

CURRICULUM VITAE
The Johns Hopkins University School of Medicine

Michael A Rosen, PhD

July 13th, 2014

DEMOGRAPHIC INFORMATION

Current Appointments

2011-Present Assistant Professor, Department of Anesthesiology and Critical Care Medicine; the Armstrong Institute for Patient Safety and Quality

Personal Data

Johns Hopkins University School of Medicine
Department of Anesthesiology and Critical Care Medicine;
The Armstrong Institute for Patient Safety and Quality
750 E. Pratt Street, Baltimore, MD 21202
Constellation Energy Building – 15th Floor
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Education and Training

Undergraduate

1998 B.S., Psychology, University of Central Florida, Orlando, FL

Doctoral/graduate

2005 M.A., English/Technical Communications, University of Central Florida, Orlando, FL
2010 Ph.D., Applied Experimental and Human Factors Psychology, University of Central Florida, Orlando, FL

Professional Experience chronologically

2003-2004 Usability Specialist (Internship), Usability Lab, Statistical Research Division, US Bureau of the Census, Suitland, MD
2004-2010 Sr. Graduate Research Associate, Institute for Simulation and Training, University of Central Florida, Orlando, FL
2005-2010 Instructor, St. John's River Community College, Palatka, FL
2010-2011 Associate, Booz Allen Hamilton, Washington, DC
2011-present Assistant Professor, Anesthesiology and Critical Care Medicine; the Armstrong Institute for Patient Safety and Quality, Johns Hopkins University School of Medicine, Baltimore, MD

RESEARCH ACTIVITIES

Peer Reviewed Original Science Publications

1. Salas E, **Rosen MA**, King HB. Managing teams managing crises: Principles for teamwork in the ER and beyond. *Theoretical Issues in Ergonomics Science*. 2007;8(5):381-394.
2. Salas E, **Rosen MA**, Burke CS, Nicholson D, Howse WR. Markers for Enhancing Team Cognition in Complex Environments: The Power of Team Performance Diagnosis. *Aviation, Space, and Environmental Medicine, Special Supplement on Operational Applications of Cognitive Performance Enhancement Technologies*. 2007;78(5):B77-B85.

3. **Rosen MA**, Salas E, Wilson KA, King HB, Salisbury M, Augenstein JS, Robinson DW, Birnbach DJ. Measuring Team Performance for Simulation-based Training: Adopting Best Practices for Healthcare. *Simulation in Healthcare*. 2008;3(1), 33-41.
4. Salas E, Cooke NJ, **Rosen MA**. On teams, teamwork, and team performance: Discoveries and Developments. *Human Factors*. 2008;50(3):540-547.
5. **Rosen MA**, Salas E, Silvestri S, Wu TS, Lazzara EH. A measurement tool for simulation-based training in Emergency Medicine: The Simulation Module for Assessment of Resident Targeted Event Responses (SMARTER) Approach. *Simulation in Healthcare*. 2008;3(3):170-179.
6. **Rosen MA**, Salas E, Wu TS, Silvestri S, Lazzara EH, Lyons R, Weaver SJ, King HB. Promoting teamwork: An event-based approach to simulation-based teamwork training for Emergency Medicine Residents. *Academic Emergency Medicine*. 2008;15(11):1190-1198.
7. **Rosen MA**, Fiore SM, Salas E, Letsky M, Warner N. Tightly coupling cognition: Understanding how communication and awareness drive coordination in teams. *The International Journal of Command and Control*. 2008;2(1):1-30.
8. Wilson KA, Salas E, **Rosen MA**, Taekman JM, Augenstein JS. Games doctors play: Guiding principles for training shared cognition. *International Cognitive Technology Journal*. 2008;13(2):8-16.
9. Salas E, **Rosen MA**, Held JD, Weissmuller JJ. Performance measurement in simulation-based training: A review and best practices. *Simulation & Gaming: An Interdisciplinary Journal*. 2009; 40(3):328-376.
10. Salas E, **Rosen MA**, Weaver SL, Held JD, Weissmuller JJ. Guidelines for Performance Measurement in Simulation-based Training. *Ergonomics in Design*. 2009;17(4):12-18.
11. Deering S, **Rosen MA**, Salas E, King HB. Building team and technical competency for obstetric emergencies: The Mobile Obstetric Emergency Simulator (MOES) System. *Simulation in Healthcare*. 2009;4(3):166.
12. Salas E, **Rosen MA**, King HB. Integrating teamwork into the 'DNA' of Graduate Medical Education: Principles for simulation-based training. *Journal of Graduate Medical Education*. 2009;1(2):243-244.
13. Lazzara EH, Weaver SL, DiazGranados D, **Rosen MA**, Salas E, Wu TS, Silvestri S, Augenstein JS, Birnbach DJ, Robinson DW, King HB. TEAM MEDSS: A Tool for Designing Medical Simulation Scenarios. *Ergonomics in Design*. 2010;18(1):11-17.
14. Weaver SL, **Rosen MA**, DiazGranados D, Lazzara EH, Lyons R, Salas E, Knych S, McKeever M, Adler L, Barker M, King HB. Does teamwork improve performance in the operating room? A multi-level evaluation. *Joint Commission Journal on Quality and Patient Safety*. 2010;36(3):133-142.
15. Salas E, **Rosen MA**, DiazGranados D. Expertise-based intuition and decision making in organizations. *Journal of Management*. 2010;36:941-973.
16. Fiore SM, **Rosen MA**, Smith-Jentsch KA, Salas E, Letsky M, Warner N. Toward an Understanding of Macrocognition in Teams: Predicting Processes in Complex Collaborative Contexts. *Human Factors*. 2010;52(2):203-224.
17. Weaver SL, Salas E, Lyons R, Lazzara EH, **Rosen MA**, DiazGranados D, Grim JG, Augenstein JS, Birnbach DJ, King HB. Simulation-Based Team Training (SBTT) at the Sharp End: A Qualitative Study of SBTT Design, Implementation, and Evaluation in Healthcare. *Journal of Emergencies, Trauma, and Shock*. 2010;4(3):369-77.
18. **Rosen MA**, Weaver SL, Lazzara EH, Salas E, Wu TS, Silvestri S, Schiebel N, Almeida S, King HB. Tools for evaluating team performance in simulation-based training. *Journal of Emergencies, Trauma, and Shock*. 2010;3:353-9.
19. **Rosen MA**, Shuffler M, Salas E. How experts make decisions: Beyond the JDM paradigm. *Industrial and Organizational Psychology: Perspectives on Science and Practice*. 2010;3:438-442.
20. **Rosen MA**, Salas E, Pavlas D, Jensen R, Fu D, Lampton D (2010). Demonstration-based training: A review and typology of instructional features. *Human Factors*. 2010;52:596-609.

21. Weaver SL, Lyons R, DiazGranados D, **Rosen MA**, Salas E, Oglesby J, Birnbach DJ, Augenstein JS, Robinson DW, King HB. The anatomy of healthcare team training: The state of practice. *Academic Medicine*. 2010;85:1746-60.
22. Weaver SL, **Rosen MA**, Salas E, Baum KD, King HB. Integrating the science of team training: Guidelines for continuing medical education. *Journal of Continuing Education in the Health Professions*. 2010;30:208-20
23. Deering S., **Rosen MA**, Ludi V, Munroe M, Pocrnich A, Laky C, Napolitano P. On the front lines of patient safety: Implementation and evaluation of team training in Iraq. *Joint Commission Journal on Quality and Patient Safety*. 2011;37(8):350-6.
24. **Rosen MA**, Bedwell WL, Wildman JL, Fritzsche BA, Salas E, Burke CS. Managing adaptive performance in teams: Guiding principles and behavioral markers for measurement. *Human Resources Management Review*. 2011;21:107-22.
25. Patterson PD, Weaver MD, Weaver S, **Rosen MA**, Todorova G, Weingart L, Krackhardt D, Lave J, Arnold R, Yealy D, Salas E. Measuring teamwork and conflict among Emergency Medical Technician personnel. *Prehospital Emergency Care*. 2012;16:98-108.
26. Wildman JL, Thayer A, **Rosen MA**, Salas E., Mathieu J, Rayne S. Task types and team level attributes: A synthesis of team classification literature. *Human Resources Development Review*. 2012;11:97-129.
27. Cuong-Pham J, Aswani MS, **Rosen MA**, Lee H, Huddle M, Weeks K, Pronovost PJ. Reducing medical errors and adverse events. *Annual Review of Medicine*. 2012;63:447-63.
28. Salas E, King HB, **Rosen MA**. Improving Teamwork and Safety: Towards a Practical Systems Approach. *Social Science in Medicine*. 2012;75:986-9.
29. Weaver SJ, Newman-Toker D, **Rosen MA**. Reducing Cognitive Skill Decay and Diagnostic Error: Theory-Based Practices for Continuing Education in Health Care. *Journal of Continuing Education in the Health Professions*. 2012;32:269-78.
30. **Rosen MA**, Hunt E, Pronovost PJ, Federowicz M, Weaver SJ. In Situ Simulation in Continuing Education for the Healthcare Professions: A Systematic Review. *Journal of Continuing Education in the Health Professions*. 2012;32:243-54.
31. Grossman R, Salas E, Pavlas D, **Rosen MA**. Using Instructional Features to Enhance Demonstration-Based Training in Management Education. *Academy of Management Learning and Education*. 2013;12(2):1-25.
32. Ohtake PJ, Lazarus M, Schillo R, **Rosen MA**. Simulation Experience Enhances Physical Therapy Student Confidence in Managing a Patient in the Critical Care Environment. *Physical Therapy Journal*. 2013;93:216-28.
33. Salas E, **Rosen MA**. Building high reliability teams: Progress and some reflections on teamwork training. *BMJ Qual Safety*. 2013;22:369-373.
34. Salas E, Paige J, **Rosen MA**. Creating new realities in healthcare: The status of simulation as a patient safety improvement method. *BMJ Qual Safety*. 2013;22:449-52.
35. Clarke, J. L., Miff, S., Cutler, D., Udow-Phillips, M., Wolterman, D., Rosenthal, M., McGonigal, J., Smith Gelinas, L., DeMotte, C., Hatlie, M.J., Collier, S., Hicks, D., Doty, J., Goeschel, C., **Rosen, M.A.**, Weaver, S.J., Johnson, A., Welch, R., Nass, P.L., & McGonigal, K. Navigating to Excellence Solutions Driving Exceptional Results. *American Journal of Medical Quality*. 2014: 29(1 suppl), 3S-18S.
36. Weaver SJ, Dy S, **Rosen MA**. Team-Training in Health Care: A Narrative Synthesis of the Literature. *BMJ Qual Safety*. 2014;23:359-372.
37. **Rosen MA**, Pronovost PJ. Advancing the Use of Checklists for Evaluating Performance in Health Care. *Academic Medicine*. 2014;89(7):963-5.
38. **Rosen MA**, Sampson JB, Jackson EV, Jr., Koka R, Chima AM, Ogbuagu OU, Marx MK, Koroma M, Lee BH. Failure Mode and Effects Analysis of the Universal Anesthesia Machine in Two Tertiary Care Hospitals in Sierra Leone. *British Journal of Anesthesia*. In Press.
39. Hicks CW, **Rosen MA**, Hobson D, Ko C, Wick, E. Improving Safety and Quality of Care With Enhanced Teamwork Through Operating Room Briefings. *JAMA Surgery*. In Press.
40. **Rosen MA**, Lee BH, Sampson JB, Koka R, Chima AM, Ogbuagu OU, Marx MK, Kamara TB, Koroma M, & Jackson, EV, Jr. Failure Modes and Effects Analysis (FMEA) Applied to the

Maintenance and Repair of Anesthetic Equipment in an Austere Medical Environment. International Journal of Quality in Healthcare. In Press.

41. Dietz AS, Pronovost PJ, Mendez-Tellez P, Wyskiel R, Marsteller JA, Thompson DA, & **Rosen MA**. A Systematic Review of Teamwork in the ICU: What do we know about Teamwork, Team Tasks, and Improvement Strategies? Journal of Critical Care. In Press.
42. Pronovost PJ, Marsteller JA, Wu AW, Holzmueller CG, Thompson DA, Lubomski LH, Paine LA, Hobson DB, Sawyer MD, Wyskiel RM, Aboumatar H, Needham DM, Goeschel CA, Winters BD, Pham JC, Sapirstein, A, Romig M, Mendez-Tellez PA, Gurses AP, **Rosen MA**, Weaver SJ, Austin JM, Latif A, Berenholtz SM. Advancing the science of patient safety and quality improvement to the next level. *Advances in the Prevention and Control of HAIs*, 2014 (in press).
43. Johnston FM, Tergas AI, Bennett JL, Valero V, Morrissey C, Nickles Fader A., Hobson D., Weaver SJ, **Rosen MA**, Wick EC. Measuring Briefing and Checklist Compliance in Surgery: A Tool for Quality Improvement. American Journal of Medical Quality. In Press
44. **Rosen MA**, Dietz AS, Yang T, Priebe CE, & Pronovost PJ. An Integrative Framework for Sensor-based Measurement of Teamwork in Healthcare. Journal of the American Informatics Association, In Press.
45. Dietz A, Pronovost PJ, Benson KN, Mendez-Tellez P, Dwyer C, Wyskiel R, & **Rosen MA**. A Systematic Review of Behavioral Marker Systems in Healthcare: What do we know about their Attributes, Validity, and Application? BMJ Quality and Safety. In Press.

Extramural Sponsorship

Current:

- | | |
|-----------------------|--|
| 07/01/2012-2/28/2011 | Pathway for Organizational Change, Accountability, and Activation of Executive Leadership for Patient Safety
No ID number
VHA, Inc.
\$489,142
PI: Rosen, 3 calendar |
| 07/01/2011-04/30/2016 | A Multifaceted Intervention to Reduce Ventilator-Associated Pneumonia in the ICU
1R01HL105903
NIH
\$302,563
PI: Berenholtz
Co-Investigator: Rosen, 0.6 calendar |
| 09/01/2011-08/31/2015 | Development and Demonstration of a Surgical Unit-based Safety Program (SUSP) to Reduce Surgical Site Infection (SSI) and Other Surgical Complications
HHSA29032001T
AHRQ
\$1,257,946
PI: Pronovost
Co-Investigator: Rosen, 2.4 calendar |

Pending grants:

- | | |
|-----------------|--|
| 3/1/14-12/31/14 | Leadership Accountability for Patient Safety and Quality: Phase Two Implementation and Evaluation
No ID Number
VHA, Inc. |
|-----------------|--|

	\$311,144 PI: Rosen, 3 calendar
10/1/14-9/30/17	Smart social sensing systems for improving teamwork and patient care NSF13-587 National Science Foundation \$452,059 PI: Rosen, 1.2 calendar
8/1/14-7/31/18	Social –sensing systems for improving teamwork and patient safety in the ICU NSF 13-543 National Science Foundation \$1,459,448 PI: Rosen, 1.8 calendar
12/1/14-11/30/19	Creating enabling technology for collaborative decision making in the ICU AHRQ R01 Agency for Healthcare Research and Quality \$ 2,333,076 PI: Rosen, 2.4 calendar
7/1/14-6/31/17	Simulation for Building Leadership Capacity for Patient Safety AHRQ R18 Agency for Healthcare Research and Quality \$749,000 PI: Rosen, 1.8 calendar
Previous Grants:	
09/01/2011 – 03/31/2013	Comprehensive Unit-Based Safety Program (CUSP) for Ventilator Associated Pneumonia (VAP) Preventions HHS29032002T AHRQ \$372,662 PI: Berenholtz Co-Investigator: Rosen, 1.8 calendar
09/23/2011 – 08/22/2013	Universal Anesthesia Machine Evaluation Study UAM Global LLC \$541,500 PI: Jackson Co-Investigator: Rosen, 1.2 calendar
09/30/2010 – 07/31/2013	Translating CER results from ICU study to improve outcomes in cardiac surgery R18HS019934 AHRQ \$979,547 PI: Pronovost Co-Investigator: Rosen, 1.2 calendar

EDUCATIONAL ACTIVITIES

Educational Publications

Invited commentary

1. Salas E, **Rosen MA**. Beyond the bells and whistles: When simulation-based team training works best. *Harvard CRICO RMF Forum*. 2008;26(4):6-7.

Book Chapters, Monographs

1. Salas, E., **Rosen, M. A.**, Burke, C. S., Goodwin, G. F., & Fiore, S. M. (2006). The making of a dream team: When expert teams do best. In K. A. Ericsson, N. Charness, P. J. Fletovich & R. R. Hoffman (Eds.), *The Cambridge Handbook of Expertise and Expert Decision Making* (pp. 439-453). New York: Cambridge University Press.
2. **Rosen, M. A.**, Kelly, B., & Salas, E. (2006). The role of shared cognition and CSCW in strategic alliances. In S. Martinez-Fierro, J. A. Medina-Garrido & J. R. Ruiz-Navarro (Eds.), *Utilizing Information Technology in Developing Strategic Alliances among Organizations* (pp. 74-91). Hershey, PA: Idea Group.
3. Stagl, K. C., Salas, E., **Rosen, M. A.**, Priest, H. A., Burke, C. S., Goodwin, G. F., et al. (2007). Distributed team performance: Continuing the dialogue. In F. Dansereau & F. J. Yammarino (Eds.), *Multi-level Issues in Organizations and Time* (Vol. 6, pp. 83-91). Amsterdam: Elsevier/JAI.
4. Stagl, K. C., Salas, E., **Rosen, M. A.**, Priest, H. A., Burke, C. S., Goodwin, G. F., et al. (2007). Distributed team performance: A multi-level review of distribution, diversity, and demography. In F. Dansereau & F. J. Yammarino (Eds.), *Multi-level Issues in Organizations and Time* (Vol. 6, pp. 11-58). Amsterdam: Elsevier/JAI.
5. **Rosen, M. A.**, Fiore, S. M., & Salas, E. (2007). Of memes and teams: Exploring the memetics of team problem solving. In D. Jonassen (Ed.), *Learning to Solve Complex Scientific Problems* (pp. 131-156). New York: Erlbaum.
6. **Rosen, M. A.**, Salas, E., Lyons, R., & Fiore, S. M. (2008). Expertise and naturalistic decision making in organizations: Mechanisms of effective decision making. In G. P. Hodgkinson & W. H. Starbuck (Eds.), *The Oxford Handbook of Organizational Decision Making: Psychological and Management Perspectives* (pp. 211-230). Oxford, UK: Oxford University Press.
7. Fiore, S. M., **Rosen, M. A.**, Salas, E., Burke, C. S., & Jentsch, F. (2008). Processes in complex team problem solving: Parsing and defining the theoretical problem space. In M. Letsky, N. Warner, S. M. Fiore & C. Smith (Eds.), *Macro-cognition in Teams*. London: Ashgate.
8. Burke, C. S., Hess, K. P., Priest, H. A., **Rosen, M. A.**, Salas, E., Paley, M., et al. (2008). Facilitating leadership in a global community: A training tool for multicultural team leaders. In S. Reddy (Ed.), *Managing Multicultural Teams* (pp. 178-197). Hyderabad, India: Icfai University Press.
9. Salas, E., & **Rosen, M. A.** (2008). Naturalistic decision making, expertise, and Homeland Security. In G. Voeller (Ed.), *Handbook of Science and Technology for Homeland Security*. Hoboken, NJ: Wiley.
10. Salas, E., Weaver, S. L., **Rosen, M. A.**, & Smith-Jentsch, K. A. (2009). Managing team performance in complex settings: Research-based best practices. In J. W. Smither & S. London (Eds.), *Performance Management: Putting Research into Practice* (pp. 197-232). San Francisco, CA: Jossey-Bass.
11. Salas, E., & **Rosen, M. A.** (2009). Performance assessment in virtual environments: Guiding principles for training. In D. D. Schmorow, J. Cohn & D. Nicholson (Eds.), *The PSI Handbook of Virtual Environments for Training and Education: Developments for the Military and Beyond* (Vol. 1, pp. 225-235). Westport, CT: Praeger Security International.
12. Salas, E., **Rosen, M. A.**, Burke, C. S., & Goodwin, G. F. (2009). The wisdom of collectives in organizations: An update of the teamwork competencies. In E. Salas, G. F. Goodwin & C. S. Burke (Eds.), *Team Effectiveness in Complex Organizations: Cross-disciplinary perspectives and approaches* (pp. 39-79). New York: Routledge.
13. Salas, E., & **Rosen, M. A.** (2010). Experts at work: Principles for developing expertise in organizations. In S. W. J. Kozlowski & E. Salas (Eds.), *Learning, Training, and Development in Organizations* (pp. 99-134). New York: Routledge.

14. Burke, C. S., Salas, E., Smith-Jentsch, K. A., & **Rosen, M. A.** (2010). Measuring macrocognition in teams: Some insights for navigating the complexities. In E. S. Patterson & J. E. Miller (Eds.), *Macrocognition metrics and science: Design and evaluation for real-world teams* (pp. 29-46). Aldershot, UK: Ashgate.
15. **Rosen, M. A.**, Feldman, M., Salas, E., King, H. B., & Lopreiato, J. (2010). Challenges and opportunities for applying human factors methods to the development of non-technical skills in healthcare education. In V. Duffy (Ed.), *Advances in Human Factors and Ergonomics in Healthcare* (pp. 1-30). Boca Raton, FL: CRC Press.
16. **Rosen, M. A.**, Fiore, S. M., McDaniel, R., & Salas, E. (2010). Adapting narrative theory to improve the implementation of story in problem-based learning. In D. H. Andrews, T. D. Hull, & DeMeester, K. (Eds.), *Storytelling as an Instructional Method: Research Perspectives* (pp. 87-104). Rotterdam: Sense Publishers.
17. Fiore, S. M., **Rosen, M. A.**, & Salas, E. (2011). Uncertainty management and macrocognition in teams: A multidisciplinary review and integration. In K.L. Mosier and U.M. Fischer (Eds.), *Informed by knowledge: Expert performance in complex situations* (pp. 247-60). Psychology Press: New York.
18. Salas, E., **Rosen, M. A.**, Held, J. D., & Weissmuller, J. J. (2011). Performance measurement in simulation-based training: A review and best practices. In F. Jentsch, M. Curtis & E. Salas (Eds.), *Simulation in Aviation Training*. Aldershot, UK: Ashgate.
19. Goeschel, C., **Rosen, M.A.**, Lubomski, L., Thompson, D., Pronovost, P., & Berenholtz, S. (2012). Identifying and responding to patient safety problems. In S. Berman (Ed.), *From Front Office to Front Line* (2nd ed.) (pp. 37-57). Joint Commission Resources.
20. Salas, E., Weaver, S.J., **Rosen, M. A.**, Gregory, M.E. (2012). Team training for patient safety. In P. Carayon (Ed.), *Handbook of Human Factors and Ergonomics in Health Care and Patient Safety* (2nd ed.) (pp. 627-47). New York: Routledge.
21. **Rosen, M. A.**, Salas, E., Tannenbaum, S. I., Pronovost, P., & King, H. B. (2012). Simulation-based team training in healthcare: Designing scenarios, measuring performance, and providing feedback. In P. Carayon (Ed.), *Handbook of Human Factors and Ergonomics in Health Care and Patient Safety* (2nd ed.) (pp. 573-94). New York: Routledge.
22. **Rosen, M. A.**, Wildman, J. L., Salas, E., & Rayne, S. (2012). Measuring team dynamics in the wild. In A. B. Hollingshead & M. S. Poole (Eds.), *Research methods for studying group and teams: A guide to approaches, tools, and technologies* (pp. 386-417). New York: Routledge.
23. **Rosen, M. A.**, Salas, E., Lazzara, E. H., & Lyons, R. (2012). Cognitive task analysis: Methods for capturing and leveraging expertise in the workplace. In M. A. Wilson, W. Bennett, S.G. Gibson, and G.M. Alliger. (Eds.), *The Handbook of Work Analysis: The Methods, Systems, & Science of Work Measurement in Organizations* (pp. 185-200). New York: Routledge.
24. **Rosen, M. A.**, & Pronovost, P.J., (2012). Teamwork in healthcare: From training programs to integrated systems of development. In K. Frush & E. Salas (Eds.), *Improving Patient Safety through Teamwork and Team Training* (pp. 239-43). Oxford, UK: Oxford University Press.
25. Salas, E., & **Rosen, M. A.**, (2012). Ten critical themes in healthcare team training. In K. Frush & E. Salas (Eds.), *Improving Patient Safety through Teamwork and Team Training* (pp. 257-60). Oxford, UK: Oxford University Press.
26. **Rosen, M. A.**, Schiebel, N., Salas, E., Wu, T. S., Silvestri, S., & King, H.B. (2012). How can team performance be measured, assessed, and diagnosed? In K. Frush & E. Salas (Eds.), *Improving Patient Safety through Teamwork and Team Training* (pp. 59-93). Oxford, UK: Oxford University Press.
27. Salas, E., **Rosen, M. A.**, & DiazGranados, D. (2012). Decision making in naturalistic environments. In S. W. J. Kozlowski (Ed.), *Oxford Handbook of Industrial and Organizational Psychology (Vol. 2, pp. .* Oxford, UK: Oxford University Press.
28. Weaver, S. J., & **Rosen M.A.** Team-training in healthcare: Brief review. In R.M. Watcher, P.G. Shekelle, P. Pronovost (Eds.). *Making healthcare safer 2012: A critical analysis of the evidence of patient safety practices* (AHRQ report # TBD). Rockville, MD.
29. Salas, E., **Rosen, M.A.**, & Weaver, S.J. (2013). Best Practices for Measuring Team Performance in Healthcare. In W.C. McGaghie (Ed.), *International Best Practices for Evaluation in the Health Professions* (pp.). London, UK: Radcliffe Publishing.

30. Weaver, S. J., Che, X., Pronovost, P. J., Goeschel, C. A., Kosel, K. C., & **Rosen, M. A.** (in press). Improving Patient Safety and Care Quality: A Multi-Team System Perspective. In E. Salas, R. Rico, & M. Shuffler (Eds.), *Pushing the Boundaries: Multiteam Systems in Research & Practice*.
31. **Rosen, MA**, Coffman, I, Dietz, A, & Pham, JC. (in press). Decision Making in Emergency Medical Systems. Keebler, J (Ed). *Human Factors in Emergency Medical Systems*. Boca Raton, FL: CRC Press.
32. Hunt, EA, Grant, D, & **Rosen, MA**. (in press). Simulation Training and Team Dynamics.
33. **Rosen, MA**, Che, X, Dietz, A, & Hunt, EA. (in press). Interdisciplinary Team Training. Strother, C, Okuda, H, & McLaughlin, S (Eds). *The Comprehensive Textbook of Healthcare Simulation: Emergency Medicine Edition*.

Books, Textbooks

1. **Rosen, M. A.**, Salas, E., Tannenbaum, S. I., Pronovost, P., Deering, S., Schiebel, N., & King, H.B. (in progress, 2014). *Simulation-based Team Training in Healthcare: Debriefing for Success*. Aldershot, UK: Ashgate.

Other media (films, videos, CD-ROMs, slide sets, etc)

- 2011 Developed *Improving Handoff Quality* MyLearning Module, Johns Hopkins Medicine.
- 2012 Developed four teamwork modules for the Online Patient Safety Certificate Program for the Armstrong Institute program.
- 2012 Developed wargaming simulation for executive leaders

Teaching

Classroom instruction

- September 6th, 2011 Improving the Quality of Handoffs, Lecturer, Patient Safety Grand Rounds, Johns Hopkins School of Medicine
- November 10th, 2011 Improving the Quality of Handoffs, Lecturer, Department of Otolaryngology Grand Rounds, Johns Hopkins School of Medicine
- December 15th, 2011 Improving the Quality of Handoffs, Lecturer, Department of Orthopedic Surgery Grand Rounds, Johns Hopkins
- January 3rd, 2012 Teamwork and Communication in Healthcare, Co-Presenter, School of Medicine Safety Intercession, Johns Hopkins.
- March 14th, 2012 Teamwork and Communication Training, Introduction to Healthcare Quality and Patient Safety—A Management Perspective. Department of Health Policy and Management, Johns Hopkins University Bloomberg School of Public Health.
- October 3rd, 2012 Improving the Quality of Handoffs, Lecturer, Department of Pediatrics Grand Rounds, Johns Hopkins
- October 16th, 2012 Building Expert Teams: An Integrative Review and Evidence-based Strategies, Lecturer, FULD Fellowship Program, Johns Hopkins School of Nursing
- March 27th, 2013 Building Expert Teams: An Integrative Review and Evidence-based Strategies, Lecturer, FULD Fellowship Program, Johns Hopkins School of Nursing
- December 4th, 2013 An Introduction to Human Factors and Ergonomics, Lecturer, Healthcare Epidemiology, Department of Health Policy and Management, Johns Hopkins University Bloomberg School of Public Health.
- February 11th, 2013 21st Century Leadership Accountability Across the Spectrum, Lecturer, Introduction to Healthcare Quality and Patient Safety—A Management Perspective. Department of Health Policy and Management, Johns Hopkins University Bloomberg School of Public Health.

- October 16th, 2013 Leadership and Team Building, Lecturer, Johns Hopkins Medicine Leadership Development Program, Johns Hopkins
- October 16th, 2013 Building Expert Teams: An Integrative Review and Evidence-based Strategies, Lecturer, FULD Fellowship Program, Johns Hopkins School of Nursing
- December 5th, 2013 An Introduction to Human Factors and Ergonomics, Lecturer, Healthcare Epidemiology, Department of Health Policy and Management, Johns Hopkins University Bloomberg School of Public Health.
- January 14th, 2014 Teamwork and Patient Safety: The Evidence and Strategies for Improvement. Patient Safety and Medical Errors, Department of Health Policy and Management, Johns Hopkins University Bloomberg School of Public Health.
- February 12th, 2014 Seeing Patient Safety from the C-Suite, Lecturer, Introduction to Healthcare Quality and Patient Safety—A Management Perspective. Department of Health Policy and Management, Johns Hopkins University Bloomberg School of Public Health.
- March 24th, 2014 Building Expert Teams: An Integrative Review and Evidence-based Strategies, Lecturer, FULD Fellowship Program, Johns Hopkins School of Nursing

Workshops/seminars

- March 2nd, 2007 Beyond the basics: Brining simulation theory & technology together. Council of Emergency Medicine Residency Directors (CORD) Academic Assembly, Co-Leader, Orlando, FL
- March 2nd, 2007 So you want to start a simulation program? Tips, Tricks, & Potential Pitfalls. Council of Emergency Medicine Residency Directors (CORD) Academic Assembly. Workshop, Co-Leader, Orlando, FL
- January 1st, 2010 Designing Event-based Measurement Tools for Teamwork Skills Training. International Meeting on Simulation in Healthcare, Workshop Co-Leader, Phoenix, AZ
- May 1st, 2010 Measuring Teamwork: Strategies and Tools for Assessment in Simulation and On-the-Job. 14th Ottawa Conference on the Assessment of Competence in Medicine and the Healthcare Professions, Workshop Co-Leader, Miami, FL
- November 1st, 2010 Building Expert Healthcare Teams: Designing Scenarios and Measurement Tools. Interservice / Industry Training, Simulation, and Education Conference (I/ITSEC), Workshop Co-Leader, Orlando, FL
- May 17-19, 2010 Handoffs and Critical Communication. Interactive Simulation Session, National Patient Safety Congress Learning and Simulation Center, Workshop Co-Leader, Orlando, FL.
- January 12th, 2011 Developing observers and tools to reliably assess teamwork skills in simulation-based environments. International Meeting on Simulation in Healthcare, Workshop Co-Leader, New Orleans, LA
- January 12th, 2011 Systems Approach to Team Debriefing: Improving Team Performance. Workshop presented at the International Meeting on Simulation in Healthcare, New Orleans, LA.
- January 10th, 2012 Implementing observational rating systems in simulation-based training curriculum. International Meeting on Simulation in Healthcare, Workshop Co-Leader San Diego, CA
- January 20th, 2013 Making it Stick: pairing Team Training and Organizational Change to Optimize Transfer of Training. International Meeting on Simulation in Healthcare, Workshop Co-Leader San Diego, CA.
- January 20th, 2014 Collaborating to Make it Stick: Working in Interdisciplinary Teams to Optimize Transfer of Training. International Meeting on Simulation in Healthcare, Workshop Co-Leader San Francisco, CA.

Mentoring

Advisees

2011 - 2012 Laura Wood, DNP, Senior Vice President, Patient Care Services and Chief Nursing Officer, Boston Children's Hospital, Boston, MA

Thesis committees

2012 Laura Wood, DNP, Mitigation of Intravenous Medication Administration Infusion Pump-related Obstacles: A Comprehensive Unit-based Safety Program Quality Improvement Initiative

2014 Aaron Dietz, PhD, Measuring ICU Teamwork: Validation of a Behavioral Marker System.

Educational Program Building/Leadership

2013-present Team Training Master Trainer's Course, lead the development of this program hosted in the Armstrong Institute for Patient Safety and Quality.

SYSTEM INNOVATION AND QUALITY IMPROVEMENT ACTIVITIES

System Improvement Training Programs

Cohort 1: September-
November, 2013

Cohort 2: April-May,
2014

TeamSTEPPS Master Trainer's Course

October 16th, 2012
January 15th, 2013
May 7th, 2013
September, 27th, 2013
October 22nd, 2013
January 8th, 2014
April 3rd, 2014

CUSP Workshop, Armstrong Institute, Teamwork Improvement Tools: A Deep Dive Module

July 24th, 2012
February 12th, 2013
April 9th, 2013
November 5th, 2013
February 4th, 2014
May 6th, 2014

Patient Safety Certificate Program, Armstrong Institute,
Teamwork Modules

June 20th, 2011
November 12th, 2012
May 21st, 2013
September 26th, 2013

Human Factors Workshop, Armstrong Institute, Individual and Organizational Factors Modules

ORGANIZATIONAL ACTIVITIES

Editorial Activities

Special Issue Editing

- 2013 Co-editor of Special Issue for BMJ Quality and Safety (2013, Volume 22, Issue 5) on teamwork.
- 2013 Co-editor of Special Issue for BMJ Quality and Safety (2013, Volume 22, Issue 6) on simulation.

Journal Reviewer

- 2010-present Simulation in Healthcare
- 2010 Applied Psychology: An International Review
- 2011-present Human Factors
- 2011 Military Psychology
- 2011 Human Resource Management
- 2011-present Joint Commission Journal on Quality and Patient Safety
- 2011 IEEE Transactions on Healthcare Systems Engineering
- 2012-present Journal of Applied Psychology
- 2012 Medical Care
- 2012-present BMJ Quality & Safety
- 2012 Journal of Behavioral Decision Making
- 2012 Implementation Science
- 2012 Pediatrics
- 2013-present PLOS ONE
- 2014 Critical Care Medicine

Advisory Committees, Review Groups/Study Sections

- 2012-2014 Member, National Cancer Institute, Science of Team Science Toolkit Editorial Board
- 2013 NASA / NSBRI Peer Review Panel for Behavior and Human Performance funding, panel member
- 2013 NASA Non-Advocate Review Panel for internal research projects, panel member
- 2014 ICTR Behavioral, Social, and Systems Science Translational Research Community Advisory Board, Johns Hopkins

Professional Societies

- 2004-present Human Factors and Ergonomics Society (HFES)
Member, Vice Program Chair 2013-2014, Healthcare Special Interest Group
- 2004-present Society for Industrial and Organizational Psychology (SIOP)
Member
- 2006-present Member, Society for Simulation in Healthcare (SSiH)
Member, Vice Chair 2013-2014, Healthcare Systems Modeling and Simulation Affinity Group
- 2012-present Academy of Management (AOM)
Member

Conference Organizer, Session Chair

- March 2014 Session chair, Learning from and with other industries. Human Factors and Ergonomics Society Healthcare Symposium, Chicago, IL
- 2014 Vice Program Chair, Human Factors and Ergonomics Society Annual Meeting, Healthcare Technical Group, Chicago, IL
- 2014 Co-chair, Human Factors and Ergonomics Society Healthcare Symposium Patient and Provider Safety Track, Baltimore, MD

RECOGNITION

Awards, Honors

- 2004 Graduate Studies Merit Fellowship, University of Central Florida (UCF)
- 2006 Student Researcher of the Year, Institute for Simulation and Training, UCF
- 2008 Student Member with Honors Award, Human Factors and Ergonomics Society (HFES)
- 2009 M. Scott Myers Award for Applied Research in the Workplace, Society for Industrial and Organizational Psychology (SIOP)
- 2014 The William C. Howell Young Investigator Award, Human Factors and Ergonomics Society (HFES)

Invited Talks, Panels

- February 23rd, 2011 Human Factors as a Cause of Patient Harm, Lecturer, Department of Defense Patient Safety Program, Learning Action Network Webinar
- June, 21st 2011 Team Training in Healthcare: The 'State of Practice' and Evidence for Behavior Change and Safety, Lecturer, Patient Safety Summit, Johns Hopkins.
- October 21st, 2011 Safety Culture and Outcomes in the ICU, Lecturer, American College of Chest Physicians, Honolulu, HI
- May 17th, 2012 A Culture of Safety: The Science and Practical Strategies for Improvement, Lecturer, Louisiana Hospital Association Hospital Engagement Network Kickoff Meeting, Baton Rouge, LA
- July 12-13th, 2012 Enhancing your Leadership Skill Set, Lecturer, Kentucky Hospital Association, Patient Safety Champion Training, Lexington, KY
- July 12-13th, 2012 Building a training model for clinicians in your workplace, Lecturer, Kentucky Hospital Association, Patient Safety Champion Training, Lexington, KY
- September 26th, 2012 Partnership for Patients Leadership Network: An Essential Forum for Executive Leaders, Panelist, A live broadcast, VHA, Inc. TV.
- September 28th, 2012 Evidence-based Strategies for Building and Maintaining High Performance Teams, Lecturer, Joint Grand Rounds York Hospital, York, PA
- October 17th, 2012 Building Expert Teams: An Integrative Review of Evidence-Based Methods. Lecturer, Neurology and Psychiatry Safety Work Shop, Johns Hopkins
- November 16th, 2012 Tools for Enhanced Accountability and Safety Outcomes, Panelist, A live broadcast, VHA, Inc. TV.
- Dec. 12-13th, 2012 War Games: Linking Fiction, Science, and Gaming Strategy for Safety Leadership Skill-building, facilitator/lecturer, VHA Partnership for Patients Leadership Network, VHA, Inc., Orlando, FL
- January 8th, 2013 Improving team structure. Lecturer. Kentucky Hospital Association Hospital Engagement Network.
- April 10th, 2013 Managing Team Dynamics in Routine and Crisis Situations: Evidence-based Strategies, Lecturer, Human Factors in Control Meeting, Sinteff, Bergen, Norway
- May 1st, 2013 Linking fiction, science, and gaming strategy for safety leadership skill building, Lecturer, Navigating to Excellence Forum, VHA, Inc., Las Vegas, NV
- October 15th, 2013 Surgical Unit Safety Program Project, Lecturer, Michigan Hospital Association, Keystone Surgery Project, Lansing, MI
- November 6th, 2013 Developing Methods to Measure Healthcare Team Performance in Acute and Chronic Care Settings, Lecturer, National Cancer Institute Cyber Discussion, Bethesda, MD

December 11th, 2013 Team Training in Healthcare, and TeamSTEPPS at Johns Hopkins, Co-presenter, Webinar for the Agency for Healthcare Research and Quality National Implementation of TeamSTEPPS Program

January 11th, 2014 Developing Leadership Qualities in the Workplace, Lecturer, Sparta Outpatient Surgery Center, Sparta, NJ

January 22nd, 2014 Teamwork and Patient Safety: The Evidence and Strategies for Improvement. Lecturer, All Children's Hospital, St. Petersburg, FL

February 28th, 2014 Cultural Change and Team Leadership, Lecturer, American Academy of Asthma, Allergy, and Immunology Leadership Institute Annual Workshop, San Diego, CA

March 13th, 2014 Partnership for Patients Educational Series Part 1: Leadership Model of Accountability for Patient Safety and Quality, Panelist, A live broadcast, VHA, Inc. TV.

June 24th, 2014 Leadership Accountability for Patient Safety. Lecturer. Health Care Quality Improvement and Cost Containment Summit, C-Suite Invitational Forum Workshop. World Congress, Philadelphia, PA.

Conference presentations and panels

July 17th, 2014 Creativity for the rest of us: Examining status and creativity in a successful safety climate. Poster presentation. Interdisciplinary Network for Group Research, Raleigh, NC.

July 17th, 2014 Conducting Team Research in Diverse Contexts. Panel. Interdisciplinary Network for Group Research, Raleigh, NC.

August 4th, 2014 Creativity for the rest of us: Examining status and creativity in a successful safety climate. Lecture. Academy of Management, Philadelphia, PA.

August 5th, 2014 Leadership Accountability For Patient Safety: From Theory to Practice. Symposium. Academy of Management, Philadelphia, PA.