



Sara Goldhaber-Fiebert

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Bio

BIO

My main focus, for research and for implementations, is on understanding, adapting, and scaling concepts that enable both providers and patients to thrive. Combining my backgrounds in implementation science, quality improvement, human factors, simulation, and patient safety, our teams often utilize various tools from medical simulation that can translate to clinical changes. Multi-year examples of our teams' implementations and research in this space include: 1. clinical uses of emergency manuals (context relevant sets of cognitive aids or checklists), for crisis management of critical events 2. surgical caps with names and roles to enable both teamwork for better patient care and connection for provider and patient wellness. 3. Psychological safety and safety culture. We enjoy collaborating with multiple colleagues throughout healthcare and other safety-critical industries for bigger impacts.

For background and free resources for implementing emergency manuals see <http://emergencymanual.stanford.edu/> from Stanford Anesthesia Cognitive Aid Group and www.emergencymanuals.org/ from the broader Emergency Manuals Implementation Collaborative

CLINICAL FOCUS

- Anesthesia

ACADEMIC APPOINTMENTS

- Clinical Professor, Anesthesiology, Perioperative and Pain Medicine

PROFESSIONAL EDUCATION

- Board Certification: Anesthesia, American Board of Anesthesiology (2009)
- Residency: Massachusetts General Hospital (2007) MA
- Internship: Brigham and Women's Hospital Harvard Medical School (2004) MA
- Medical Education: Harvard Medical School (2003) MA
- Fellowship, Center for Medical Simulation, Harvard, Simulation (2007)

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Implementation of emergency manuals (context relevant sets of cognitive aids or crisis checklists), surgical caps with names and roles, and other evidence-based patient safety advances can help excellent clinicians to deliver optimal care, if designed and implemented effectively.

My and teams' interests include:

1. Implementation of emergency manuals for crisis management of critical events, in both simulation-based and clinical settings
For free resources, see: <http://emergencymanual.stanford.edu>, a website I developed to share the work of our Stanford Anesthesia Cognitive Aid Group and our interdisciplinary clinical implementation team. And www.emergencymanuals.org, Emergency Manuals Implementation Collaborative, which a group of us founded to freely share tools and implementation resources nationally and globally.
2. Enabling communication and safety culture, including via systematic implementation of surgical caps with names and roles, and studying their impacts.
3. Applying mixed-methods of implementation science to research #1 and #2.
4. Utilizing high fidelity simulation along with debriefing to teach principles of Crisis Resource Management (CRM). Faculty for multiple courses and Co-Director of Stanford's Evolve simulation program.
5. Combining verbal 'What If's' with low-tech screen-based simulation to harness the power of simulation and debriefing in much wider, more frequent, and even clinical settings.
6. Difficult airway management, and ENT anesthesia, integrating procedural and full-scenario simulation to practice and debrief approaches to challenging cases.

Publications

PUBLICATIONS

- **Perceptions of Use of Names, Recognition of Roles, and Teamwork After Labeling Surgical Caps.** *JAMA network open*
Wong, B. J., Nassar, A. K., Earley, M., Chen, L., Roman-Micek, T., Wald, S. H., Shanafelt, T. D., Goldhaber-Fiebert, S. N.
2023; 6 (11): e2341182
- **Leveraging What Goes Right to Improve Perioperative Safety.** *JAMA network open*
Nassar, A. K., Goldhaber-Fiebert, S. N.
2023; 6 (4): e237629
- **Emergency manual peri-crisis use six years following implementation: Sustainment of an intervention for rare crises.** *Journal of clinical anesthesia*
Goldhaber-Fiebert, S. N., Frackman, A., Agarwala, A. V., Doney, A., Pian-Smith, M. C.
2023; 87: 111111
- **Personalized Scrub Caps for Improved Communication and Professional Wellness**
Speirs, K., Goldhaber-Fiebert, S.
LIPPINCOTT WILLIAMS & WILKINS.2022: 930-934
- **Labeled Surgical Caps: A Tool to Improve Perioperative Communication.** *Anesthesiology*
Wong, B. J., Nassar, A. K., Goldhaber-Fiebert, S. N.
2022
- **What's in a Name? Enhancing Communication in the Operating Room with the Use of Names and Roles on Surgical Caps.** *Joint Commission journal on quality and patient safety*
Brodzinsky, L. n., Crowe, S. n., Lee, H. C., Goldhaber-Fiebert, S. N., Sie, L. n., Padua, K. L., Daniels, K. n.
2021; 47 (4): 258–64

- **Clinical Uses and Impacts of Emergency Manuals During Perioperative Crises.** *Anesthesia and analgesia*
Goldhaber-Fiebert, S. N., Berekenyi Merrell, S., Agarwala, A. V., De La Cruz, M. M., Cooper, J. B., Howard, S. K., Asch, S. M., Gaba, D. M.
2020; 131 (6): 1815–26
- **Ten years of the Helsinki Declaration on patient safety in anaesthesiology: An expert opinion on peri-operative safety aspects.** *European journal of anaesthesiology*
Preckel, B., Staender, S., Arnal, D., Brattebo, G., Feldman, J. M., Ffrench-O'Carroll, R., Fuchs-Buder, T., Goldhaber-Fiebert, S. N., Haller, G., Haugen, A. S., Hendrickx, J. F., Kalkman, C. J., Meybohm, et al
2020
- **Low-flow Nasal Cannula and Potential Nosocomial Spread of COVID-19.** *British journal of anaesthesia*
Goldhaber-Fiebert, S. N., Greene, J. A., Garibaldi, B. T.
2020
- **Operating Room In Situ Interprofessional Simulation for Improving Communication and Teamwork.** *The Journal of surgical research*
Shi, R. n., Marin-Nevarez, P. n., Hasty, B. n., Roman-Micek, T. n., Hirx, S. n., Anderson, T. n., Schmiederer, I. n., Fanning, R. n., Goldhaber-Fiebert, S. n., Austin, N. n., Lau, J. N.
2020; 260: 237–44
- **Bringing Perioperative Emergency Manuals to Your Institution: A "How To" from Concept to Implementation in 10 Steps** *JOINT COMMISSION JOURNAL ON QUALITY AND PATIENT SAFETY*
Agarwala, A., McRichards, L., Rao, V., Kurzweil, V., Goldhaber-Fiebert, S. N.
2019; 45 (3): 170–79
- **Cognitive Aids in Obstetric Units: Design, Implementation, and Use.** *Anesthesia and analgesia*
Abir, G. n., Austin, N. n., Seligman, K. M., Burian, B. K., Goldhaber-Fiebert, S. N.
2019
- **Use of an Emergency Manual During an Intraoperative Cardiac Arrest by an Interprofessional Team: A Positive-Exemplar Case Study of a New Patient Safety Tool** *JOINT COMMISSION JOURNAL ON QUALITY AND PATIENT SAFETY*
Merrell, S., Gaba, D. M., Agarwala, A., Cooper, J. B., Nevedal, A. L., Asch, S. M., Howard, S. K., Goldhaber-Fiebert, S. N.
2018; 44 (8): 477–84
- **Emergency Manuals: How Quality Improvement and Implementation Science Can Enable Better Perioperative Management During Crises.** *Anesthesiology clinics*
Goldhaber-Fiebert, S. N., Macrae, C. n.
2018; 36 (1): 45–62
- **Factors associated with the use of cognitive aids in operating room crises: a cross-sectional study of US hospitals and ambulatory surgical centers.** *Implementation science : IS*
Alidina, S. n., Goldhaber-Fiebert, S. N., Hannenberg, A. A., Hepner, D. L., Singer, S. J., Neville, B. A., Sachetta, J. R., Lipsitz, S. R., Berry, W. R.
2018; 13 (1): 50
- **Operating Room Crisis Checklists and Emergency Manuals.** *Anesthesiology*
Hepner, D. L., Arriaga, A. F., Cooper, J. B., Goldhaber-Fiebert, S. N., Gaba, D. M., Berry, W. R., Boorman, D. J., Bader, A. M.
2017; 127 (2): 384-392
- **Building Comprehensive Strategies for Obstetric Safety: Simulation Drills and Communication.** *Anesthesia and analgesia*
Austin, N., Goldhaber-Fiebert, S., Daniels, K., Arafeh, J., Grenon, V., Welle, D., Lipman, S.
2016; 123 (5): 1181-1190
- **Emergency Manual Uses During Actual Critical Events and Changes in Safety Culture From the Perspective of Anesthesia Residents: A Pilot Study.** *Anesthesia and analgesia*
Goldhaber-Fiebert, S. N., Pollock, J., Howard, S. K., Berekenyi Merrell, S.
2016; 123 (3): 641-649
- **Checklists and multidisciplinary team performance during simulated obstetric hemorrhage.** *International journal of obstetric anaesthesia*
Hilton, G., Daniels, K., Goldhaber-Fiebert, S. N., Lipman, S., Carvalho, B., Butwick, A.
2016; 25: 9-16

- **Emergency manual implementation: can brief simulation-based or staff trainings increase familiarity and planned clinical use?** *Joint Commission journal on quality and patient safety / Joint Commission Resources*
Goldhaber-Fiebert, S. N., Lei, V., Nandagopal, K., Bereknyei, S.
2015; 41 (5): 212-217
- **In response.** *Anesthesia and analgesia*
Goldhaber-Fiebert, S. N., Howard, S. K.
2014; 118 (6): 1389-1390
- **Implementing emergency manuals: can cognitive AIDS help translate best practices for patient care during acute events?** *Anesthesia and analgesia*
Goldhaber-Fiebert, S. N., Howard, S. K.
2013; 117 (5): 1149-1161
- **Simulation Exercises as a Patient Safety Strategy A Systematic Review** *ANNALS OF INTERNAL MEDICINE*
Schmidt, E., Goldhaber-Fiebert, S. N., Ho, L. A., McDonald, K. M.
2013; 158 (5): 426-?
- **Trigger Video of Simulated Intraoperative Cardiac Arrest.** *MedEdPORTAL*
Goldhaber-Fiebert, S., Harrison K, Mudumbai S, Howard S, McCowan K, Gaba D
2010
- **Knowledge-based errors in anesthesia: a paired, controlled trial of learning and retention** *CANADIAN JOURNAL OF ANAESTHESIA- JOURNAL CANADIEN D ANESTHESIE*
Goldhaber-Fiebert, S. N., Goldhaber-Fiebert, J. D., Rosow, C. E.
2009; 56 (1): 35-45
- **Male involvement in cardiovascular preventive healthcare in two rural Costa Rican communities** *PREVENTIVE MEDICINE*
Goldhaber-Fiebert, J. D., Goldhaber-Fiebert, S. N., Andorsky, D. J.
2005; 40 (6): 690-695
- **Randomized controlled community-based nutrition and exercise intervention improves glycemia and cardiovascular risk factors in type 2 diabetic patients in rural Costa Rica** *DIABETES CARE*
Goldhaber-Fiebert, J. D., Goldhaber-Fiebert, S. N., Tristan, M. L., Nathan, D. M.
2003; 26 (1): 24-29