency Assessment Improve Trainee Clinical Success with First Infant Lumbar Puncture? International Pediatric Simulation Society Conference, New York, NY, 2013.
73. **Kessler D**, Zaveri P, White M, Chang T, Auerbach M, INSPIRE Network. Just-In-Time Simulation-Based Assessment to Predict Trainee's Infant Lumbar Puncture Success. 13th Annual International Meeting on Simulation in Healthcare (IMSH), Orlando, Florida, 2013.
74. Lumba A, **Kessler D**, et al. Pemnetwork.org: a novel website for PEM community. American Academy of Pediatrics National Conference, New Orleans, Louisiana, 2012.
75. Chang T, **Kessler D**, Auerbach M, Scherzer D.J., McAninch, Jackson J, Zaveri Pavan, Seelbach E, Mehta R, Ching K, Van Ittersum W, Dobson J, Fein D, Strother S, Rocker J, Pusic M. Script Concordance Testing and Lumbar Puncture Practice Variation among Trainees and Physicians. Pediatric Academic Society National Meeting, Boston, Massachusetts, 2012.
76. *Auerbach M, Agrawal D, White M, **Kessler D**. The Use of Just-in-Time Simulation-Based Assessment To Predict Trainee's Clinical Infant Lumbar Puncture Success. Pediatric Academic Society National Meeting, Boston, Massachusetts, 2012.
77. **Kessler D**, Fein D, Agrawal D, Reid J, Pusic M, Haubner L, Auerbach A. Impact of a Simulator Based Just-In-Time Refresher Training for Interns On Their Clinical Success Rate with Infant Lumbar Puncture. 12th Annual International Meeting on Simulation in Healthcare (IMSH), San Diego, California, 2012.
78. Chang T, Reid J, Cico S, **Kessler D**, Auerbach M. Using Adobe Captivate to synchronize Trainers for a Multi-Center International Simulation Intervention Study. 12th Annual International Meeting on Simulation in Healthcare (IMSH), San Diego, California, 2012. **3rd place winner**
79. **Kessler D**, Cappaert M, Walker C, Kyne C, Tsze D, Middlesworth W, Sonnett M, Fowler D. Full Scale Multidisciplinary In-Situ Simulation Prior to Opening a New Pediatric Emergency Department. 12th Annual International Meeting on Simulation in Healthcare (IMSH), San Diego, California, 2012.

80. **Kessler D**, Fein D, Agrawal D, Reid J, Pusic M, Haubner L, Auerbach A. Impact of a Simulator Based Just-In-Time Refresher Training for Interns On Their Clinical Success Rate with Infant Lumbar Puncture. American Academy of Pediatrics National Conference, Boston, Massachusetts 2011.
81. Ching K, **Kessler D**, Auerbach M. From Civilian to Warrior: Pediatric Emergency Medicine Boot Camp Training. International Pediatric Simulation Society Conference, France, 2011.
82. Ching K, Reid J, **Kessler D**, Auerbach M, Cleary K. Beyond Mock Codes: A bespoke Pediatric Simulation Curriculum. International Pediatric Simulation Society Conference, France, 2011.
83. Gerard J, Braun C, **Kessler D**, Auerbach M, Mehta R, Burch W, Scalzo A. Validation of an Infant Lumbar Puncture Global Skills Assessment Tool. International Pediatric Simulation Society Conference, France, 2011.
84. **Kessler D**, Fein D, Agrawal D, Reid J, Pusic M, Haubner L, Auerbach A. Impact of a Simulator Based Just-In-Time Refresher Training for Interns On Their Clinical Success Rate with Infant Lumbar Puncture. International Pediatric Simulation Society Conference, France, 2011.
85. Chang T, Auerbach M, **Kessler D**, Pusic M. Using Online Train-The-Trainer Modules to Standardize Pediatric Simulation-Based Medical Education. International Pediatric Simulation Society Conference, France, 2011.
86. Auerbach M, Chang T, Fein D, Gerard J, Mehta R, Scherzer D, Reid J, Pusic M, Batra M, Lemke D, Zaveru P, Oriot D, **Kessler D**. Simulation-Based Competency Assessment to Predict Clinical Infant Lumbar Puncture Success. International Pediatric Simulation Society Conference, France, 2011.
87. Auerbach M, **Kessler D**, Ching K, Weinberg E, Rucker J, Arteaga G, Haubner L, Kamdar G, Tilt L, Petrescu M, Strother C, Lindower J. The Effect of a Simulation- Based Mastery Learning Intervention on Pediatric Interns' Procedural Skills Performance: A Multicenter Randomized Trial. International Pediatric Simulation Society Conference, France, 2011.
88. Fein D, Avner J, Auerbach M, Klein E, Srivastava G, Seelbach E, Rucker J, Strother C, **Kessler D**. Analgesia Use for Infant Lumbar Puncture by Interns after an Educational Intervention. Pediatric Academic Society National Meeting, Denver, Colorado, 2011.
89. *Ching K, Auerbach M, Overly F, Brown L, Dong C, Gillespie C, Falk M, Shah N, Weinberg E, **Kessler D**. Training Experiences of Pediatric Emergency Medicine Fellows before Fellowship. Pediatric Academic Society National Meeting, Denver, Colorado, 2011.

90. *Ching K, Auerbach M, Overly F, Brown L, Dong C, Gillespie C, Falk M, **Kessler D**. Impact of BASE Camp: Simulation –Based Multidisciplinary Team Training for Pediatric Emergency Medicine Fellows. Pediatric Academic Society National Meeting, Denver, Colorado, 2011.
91. Alletag M, **Kessler D**, Auerbach M. Pediatric Resident’s Procedural Experience: How Much is Enough? Pediatric Academic Society National Meeting, Denver, Colorado, 2011.
92. Kamdar G, Tilt L, **Kessler D**, Khanna K, Srivastava G, Chang T, Krantz A, Cico S, Holder M, Reid J, Pusic M, Ching K, Auerbach M. Just in Time Simulation-Based LP Training: A Qualitative Evaluation. Pediatric Academic Society National Meeting, Denver, Colorado, 2011.
93. *Fein D, Avner J, Auerbach M, Klein E, Srivastava G, Seelbach E, Rocker J, Strother C, **Kessler D**. Analgesia Use for Infant Lumbar Puncture by Interns after an Educational Intervention. Eastern Society for Pediatric Research Annual Meeting, Philadelphia, Pennsylvania, 2011.
94. *Ching K, Auerbach M, Overly F, Brown L, Dong C, Gillespie C, Falk M, Shah N, Weinberg E, **Kessler D**. Training Experiences of Pediatric Emergency Medicine Fellows before Fellowship. Eastern Society for Pediatric Research Annual Meeting, Philadelphia, Pennsylvania, 2011.
95. Alletag M, **Kessler D**, Auerbach M. Pediatric Residents’ Procedural Experience: How Much Is Enough? Eastern Society for Pediatric Research Annual Meeting, Philadelphia, Pennsylvania, 2011.
96. *Ching K, Auerbach M, Overly F, Brown L, Dong C, Gillespie C, Falk M, **Kessler D**. Impact of BASE Camp: Simulation-Based Multidisciplinary Team Training for Pediatric Emergency Medicine Fellows. Eastern Society for Pediatric Research Annual Meeting, Philadelphia, Pennsylvania, 2011.
97. **Kessler D**, Chang T, Sherman J, Shah N, Srivastav G, Strother C, Khanna K, Holder M, Cico S, Mehta R, Petrescu M, Reid J, Hebbar K, Zuckerbraun N, Pusic M, Auerbach M. New Pediatric Interns’ Infant Lumbar Puncture Skills. Eastern Society for Pediatric Research Annual Meeting, Philadelphia, Pennsylvania, 2011.
98. Alletag M, **Kessler D**, Auerbach M. Pediatric Resident Procedural Experience: How Much Is Enough? 11th Annual International Meeting on Simulation in Healthcare (IMSH), New Orleans, Louisiana, 2011.
99. *Chang T, Khanna K, Ostrom K, Zaveri P, Seelbach E, Birch S, Auerbach M, **Kessler D**, on behalf of the POISE investigators. Does Mastery Training and Just-In-Time Training Using Lumbar Puncture Simulators Increase the Incidence of Traumatic Lumbar Punctures? 11th Annual International Meeting on Simulation in Healthcare (IMSH), New

Orleans, Louisiana, 2011.

100. *Auerbach M, **Kessler D**, on behalf of the POISE Investigators. The Impact of Simulation-Based Mastery Learning with Just-In-Time Training Refreshers on Clinical Infant Lumbar Puncture Success Rates Across the POISE (Patient Outcomes in Simulation Education) Network. 11th Annual International Meeting on Simulation in Healthcare (IMSH), New Orleans, Louisiana, 2011.
101. **Kessler D**, Tilt L, Krantz A, Santiago K, O'Malley S, Kamdar G, Arteaga G, Pusic M, Weinberg E, Shah N, Rocker J, Ching K, Miller M, Strother C, Haubner L, Foltin J, Lindower J, Petrescu M, Auerbach M on behalf of the POISE Investigators. The Effect of a Simulation-Based Mastery Learning Intervention on Pediatric Interns Procedural Skills Performance: A Multicenter Randomized Trial. 11th Annual International Meeting on Simulation in Healthcare (IMSH), New Orleans, Louisiana, 2011.
102. Fein D, Avner J, Auerbach M, Klein K, Paul A, Seelbach E, Stryjewski E, **Kessler D**. Patterns of Analgesia Use by Pediatric Interns for Lumbar Puncture in Children Less Than One Year of Age. 11th Annual International Meeting on Simulation in Healthcare (IMSH), New Orleans, Louisiana, 2011.
103. *Auerbach M, Paul A, O'Malley S, **Kessler D** on behalf of the POISE Investigators. Impact of Medical School Simulation Training Experiences on Infant Lumbar Puncture Knowledge, Skills and Attitudes. 11th Annual International Meeting on Simulation in Healthcare (IMSH), New Orleans, Louisiana, 2011.
104. **Kessler D**, Tilt L, Krantz A, Santiago K, Ching K, Zuckerbraun N, McAninch B, Auerbach M, on behalf of the POISE Investigators. Infant Lumbar Puncture Knowledge, Skills and Attitudes at the Start of Residency. 11th Annual International Meeting on Simulation in Healthcare (IMSH), New Orleans, Louisiana, 2011.
105. *McAninch B, Zuckerbraun N, Ching K, Auerbach M, **Kessler D** on behalf of the POISE Investigators. Validation of a Global Skills Assessment Tool for Resident Infant Lumbar Puncture Skill. 11th Annual International Meeting on Simulation in Healthcare (IMSH), New Orleans, Louisiana, 2011.
106. **Kessler D**, Arteaga G, Foltin J, Haubner L, Kamdar G, Krantz A, Lindower J, Miller M, O'Malley S, Petrescu M, Pusic M, Rocker J, Shah N, Strother C, Tilt L, Weinberg E, Auerbach M. Effect of a Simulation-Based Mastery Learning Intervention on Pediatric Interns Procedural Skills Performance: A Multi-Center Randomized Trial. 3rd International Pediatric Simulation Symposium and Workshops, Madrid, Spain, 2010
107. **Kessler D**, Arteaga G, Foltin J, Haubner L, Kamdar G, Krantz A, Lindower J, Miller M, O'Malley S, Petrescu M, Pusic M, Rocker J, Shah N, Strother C, Tilt L, Weinberg E, Auerbach M. Effect of a Simulation-Based Mastery Learning Intervention on Pediatric Interns Procedural Skills Performance: A Multi-Center Randomized Trial. American Academy of Pediatrics National Conference, Section on Emergency Medicine, San Francisco, California, 2010.

108. **Kessler D**, Auerbach M, Pusic M, Tunik M, Foltin J. A Randomized Trial of Simulation for Infant Lumbar Puncture Skills-Training. New York University Joseph Dancis Research Day, New York City, NY, 2010
109. Kadia P, **Kessler D**, Weinberg E, Strother C, Lindower J, Rucker J, Haubner L, Arteaga G, Petrescu M, Tilt L, Kamdar G, Foltin J, Pusic M, Auerbach M, New Interns Have Little Training or Confidence in Their Pediatric IV Skills. Eastern Society for Pediatric Research Annual Meeting, Philadelphia, Pennsylvania, 2010
110. **Kessler D**, Weinberg E, Strother C, Lindower J, Rucker J, Haubner L, Arteaga G, Petrescu M, Tilt L, Kamdar G, Foltin J, Pusic M, Auerbach M A Multi-Center Study of Infant Lumbar Puncture during Medical School. Eastern Society for Pediatric Research Annual Meeting, Philadelphia, Pennsylvania, 2010
111. Fenster D, **Kessler D**, Tsung J, The Anatomic Relationship of Trachea and Esophagus at the Cricoid Ring by Ultrasonography: Implications for Cricoid Pressure during Airway Management. Association For Medical Ultrasound (AIUM) annual convention, San Diego, California, 2010.
112. *Auerbach A, E. Weinberg, M. Miller, M. Pusic, G. Arteaga, A. Krantz, C. Strother, J. Lindower, L. Haubner, MD, M. Petrescu, T. Burwinkle, **Kessler D**. The Development of POISE (Patient Outcomes in Simulation Education) A Pediatric Research Network. 10th Annual International Meeting on Simulation in Healthcare (IMSH), Phoenix, Arizona, 2010.
113. **Kessler D**, et al. Simulation Training During Medical School for Common Pediatric Procedures: a Multi-Center Descriptive Study. 10th Annual International Meeting on Simulation in Healthcare (IMSH), Phoenix, Arizona, 2010.
114. Pusic M, Andrews J, Kamdar G, **Kessler D**, Teng D, Pecaric M, Boutis K. Determining the Optimal Mix of Abnormals to Normals for Learning Radiograph Interpretation: A Randomized Controlled Trial of Residents 14th Ottawa Conference on the Assessment of Competence in Medicine and the Healthcare Professions, Miami, Florida, 2010.
115. **Kessler D**, Weinberg E, Strother C, Lindower J, Rucker J, Haubner L, Arteaga G, Petrescu M, Tilt L, Kamdar G, Foltin J, Pusic M, Auerbach M, Training During Medical School For Intravenous Line Placement: A Multi-Center Descriptive Study. Pediatric Academic Society National Meeting, Vancouver, Canada, 2010.
116. **Kessler D**, Weinberg E, Strother C, Lindower J, Rucker J, Haubner L, Arteaga G, Petrescu M, Tilt L, Kamdar G, Foltin J, Pusic M, Auerbach M, A Multi-Center Study of Infant Lumbar Puncture during Medical School. Pediatric Academic Society National Meeting, Vancouver, Canada, 2010.
117. **Kessler D**, Auerbach M, Heon D, Tunik M, Foltin J. "Sim One, Do One" Infant

Lumbar Puncture Simulator Improves Resident Confidence and Skills. Society for Simulation in Healthcare National Meeting, Orlando, Florida, 2009.

118. Auerbach M, **Kessler D**, Heon D, Foltin J, Tunik M. RePedSim: Repetitive Simulation Training. Society for Simulation in Healthcare National Meeting, Orlando, Florida, 2009.
119. **Kessler D**, Auerbach M, Tunik M, Foltin J. A Randomized Trial of Simulation for Infant Lumbar Puncture Skills-Training. Pediatric Academic Society National Meeting, Baltimore, Maryland, 2009.
120. Corwin D, **Kessler D**, Auerbach M, Kristinsson G. Pain Relief in Childhood Emergencies. Pediatric Academic Society National Meeting, Vancouver, 2010.
121. **Kessler D**, Infantile Cortical Hyperostosis (Caffey's Disease). PEMpix competition, American Academy of Pediatrics National Convention in Washington D.C. 2009.
122. **Kessler D**, Marr M, Mojica M. Randomized Trial Comparing Wound Packing to No Wound Packing Following Incision and Drainage of Superficial Skin Abscesses in the Pediatric Emergency Department. American Academy of Pediatrics National Convention in Washington D.C. 2009.
123. **Kessler D**, Auerbach M, Marr M, Gorman A, Turner M. Safety Device Use Among Pediatric Taxi Cab Passengers. Pediatric Academic Society National Meeting, Baltimore, Maryland, 2009.
124. Garland V, Baer T, Hammond B, **Kessler D**, Rosen C, Mogilner L. Program Evaluation: Parent Health Education Sessions. Mount Sinai's Pediatric Research day, New York, NY, 2007
125. **Kessler D**, Hahn Sigrid. Injury Surveillance and Motorcycle Helmet use in the Dominican Republic. American College of Emergency Physicians National Meeting, Seattle, Washington, 2007.
126. Kessel A, **Kessler D**. Rosen C. The Asthma Card: Will it Improve Asthma Care in an Urban Population? Mount Sinai's Pediatric Research day, New York, NY, 2007
127. **Kessler D**, Ragin L, Sadow K. Sexual health disparities between emergency department patients with and without primary care. Mount Sinai's Pediatric Research day, New York, NY, 2006.
128. **Kessler D**, Yang X, Silverstein J, and Mobbs C. Post-Prandial Thermogenesis During Aging: Possible role of hypothalamic glucose sensing mechanisms. Annual Scientific Meeting of the American Geriatrics Society, Washington D.C, 2002.

Presentations

International Invited lectures, Grand rounds, Keynote addresses

Year	Title	Role	Attendees	Organization
2023	Artificial Intelligence for Lung POCUS	Invited lecturer	250	P2 Lead meeting at Pediatric Academic Society, Washington DC
2022	Artificial Intelligence for Lung POCUS, Bringing AI to the Pediatric Bedside	Invited Lecturer	Live Stream	WINFOCUS World Congress (Turkey)
2021	Ultrasound Skills Training – probing the future	Invited Lecturer	Live Stream	SIMULUS 6 Virtual Conference (India)
2021	Innovation in Pediatric Emergency Medicine	Invited lecturer	Live Stream	10 th Annual Pediatric Emergency Medicine Symposium, Virtual (Northwell)
2013	Lifelong Learning for the PEM physician	Invited lecturer	200	Committee for our future, section of emergency medicine, American Academy of Pediatrics National Conference
2013	Stress & Simulation	Invited lecturer	100	Mediterranean Emergency Medicine Conference VII, Marseilles France

Presentations at International Professional Meetings

Year	Title	Role	Attendees	Organization
2023	SQUIRE-SIM: Publication Guidelines for Simulation-Based Quality Improvement Projects	Invited speaker	40	International Pediatric Simulation Symposia and Workshops (IPSS), Lisbon, Portugal
2016	Principles of Ultrasound Physics	Lecturer	50	American Academy of Pediatrics National Conference, San Francisco
2016	Pediatric Point-of-Care Ultrasound	Lecturer, course co-leader	80	P2 Lead Annual Workshop
2014	Simulation-based Research methods	Invited speaker	200	INSPIRE meeting at 14 th Annual International Meeting on Simulation in Healthcare (IMSH), San Francisco, California
2013	Building Capacity for Multi-center Simulation Research: Strategies for Success in Developing an International Specialty Specific Simulation Research Network	Lecturer	30	13 th Annual International Meeting on Simulation in Healthcare (IMSH), Orlando, Florida
2012	Linking simulation-based training & assessment to improved patient outcomes	Lecturer	30	12 th Annual International Meeting on Simulation in Healthcare (IMSH), San Diego, California

International courses

Year	Title	Role	Attendees	Organization
2016	Simulation Research; improving rigor, impact & methodology	Co-Director	15	International Pediatric Simulation Symposia and Workshops, Glasgow
2015	Pediatric Emergency Ultrasound workshop	Co-Director	50	American Academy of Pediatrics National Conference, D.C.
2015	Designing and Conducting Simulation-Based Research	Co-Director	30	International Pediatric Simulation Symposia and Workshops, Vancouver

2015	Stress the System, Test the Space	Director	40	15 th Annual International Meeting on Simulation in Healthcare (IMSH), New Orleans, Louisiana
2014	PART 1-Look Before You Leap! Using simulation to prepare for a new clinical space or process,	Director	20	14 th Annual International Meeting on Simulation in Healthcare (IMSH), San Francisco, California
2014	PART 2-Look Before You Leap! Using simulation to prepare for a new clinical space or process	Director	20	14 th Annual International Meeting on Simulation in Healthcare (IMSH), San Francisco, California
2013	Look Before You Leap! Using simulation to prepare for a new clinical space or process	Director	20	International Pediatric Simulation Symposia and Workshops, NYC

International expert panels

Year	Title	Role	Attendees	Organization
2025	Shark Tank	Invited expert judge	100	International Network for Simulation Based Pediatric Innovation Research and Education
2025	Accelerating innovation	Invited panelist	100	International Network for Simulation Based Pediatric Innovation Research and Education
2024	The role of AI in Pediatric Medical Education	Invited panelist	100	AAP section of emergency medicine
2024	SSH presents: First edition of SSH guidelines for Healthcare Simulation Practices	Invited panelist	100	24 th Annual International Meeting on Simulation in Healthcare (IMSH), San Diego, California
2024	Academic Promotion Strategies in Healthcare Simulation	Invited speaker/panelist	50	24 th Annual International Meeting on Simulation in Healthcare (IMSH), San Diego, California
2021	How do you heal the healthcare simulation workforce, what is simulation's role in this?	Expert panelist	Virtual (50)	Global Network for Simulation in Healthcare
2020	21 st Century Child and Adolescent in the Emergency Department	Expert panelist	Live Stream	Morgan Stanley Children's Hospital
2020	Clinical Video recording During Resuscitative Care: Applications for Quality Improvement, Care Optimization, Education, and Skill Maintenance	Expert panelist	20	Pediatric Academic Society Meeting, Philadelphia, Pennsylvania, May, 2020 (moved to virtual)
2020	Becoming an effective research mentor	Expert panelist	120	INSPIRE meeting at 20 th Annual International Meeting on Simulation in Healthcare (IMSH), San Diego, California
2017	Simulation for New Construction and System Testing	Expert panelist	30	International Pediatric Simulation Symposia and Workshops, Boston, Massachusetts
2017	Latent Safety Threats, Developing a System for Mitigation Through Systems Integration	Expert panelist	20	17 th Annual International Meeting on Simulation in Healthcare (IMSH), Orlando, Florida

2014	Developing a Mobile Simulation Program for Community Providers from Start up to Sustainability: Addressing Issues in Curriculum Design, Community Engagement, and Program Building for a Sustainable Simulation Program	Expert panelist	200	14 th Annual International Meeting on Simulation in Healthcare (IMSH), San Francisco, California
2013	Simulation competition	Co-chair/judge	50	Mediterranean Emergency Medicine Conference VII, Marseilles France
2012	Collaborations in Simulation-Based Education and Training	Expert panelist	30	12 th Annual International Meeting on Simulation in Healthcare (IMSH), San Diego, California
2011	Meet the SimPros Sim Research Consortium	Expert panelist	50	11 th Annual International Meeting on Simulation in Healthcare (IMSH), New Orleans, Louisiana
2010	“Hot topics in Pediatrics”	Expert panelist	100	11 th Annual International Meeting on Simulation in Healthcare (IMSH), Phoenix, Arizona

International workshops / seminars

Year	Title	Role	Attendees	Organization
2025	The Systems Simulation Is Over...Now What?: Transforming Issues Into Solutions	Workshop faculty	30	International Pediatric Simulation Symposia and Workshops (IPSS), Munich, Germany
2025	The Ripple Effect; applying positive psychology principles to debriefing to transform team culture	Workshop faculty	30	International Pediatric Simulation Symposia and Workshops (IPSS), Munich, Germany
2025	SQUIRE-SIM Reporting Guidelines: Using These New Guidelines To Get Your Simulation-Based QI Project Published	Workshop faculty	30	International Pediatric Simulation Symposia and Workshops (IPSS), Munich, Germany
2025	Mastering the Art of Clinical Feedback: When to Debrief and When to Direct	Workshop faculty	30	Society for Academic Medicine, Philadelphia
2025	Incorporating Health Equity, Diversity, And Inclusion Into Existing Simulation Cases: A Pragmatic Approach	Workshop faculty	60	25 th Annual International Meeting on Simulation in Healthcare (IMSH), Orlando, Florida
2025	Looking in the Mirror- Optimizing Learner Self-Assessment in PEARLS Blended Method Debriefing	Workshop faculty	50	25 th Annual International Meeting on Simulation in Healthcare (IMSH), Orlando, Florida
2025	Team Training Using Applied Improvisation for Simulation Educators	Workshop faculty	40	25 th Annual International Meeting on Simulation in Healthcare (IMSH), Orlando, Florida
2024	Psychological safety and difficult debriefing: Navigating the Nuances	Workshop faculty	30	Association for Simulated Practice in Healthcare (ASPIH), London
2024	Improv for Debriefing: Theater games for simulation faculty development	Workshop faculty	60	24 th Annual International Meeting on Simulation in Healthcare (IMSH), San Diego, California

2023	S)Improv! Theater games to improve simulation-based team training	Workshop faculty	30	International Pediatric Simulation Symposia and Workshops (IPSS), Lisbon, Portugal
2023	Just in Time Systems Simulation: Using Simulation to Solve Emergent Problems	Workshop faculty	30	International Pediatric Simulation Symposia and Workshops (IPSS), Lisbon, Portugal
2023	S)Improv! Theater games to improve simulation-based team training	Workshop faculty	60	23 rd Annual International Meeting on Simulation in Healthcare (IMSH), Orlando, Florida
2022	SIMprov: An introduction to improvisational games to improve team communication.	Workshop faculty	60 + Virtual	22 nd Annual International Meeting on Simulation in Healthcare (IMSH), Los Angeles, California
2021	Just-in-time Systems Simulation: Using Simulation to Solve Emergency Problems	Workshop faculty	Virtual	International Pediatric Simulation Symposia and Workshops, (IPSSV)
2021	Grant writing basics: how to write a winning research proposal	Workshop faculty	Virtual	International Pediatric Simulation Symposia and Workshops, (IPSSV)
2021	Debriefing Methodology as a Framework to Respond to Microaggressions	Workshop faculty	Virtual	International Pediatric Simulation Symposia and Workshops, (IPSSV)
2021	Writing Workshop; Problem, Gap, Hook	Workshop faculty	Virtual	INSPIRE meeting at the International Pediatric Simulation Symposia and Workshops, (IPSSV)
2021	Helping Smart People Learn From Dummies	Workshop faculty	Virtual	Human Factors and Ergonomics in Healthcare (International Symposium)
2021	Addressing Inequity and Structural Competency Through Simulation: Transformative Learning Workshop	Workshop faculty	Virtual	Annual International Meeting on Simulation in Healthcare (IMSH)/ pre-recorded educational experience (2021)
2021	Diversity, Equity, & Inclusion: Setting a research agenda for INSPIRE	Session facilitator	100	Virtual meeting hosted by the International Network for Simulation-based Pediatric Innovation, Research, and Education
2020	Healthcare Distance Simulation Summit	Session facilitator	151	Virtual summit hosted by: INSPIRE, IPSS, NKS, PediStars
2020	Translating Positive Psychology Principles into our Debriefing- what can we learn?	Workshop faculty	25	12 th International Pediatric Simulation Symposia and Workshops, (IPSSV)
2020	How to develop & operate a Virtual Reality Education & Research Program for your Simulation Center	Workshop faculty	25	12 th International Pediatric Simulation Symposia and Workshops, (IPSSV)
2020	Building a formal clinical debriefing program and a continuous evaluation process	Workshop faculty	25	12 th International Pediatric Simulation Symposia and Workshops, (IPSSV)
2020	Debriefing Clinical Events	Workshop faculty	100	20 th Annual International Meeting on Simulation in Healthcare (IMSH), San Diego, California
2020	PEARLS for System Integration	Workshop faculty	50	20 th Annual International Meeting on Simulation in Healthcare (IMSH), San Diego, California
2019	Sticky Simulation Situations: Tools	Workshop faculty	50	11 th International Pediatric

	for difficult debriefings			Simulation Symposia and Workshops, Toronto, Canada
2018	Reporting guidelines for simulation-based research in healthcare: How to write and report a simulation-based study	Workshop faculty	20	10 th International Pediatric Simulation Symposia and Workshops, Amsterdam, Netherlands
2018	How to build a formal clinical debriefing program and develop a continuous evaluation process	Workshop faculty	20	10 th International Pediatric Simulation Symposia and Workshops, Amsterdam, Netherlands
2018	Stress Testing a New Constriction or Process Using Simulation	Workshop faculty	20	10 th International Pediatric Simulation Symposia and Workshops, Amsterdam, Netherlands
2017	Debriefing Clinical Events	Workshop faculty	20	18 th Annual International Meeting on Simulation in Healthcare (IMSH), Los Angeles, California
2017	Stirring the Pot: Blending Medical, Inter-professional & Patient-centered Objectives in Simulation	Workshop faculty	20	9 th International Pediatric Simulation Symposia and Workshops, Boston, Massachusetts
2017	Need for Speed: Pros and Cons of Using Speeded Practice in Simulation Education	Workshop faculty	20	9 th International Pediatric Simulation Symposia and Workshops, Boston, Massachusetts
2017	Teach and Assess Procedural Skills like an Expert: the L-S-P-P-D-M Approach	Workshop faculty	50	17 th Annual International Meeting on Simulation in Healthcare (IMSH), Orlando, Florida
2017	Reporting Guidelines for Simulation Research	Workshop faculty	50	17 th Annual International Meeting on Simulation in Healthcare (IMSH), Orlando, Florida
2017	Clinical Debriefing	Workshop faculty	60	9 th International Pediatric Simulation Symposia and Workshops, Boston, Massachusetts
2017	Reporting Guidelines for Simulation Research	Workshop faculty	20	9 th International Pediatric Simulation Symposia and Workshops, Boston, Massachusetts
2016	Hospital System Improvement	Workshop faculty	15	8 th International Pediatric Simulation Symposia and Workshops, Glasgow
2015	Stress the System, Test the Space	Workshop faculty	40	7 th International Pediatric Simulation Symposia and Workshops, Vancouver
2015	Teach and Assess Procedural Skills like an Expert: the L-S-P-P-D-M Approach	Workshop faculty	40	15 th Annual International Meeting on Simulation in Healthcare (IMSH), New Orleans, Louisiana
2015	A User's Guide Developing an In-Situ mobile Simulation Program for Frontline Providers	Workshop faculty	40	15 th Annual International Meeting on Simulation in Healthcare (IMSH), New Orleans, Louisiana
2014	Identifying and Overcoming Challenges to High-Quality Simulation-based Research: Â Improving Rigor and Impact.	Workshop faculty	40	14 th Annual International Meeting on Simulation in Healthcare (IMSH), San Francisco, California
2013	Exploring Effective Strategies for	Workshop faculty	30	5 th International Pediatric

	Successful Multi-center Simulation-Based Research			Simulation Symposia and Workshops, NYC
2013	Implementing Competency-based Procedural Skills Assessment for Trainees: Beyond the Checklist	Workshop faculty	30	5 th International Pediatric Simulation Symposia and Workshops, NYC
2013	Teaching Pediatric Emergency Medicine Procedures In The Simulation Setting—Checklists, Protocols, Tricks and Tips	Workshop faculty	30	5 th International Pediatric Simulation Symposia and Workshops, NYC
2013	Identifying and Overcoming Challenges in Multi-center Simulation Research: How to Broaden Simulation Research from Single-center Protocols to Multi-center Research Protocols	Workshop faculty	30	13 th Annual International Meeting on Simulation in Healthcare (IMSH), Orlando, Florida
2013	Look Before You Leap! Using simulation to prepare for a new clinical space or process	Workshop faculty	30	13 th Annual International Meeting on Simulation in Healthcare (IMSH), Orlando, Florida
2012	Speed Dating: Polishing Your Research Idea into a Protocol	Workshop faculty	20	12 th Annual International Meeting on Simulation in Healthcare (IMSH), San Diego, California
2011	Speed Dating: Polishing Your Research Idea into a Protocol	Workshop faculty	20	11 th Annual International Meeting on Simulation in Healthcare (IMSH), New Orleans, Louisiana

National Invited lectures, Grand rounds, Keynote addresses

Year	Title	Role	Attendees	Organization
2025	The Ripple Effect; applying positive psychology principles to debriefing to transform team culture	Invited lecturer	100	Children’s Hospital of Philadelphia; Delivery Room of the Future Conference
2017	Simulation for Patient Safety	Invited lecturer- Emergency Medicine Grand Rounds	25	Dell Children’s Hospital, Austin
2017	Simulation as a Patient Safety Tool and Driver for Culture Change	Invited webinar speaker	50	Beta Healthcare Group Risk Management Authority (California)
2017	Simulation-based Education Primer	Invited lecturer	40	American Association of Gynecologic Laparoscopists, NYC meeting

Presentations at national professional meetings

Year	Title	Role	Attendees	Organization
2016	Ultrasound Education	Invited lecturer & Workshop faculty	100	Bedside Ultrasound Course, Children’s Hospital Of Philadelphia
2014	Difficult cases in the Pediatric Emergency Department- Can Ultrasound Help?	Lecturer	100	American Institute of Ultrasound in Medicine, Las Vegas, Nevada
2014	Ultrasound for Febrile Infant	Lecturer	100	Society for Academic Emergency Medicine, Arizona
2014	Ultrasound Education	Invited lecturer & Workshop faculty	100	Bedside Ultrasound Course, Children’s Hospital Of Philadelphia

2011	Ultrasound Physics	Lecturer	100	Pediatrics Academic Society, Denver, Colorado
2011	Teaching High-Speed Retrieval of Clinical Evidence	Lecturer	100	Pediatrics Academic Society, Denver, Colorado
2010	Novel uses of Ultrasound in Pediatric Emergency Medicine	Lecturer	100	Section of Emergency Medicine, American Academy of Pediatrics
2010	Practice Makes Perfect: Measuring the Effectiveness of Simulation Educational Interventions on Patient Outcomes.”	Lecturer	50	Pediatrics Academic Society, Vancouver, Canada

National courses

Year	Title	Role	Attendees	Organization
2016	Stirring the Pot: Blending Medical, Interprofessional & Patient-Centered Objectives in Simulation	Co-director	20	New York Simulation Center, Hot Topics
2014	Deconstructing Debriefing for Clinical Events	Director	20	New York Simulation Center, Hot Topics

National expert panels

Year	Title	Role	Attendees	Organization
2014	Difficult cases in the Pediatric Emergency Department- Can Ultrasound Help?	Expert Panelist	100	American Institute of Ultrasound in Medicine, Las Vegas, Nevada
2010	Novel uses of Ultrasound in Pediatric Emergency Medicine	Expert panelist	100	Section of Emergency Medicine, American Academy of Pediatrics

National workshops

Year	Title	Role	Attendees	Organization
2016	Ultrasound Education	Workshop faculty	100	Bedside Ultrasound Course, Children’s Hospital Of Philadelphia
2014	Fundamentals in Pediatric Emergency Ultrasound	Workshop faculty	50	American College of Emergency Physicians
2014	Ultrasound Education	Workshop faculty	100	Bedside Ultrasound Course, Children’s Hospital Of Philadelphia
2013	How to Use Mastery Learning for Pediatric Procedural Skills Training	Workshop faculty	20	Pediatric Academic Society, Washington D.C.
2013	Designing a Simulation-based Curriculum For Your Acute Care Fellowship Program	Workshop faculty	20	Pediatrics Academic Society, Washington D.C.
2011	Pediatric Bedside Ultrasound	Workshop faculty	70	Pediatrics Academic Society, Denver, Colorado
2010	Pediatric Bedside Ultrasound	Workshop faculty	70	Pediatrics Academic Society, Vancouver, Canada
2009	Pediatric Bedside Ultrasound	Workshop faculty	70	Pediatrics Academic Society, Baltimore, Maryland

Regional Invited lectures, Grand rounds, Keynote addresses

Year	Title	Role	Attendees	Organization
2023	Clinical Debriefing	Invited lecturer	40	New York University Department of Emergency Medicine
2020	Innovation is an essential worker	Invited lecturer	20	New York University Department of Emergency Medicine
2019	Simulation as a Patient Safety Tool & Change Agent	Grand rounds, Pediatrics	60	Maimonides
2015	Improving LP success rates	Invited lecturer- Medical Education rounds	20	NYU Medical School
2013	Healthcare Simulation in Clinical Education	Keynote Speaker	175	UNDMJ – School of Health Related Professions / Research Day
2011	Point-of Care Emergency Lung Ultrasound	Invited lecturer- Ultrasound rounds	10	St. Luke's Roosevelt Ultrasound Division
2011	What's new with Code Blue?	Invited lecturer	100	5th Annual Steven Z. Miller PEM Course
2011	The Guts of Pediatric Ultrasound	Invited lecturer	100	4th Annual Steven Z. Miller PEM Course

Regional courses

Year	Title	Role	Attendees	Organization
2023	Medicine in the Metaverse	Invited expert	20	Yale, New Haven, Connecticut
2015- 2017	Ultrasound guided Vascular Access	Course director	20	CHONY
2010- 2014	BASE Camp	Small group facilitator	40	BASE camp

Regional workshops

Year	Title	Role	Attendees	Organization
2023	How to lead an effective healthcare simulation debrief	Workshop faculty	30	Nursing Professional Development
2023	DISRUPTING MICROAGGRESSIONS: Frameworks for Response Rooted in Debriefing Methodology	Workshop faculty	Virtual	Weill Cornell Emergency Medicine Faculty Meeting
2021	Debriefing Methodology as a Framework to Respond to Microaggressions	Workshop faculty	Virtual	Child Life of Greater New York
2021	Addressing Inequity and Structural Competency Through Simulation: Transformative Learning Workshop	Workshop faculty	Virtual	Child Life of Greater New York
2008	2 nd Annual Pediatric Emergency Medicine Symposium- Ultrasound Workshop	Workshop faculty	150	NY Hospital Queens

2008	Point-of-Care ultrasound in pediatrics	Workshop faculty	40	NYU/Bellevue
2007	Ultrasound Conference	Workshop faculty	30	St Lukes, NY

Local Invited lectures, Grand rounds, Keynote addresses

Year	Title	Role	Attendees	Organization
2025	Artificial Intelligence to Detect Spinal Fluid and Spinal Cord on Ultrasound	Invited speaker	100	Columbia
2022	How to Build a Sustainable Extended Reality Program in Academia:	Invited speaker, and conference planning committee	100	The Helene Fuld Health Trust Innovations in Simulation Summit , Columbia University School of Nursing
2021	Virtual CUIMC Intro Simulation Instructor Training Course	Course co-creator and invited faculty	40	Columbia University Vagelos College of Physicians and Surgeons
2020	Dismantling Structural Racism with and within Healthcare Simulation	Invited Co-chair	LIVE-STREAM (>450)	The Helene Fuld Health Trust Innovations in Simulation Summit, Columbia University School of Nursing
2019	CUIMC Intro Simulation Instructor Training Course	Course co-creator and invited faculty	40	Columbia University Vagelos College of Physicians and Surgeons
2019	Simulation as a Patient Safety Tool	Invited lecturer, expert panelist	80	Columbia University School of Nursing's 2 nd annual Innovations in Simulation Summit
2018	The Development of an International Simulation Research Network	Grand rounds, Pediatrics	60	CHONY
2018	Communication in a Crisis	Invited lecturer, Foundations of Clinical Medicine Seminars	150	Columbia University Vagelos College of Physicians and Surgeons
2018	Pediatric Symptom to Diagnosis	Invited lecturer, Foundations of Clinical Medicine Tutorials	150	Columbia University Vagelos College of Physicians and Surgeons
2010	Pediatric abdominal ultrasound and E-FAST	Invited Lecturer-Emergency Medicine rounds	60	NYU/Bellevue
2010	Improving clinical outcomes via sim based mastery learning & deliberate practice	Chief of Service, Pediatrics	60	CHONY
2009	Point of Care Ultrasound in Pediatrics	Invited lecturer-Emergency Medicine rounds	20	Elmhurst Hospital
2008	Pediatric Physical Exam (for PA students)	Invited lecturer	50	Mercy College, Bronx
2007	Global Health: Injury Surveillance in the Dominican	Pediatric grand rounds	70	Mount Sinai, NY

	Republic			
2006	Advocacy: Parent Health Education Workshops	Pediatric grand rounds	70	Mount Sinai, NY