

**CURRICULUM VITAE**  
The Johns Hopkins University School of Medicine

Ayşe P Gurses, PhD, MS, MPH

August 19, 2024

**DEMOGRAPHIC AND PERSONAL INFORMATION**

**Current Appointments**

- 2011-present Principal Faculty, Armstrong Institute for Patient Safety and Quality, The Johns Hopkins Medicine, Baltimore, MD
- 2016-present Core Faculty Member, Malone Center for Engineering in Healthcare, The Johns Hopkins University Whiting School of Engineering, Baltimore, MD
- 2017-present Founding Director, Armstrong Institute Center for Health Care Human Factors, The Johns Hopkins Medicine, Baltimore, MD
- 2020-present Professor, Department of Anesthesiology and Critical Care Medicine (primary appointment), The Johns Hopkins University School of Medicine, Baltimore, MD
- 2020-present Professor, Emergency Medicine (secondary appointment), The Johns Hopkins University School of Medicine, Baltimore, MD
- 2020-present Professor, Department of Health Policy and Management (secondary appointment), The Johns Hopkins University Bloomberg School of Public Health, Baltimore, MD
- 2020-present Professor, Biomedical Informatics and Data Science (formerly known as the Division of Health Sciences Informatics), General Internal Medicine (secondary appointment), The Johns Hopkins University School of Medicine, Baltimore, MD
- 2023-present Research Collaborator, Mayo Clinic, Rochester, MN

**Personal Data**

Armstrong Institute for Patient Safety and Quality  
Johns Hopkins University School of Medicine  
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Baltimore, MD 21202, USA  
Tel: +1 410 900 4255  
E-mail: [agurses1@jhmi.edu](mailto:agurses1@jhmi.edu)

**Education and Training**

Undergraduate

1997 BS, Honors degree, Industrial and Systems Engineering, METU, Ankara, Turkey

Doctoral/graduate

1999 MS, Industrial and Systems Engineering, Virginia Tech, Blacksburg, VA

2005 PhD, Industrial and Systems Engineering, University of Wisconsin, Madison, WI.

2015 MPH, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD

Postdoctoral

2005 Post-doctoral Research Fellow, Human Factors Research Group, Anesthesiology and Program in Trauma, University of Maryland School of Medicine, Baltimore, MD.

Leadership Development

2021 Johns Hopkins Medicine Leadership Program for Women Faculty (Year Long Course on Leadership Skills for Career Advancement in Academic Medicine).

Professional Experience

1999 Teaching Assistant, Industrial and Systems Engineering, Virginia Tech, Blacksburg, VA

1999-2001	Teaching/ Research Assistant, Industrial and Systems Engineering, University of Wisconsin-Madison, Madison, WI
2002	Instructor, Industrial and Systems Engineering, University of Wisconsin-Madison, Madison, WI
2005-2006	Assistant Professor, Anesthesiology and Program in Trauma, Human Factors Research Group, University of Maryland, Baltimore, MD
2007-2008	Assistant Professor, Health Policy and Management, University of Minnesota, Minneapolis, MN
2008-2013	Assistant Professor, Anesthesiology and Critical Care Medicine, Johns Hopkins University, Baltimore
2011-present	Core Faculty Member, Armstrong Institute for Patient Safety and Quality, Johns Hopkins Medicine, Baltimore, MD
2013-2020	Associate Professor, Anesthesiology and Critical Care Medicine, Johns Hopkins University School of Medicine, Baltimore, MD
2013-2020	Associate Professor, Department of Health Policy and Management, Johns Hopkins University Bloomberg School of Public Health, Baltimore, MD
2013-2020	Associate Professor, Division of Health Sciences Informatics, Johns Hopkins University School of Medicine, Baltimore, MD
2016-2020	Associate Professor, Department of Civil Engineering, The Johns Hopkins University Whiting School of Engineering, Baltimore, MD
2016-present	Methods Core Lead, Armstrong Institute Center for Diagnostic Excellence, Johns Hopkins Medicine, Baltimore, MD
2016-present	Core Faculty Member, Malone Center for Engineering in Healthcare. Johns Hopkins University Whiting School of Engineering, Baltimore, MD
2017-present	Director, Armstrong Institute Center for Health Care Human Factors, Johns Hopkins Medicine, Baltimore, MD
2023-present	Research Collaborator, Mayo Clinic, Rochester, MN

## PUBLICATIONS

**Peer-Reviewed Original Research [OR] - Published** - \*corresponding author; [SI/QI]: system innovation/ quality improvement publication; Underlined names: Mentees

1. Carayon P, **Gurses AP**. A human factors engineering conceptual framework of nursing workload and patient safety in intensive care units. *Intensive Crit Care Nurs*. 2005; 21(5):284-301. Role: literature review and synthesis, conceptual development of the proposed framework, manuscript writing.
2. \***Gurses AP**, Xiao Y. A systematic review of the literature on multidisciplinary rounds to design information technology. *J Am Med Inform Assoc*. 2006; 13(3):267-276.
3. Carayon P, Schoofs HA, Karsh BT, **Gurses AP**, Alvarado C, Smith M, Brennan P. Work system design for patient safety: The SEIPS Model. *BMJ Qual Saf*. 2006; 15(Suppl 1):i50-i58. *Note: (1) Recipient of the 2019 Byron Bird Award for Excellence in a Research Publication. This award is given by UW-Madison in recognition of the significant impact of the seminal article that introduced the Systems Engineering Initiative for Patient Safety (SEIPS) model.* Role: conceptual development of the proposed model, formation of research collaboration, manuscript writing.
4. \***Gurses AP**, Carayon P. Performance obstacles of intensive care nurses. *Nurs Res*. 2007; 56(3):185-194.
5. \***Gurses AP**, Carayon P. Performance obstacles of intensive care nurses. *Nurs Res*. 2007; 56(3):185-194.
6. \***Gurses AP**, Seidl K, Vaidya V, Bochicchio G, Harris A, Hebden J, Xiao Y. Systems ambiguity and guideline compliance: A qualitative study of how intensive care units follow evidence-based guidelines to reduce healthcare-associated infections. *BMJ Qual Saf*. 2008; 17(5):351-359; (*Recognized as "Editor's choice" for the issue*). *Note: An editorial that highlights my research efforts on using human factors engineering to reduce healthcare associated infections (papers OR 5, 10, and 12) was published in Am J Infection Control: Hebden JN, Murphy C. Minimizing ambiguity to promote the translation of evidence-based practice guidelines to reduce health care-associated infections. AJIC*. 2013;41(1):75-76.
7. \***Gurses AP**, Carayon P. Exploring performance obstacles of intensive care nurses. *Appl Erg*. 2009 40(3):509-518.
8. \***Gurses AP**, Carayon P, Wall M. Impact of performance obstacles on workload, quality of working life, and quality and safety of care among intensive care nurses. *Health Serv Res*. 2009; 44(2p1):422-443.
9. Wu H, Ozok AA, **Gurses AP**, Wei J. User aspects of electronic and mobile government: results from a review of current research. *Electronic Government: An Int J*. 2009; 6(3):233-251. Role: conceptual development of the proposed model, formation of research collaboration, manuscript writing, research mentor
10. \***Gurses AP**, Xiao Y, Hu P. User-designed information tools to support communication and care coordination in a trauma hospital. *J Biomed Inform*. 2009; 42(4):667-677.

11. **\*Gurses AP**, Murphy DJ, Martinez EA, Berenholtz S, Pronovost PJ. A practical tool to identify and eliminate barriers to evidence-based guideline compliance. *Jt Comm J Qual Patient Saf.* 2009; 35(10):526-532; [SI/QI].
12. Winters BD, **Gurses AP**, Lehmann H, Sexton JB, Rampersad CJ, Pronovost PJ. Checklists: Translating evidence into practice. *Crit Care* 2009; 13(6):210. Role: conceptual development, human factors engineering expertise, manuscript writing.
13. **\*Gurses AP**, Marsteller JA, Ozok AA, Xiao Y, Owens S, Pronovost PJ. Using an interdisciplinary approach to identify factors that affect clinicians' compliance with evidence-based guidelines. *Crit Care Med.* 2010; 38(8 suppl):S282-S291.
14. Trinkoff A, Johantgen M, Storr C, Han K, Liang Y, **Gurses AP**, Hopkinson S. A comparison of working conditions among nurses in Magnet and Non-Magnet hospitals. *J Nurs Adm.* 2010; 40(7-8):309-315. Role: conceptual development, human factors engineering expertise, interpretation of data analysis, manuscript writing, research mentor.
15. Trinkoff AM, Johantgen M, Storr CL, **Gurses AP**, Liang Y, Han K. Nurses' work schedule characteristics, nurse staffing, and patient mortality. *Nurs Res.* 2011;60(1): 1-8. Role: conceptual development, human factors engineering expertise, interpretation of data analysis, manuscript writing, research mentor.
16. Martinez EA, Shore A, Colantuoni E, Herzer K, Thompson DA, **Gurses AP**, Marsteller JA, Bauer L, Goeschel CA, Cleary K, Pronovost PJ, Pham JC. Cardiac surgery errors: Results from the United Kingdom National Reporting and Learning System. *Int J Qual Health Care.* 2011;23(2): 151-158. Role: human factors engineering expertise, interpretation of data analysis, manuscript writing, research mentor.
17. Martinez EA, Thompson DA, Errett NA, Kim GR, Bauer L, Lubomski LH, **Gurses AP**, Marsteller JA, Mohit B, Goeschel CA, Pronovost PJ. High stakes and high risk: a focused qualitative review of hazards during cardiac surgery. *Anesth Analg.* 2011;112(5): 1061-1074; [SI/QI]. Role: conceptual development, human factors engineering expertise, interpretation of data analysis, manuscript writing, research mentor.
18. Trinkoff A, Storr CL, Johantgen M, Liang Y, Han K, **Gurses AP**. Linking nursing work environment and patient outcomes. *J Nurs Regul.* 2011;2(1): 10-16. Role: conceptual development, human factors engineering expertise, review and interpretation of data analysis, manuscript writing, research mentor.
19. Thompson DA, Kass N, Holzmueller CG, Marsteller JA, Martinez EA, **Gurses AP**, Kanchuger M, Schwann N, Gibson C, Bauer L, Pronovost PJ Variation in local institutional review board evaluations of a multicenter patient safety study. *J Healthc Qual.* 2011;34(4): 33-39. Role: conceptual development, human factors engineering expertise, data collection, interpretation of findings, manuscript writing, research mentor.
20. Hoonakker PLT, Carayon P, **Gurses AP**, Brown R, McGuire K, Khunlertkit A, Walker J. Measuring workload of ICU nurses with a questionnaire survey: The NASA Task Load Index (TLX). *IIE Trans Healthc Syst Eng.* 2011;1(2): 131-143. Role: conceptual development, human factors engineering expertise, data collection and analysis, data interpretation, manuscript writing, research mentor, principal investigator.
21. Carayon P, Bass EJ, Bellandi T, **Gurses AP**, Hallbeck MS, Mollo V. Socio-technical systems analysis in health care: A research agenda. *IIE Trans Healthc Syst Eng.* 2011;1(3): 145-160. Role: conceptual development, human factors engineering expertise, manuscript writing.
22. Hudson DW, Holzmueller CG, Pronovost PJ, Gianci SJ, Pate ZT, Wahr J, Heitmiller ES, Thompson DA, Martinez EA, Marsteller JA, **Gurses AP**, Lubomski LH, Goeschel CA, Pham JC. Toward improving patient safety through voluntary peer-to-peer assessment. *Am J Med Qual.* 2012;27(3): 201-209; [SI/QI]. Role: conceptual development, human factors engineering expertise, manuscript writing, formation of research collaboration.
23. **\*Gurses AP**, Kim G, Martinez E, Marsteller J, Bauer L, Lubomski L, Pronovost P, Thompson D. Identifying and categorizing patient safety hazards in cardiovascular operating rooms using an interdisciplinary approach: a multisite study. *BMJ Qual Saf.* 2012;21(10): 810-818; [SI/QI]. *(Recognized as the "Editor's choice" for the issue). Note: An editorial for this paper was published in the same issue of the journal: Catchpole K, Wiegmann D. Under-standing safety and performance in the cardiac operating room: from 'sharp end' to 'blunt end.'* *BMJ Qual Saf.* 2012;21(10): 807-809.
24. Pennathur PR, Thompson DA, Abernathy JH, Martinez EA, Pronovost PJ, Kim GR, Bauer L, Lubomski LH, Marsteller JA, **Gurses AP**. Technologies in the wild (TiW): Human factors implications for patient safety in the cardiovascular operating room. *Ergonomics.* 2013;56(2): 205-219. *Note: (1) Recipient of the 2014 Liberty Mutual Best Paper Award in Ergonomics. This annual award, established by the Liberty Mutual Research Institute for Safety and the UK Institute for Ergonomics and Human Factors (IEHF), recognizes the paper published in the journal Ergonomics each year that best contributes to the advancement of ergonomics. (2) Recipient of the 2014 International Ergonomics Association (IEA)/Liberty Mutual Award in Occupational Safety and Ergonomics. This is the most prestigious prize that the IEA awards and the award consists of a cash amount of \$10,000. Through this award, the IEA and Liberty Mutual seeks to reduce or mitigate work-related injuries through the advancement of theory and understanding, innovation and development of new directions or approaches.* Role: formation of research question, data collection, analysis and interpretation, human factors engineering expertise, manuscript writing, research mentor.

25. Holden RJ, Carayon P, **Gurses AP**, Hoonakker P, Hundt AS, Ozok AA, Rivera-Rodriguez AJ. SEIPS 2.0: A human factors framework for studying and improving the work of healthcare professionals and patients. *Ergonomics*. 2013;56(11): 1669-1686. Role: conceptual development of the proposed model, human factors engineering expertise, manuscript writing.
25. Carayon P, Wetterneck TB, Rivera-Rodriguez AJ, Hundt AS, Hoonakker P, Holden R, **Gurses AP**. Human factors systems approach to healthcare quality and patient safety. *Appl Ergon*. 2014;45(1): 14-25.
26. Ozok AA, Nelson M, Wu H, Pronovost PJ, **Gurses AP**. Usability and perceived usefulness of personal health records for preventive health care: Patients' and primary care providers' perspectives. *Appl Ergon*. 2014;45(3): 613-628.
27. Murphy DJ, Pronovost PJ, Lehmann CU, **Gurses AP**, Whitman GJ, Needham DM, and Berenholtz SM. Red blood cell transfusion practices in two surgical intensive care units: a mixed methods assessment of barriers to evidence-based practice. *Transfusion*. 2014;54(10pt2): 2658-2667; [SI/QI]. Role: human factors engineering expertise, mixed-methods expertise, data collection, analysis, interpretation, manuscript writing.
28. Peterson S, **Gurses AP**, Regan L. Resident to resident handoffs in the emergency department: an observational study. *J Emerg Med*. 2014;47(5): 573-579; [SI/QI]. Role: conceptual development, human factors engineering expertise, data analysis and interpretation, manuscript writing, research mentor.
29. Thompson DA, Marsteller JA, Pronovost PJ, **Gurses AP**, Lubomski LH, Goeschel CA, Gosbee JW, Wahr J, Martinez EA. Locating errors through networked surveillance: a multi-method approach to peer assessment, hazard identification and prioritization of patient safety efforts in cardiac surgery. *J Patient Safety*. 2015;11(3): 143-151; [SI/QI]. Role: conceptual development, human factors engineering expertise, data collection, analysis, interpretation, manuscript writing.
30. Gartrell K, Storr CL, Trinkoff AL, Wilson ML, **Gurses AP**. Electronic personal health record use among registered nurses. *Nurs Outlook*. 2015;63(3): 278-287.
31. Gartrell K, Trinkoff AM, Storr CL, Wilson ML, **Gurses AP**. Testing the electronic personal health record acceptance model by nurses for managing their own health: a cross-sectional survey. *Appl Clin Inform*. 2015;6(2): 224-247.
32. Han K, Trinkoff AM, **Gurses AP**. Work-related factors, job satisfaction and intent to leave the current job among United States (US) nurses. *J Clin Nurs*. 2015;24(21-22): 3224-3232.
33. Marsteller J, Wen M, Hsu Y, VanZantenv L, Schwann N, Young C, Sanchez J, Errett N, **Gurses AP**, Thompson D, Wahr J, Martinez EA. Safety culture in cardiac surgical teams: Data from five programs and comparison to other surgical areas. *Ann Thorac Surg*. 2015;100(6): 2182-2189; [SI/QI]. Role: conceptual development, human factors engineering expertise, data interpretation and critical review, manuscript writing.
34. Nasarwanji M, Werner NE, Carl K, Hohl D, Leff B, **Gurses AP**, Arbaje AI. Identifying challenges associated with the hospital to skilled home healthcare care transition workflow: Perspectives of home healthcare agency providers. *Home Health Care Serv Q*. 2015;34(3-4): 185-203; [SI/QI]. Role: conceptual development, human factors engineering expertise, data analysis and interpretation, manuscript writing, research mentor.
35. Werner NE, **Gurses AP**, Leff BA, Arbaje AI. Improving care transitions across healthcare settings using a human factors approach. *J Healthc Qual*. 2016;38(6): 328-343. Role: conceptual development, human factors engineering expertise, manuscript writing, research mentor.
36. Nasarwanji M, Badir A, **Gurses AP**. Standardizing handoff communication: Content analysis of 27 handoff mnemonics. *J Nurs Care Qual*. 2016;31(3): 238-244.
37. Cutting E, Banchemo M, Cimino JJ, Guilherme DF, Hoffman, MA, Kawamoto K, Kelemen M, Pincus HA, Shuldiner AR, Williams MS, **Gurses AP**, Beitelshees A, Pollin T, Overby CL. Designing with scenarios for multi-gene sequencing panel reporting: user-centered system design with clinicians. *J Biomed Inform*. 2016;63: 1-10. Role: human factors engineering and human-computer interaction expertise, interpretation of findings, manuscript writing.
38. Keller S, **Gurses AP**, Werner N, Hohl N, Hughes A, Leff B, Arbaje A. Older adults and management of medical devices in the home: five requirements for successful use. *Popul Health Manag*. 2017;20(4): 278-286; [SI/QI] Role: conceptual development, human factors engineering expertise, interpretation of findings, manuscript writing, research mentor.
39. Ozok AA, Wu H, **Gurses AP**. Exploring patients' use intention of personal health record systems: Implications for design. *Int J Hum-Comput Int*. 2016;33(4): 265-279.
40. Werner NE, Malkana S, **Gurses AP**, Leff B, Arbaje AI. Medication management as a case study for understanding distributed healthcare tasks: Towards a process-level view. *Appl Ergon*. 2017;65: 255-268. Role: conceptual development, human factors engineering expertise, qualitative methods expertise, manuscript writing, research mentor.
41. Katz MJ, **Gurses AP**, Tamma PD, Cosgrove SE, Miller MA, Jump RLP. Implementing antimicrobial stewardship in long-term care settings: An integrative review using a human factors approach. *Clin Infect Dis*. 2017;65(11): 1943-

- 1951; [SI/QI]. Role: conceptual development, human factors engineering expertise, manuscript writing, research mentor.
42. Keller SC, Williams D, Gavvani M, Hirsch D, Adamovich J, Hohl D, **Gurses AP**, Cosgrove SE. Rates of risk factors for adverse drug events in outpatient parenteral antimicrobial therapy. *Clin Infect Dis*. 2017;66(1): 11-19. Role: conceptual development, human factors engineering expertise, critical review and editing of the manuscript, research mentor.
  43. Aboumatar H, Naqibuddin M, Chung S, Adebowale H, Bone L, Brown T, Cooper LA, **Gurses AP**, Knowlton A, Kurtz D, Piet L, Putcha N, Rand C, Roter D, Shattuck E, Sylvester C, Urteaga-Fuentes A, Wise R, Wolff JL, Yang T, Hibbard J, Howell E, Myers M, Shea K, Sullivan J, Syron L, Wang N, Pronovost PJ, and the BREATHE Study Patient Family Partners Group. Improving patient-centered care delivery among COPD patients in the better respiratory education and treatment help empower (BREATHE) study: A randomized clinical trial. *Contemp Clin Trials*. 2017; 62: 159-167; [SI/QI]. Role: human factors engineering expertise, contribution to study design, critical review and editing of the manuscript.
  44. Xie A, Woods-Hill CZ, King AF, Enos-Graves H, Ascenzi J, **Gurses AP**, Klaus SA, Fackler JC, Milstone AM. Work system assessment to facilitate the dissemination of a quality improvement intervention to optimize blood culture use: a case study using human factors and systems engineering principles. *J Pediatric Infect Dis Soc*. 2017; 8(1): 39-45; [SI/QI]. Role: conceptual development, human factors engineering expertise, qualitative methods expertise, manuscript writing, research mentor.
  45. Asan O, Nattinger AB, **Gurses AP**, Tyszka JT, Yen TWF. Oncologists' views regarding the role of electronic health records for care coordination. *JCO Clin Cancer Inform*. 2018; 2: 1-12. Role: conceptual development, human factors engineering expertise, input to qualitative data analyses, interpretation of findings, manuscript writing, research mentor.
  46. Keller SC, Tamma P, Cosgrove S, Miller M, Sateia H, Szymczak J, **Gurses AP**, Linder JA. Ambulatory antibiotic stewardship through a human factors engineering approach: A systematic review. *J Am Board Fam Med*. 2018; 31(3): 417-430. Role: conceptual development, human factors engineering expertise, provide critical input to analyses of existing literature, interpretation of systematic review findings, manuscript writing, research mentor.
  47. Tubbs-Cooley H, Mara CA, Carle AC, **Gurses AP**. The NASA task load index as a measure of overall workload among neonatal, pediatric, and adult intensive care nurses. *ICCN*. 2018; 46: 64-69. Role: conceptual development, human factors engineering expertise, data collection, interpretation of findings, manuscript writing, research mentor.
  48. Durojaiye AB, McGeorge NM, Puett LL, Stewart D, Fackler JC, Hoonakker P, Lehmann HP, **Gurses AP\***. Mapping the flow of pediatric trauma patients using process mining. *Appl Clin Inform*. 2018; 09: 654-66; [SI/QI]
  49. Hose B-Z, Hoonakker PLT, Wooldridge AR, Brazelton T, Dean S, Eithun B, Fackler J, **Gurses AP**, Kelly M, Kohler JE, McGeorge N, Ross J, Rusy D, Carayon P. Physician perceptions of the electronic problem list in pediatric trauma care. *Appl Clin Inform*. 2019; 10(1): 113-122. Role: principal investigator for the federally-funded grant, conceptual development, human factors engineering expertise, interpretation of findings.
  50. Xie A, Rock C, Hsu Y, Osei P, Andonian J, Scheeler V, Keller SC, Cosgrove SE, **Gurses AP**. Improving daily patient room cleaning: an observational study using a human factors and systems engineering approach. *IISE Transactions on Occupational Ergonomics and Human Factors*. 2018; 6(3-4):178-191. [SI/QI]. Role: conceptual development, human factors engineering expertise, data collection, interpretation of findings, manuscript writing, research mentor.
  51. Rosen MA, Dietz AS, Lee N, Wang I, Markowitz J, Wyskiel R, Yang T, Priebe C, **Gurses AP**, Sapirstein A, Pronovost PJ. Sensor-based measurement of critical care nursing workload: Unobtrusive measures of nursing activity complement traditional task and patient level indicators of workload to predict perceived exertion. *PLOS ONE*. 2018; 13(10): e0204819.
  52. Durojaiye AB, Puett LL, Levin S, Toerper M, McGeorge NM, Webster KLW, Deol GS, Kharrazi H, Lehmann, HP, **Gurses AP\***. Assessing the value of probabilistic linkage in linking electronic health record and trauma registry data using indirect identifiers. *Methods Inf Med*. 2018; 57(5/6): 261-269.
  53. Arbaje AI, Hughes A, Werner NE, Carl K, Hohl D, Jones K, Bowles K, Chan KS, Leff B, **Gurses AP**. Information management goals and process failures during home visits for middle aged and older adults receiving skilled home health care services after hospital discharge: a multi-site, qualitative study. *BMJ Q&S*. 2019; 28(2): 111-120.
  54. Hsu Y, Kosinski AS, Wallace AS, Chaudhuri PS, Chang BH, Speck K, Rosen M, **Gurses AP**, Xie A, Huang S, Dokholyan R, Cameron DE, Thompson DA, Marsteller JA. Using a society database to evaluate a patient safety collaborative: The Cardiovascular Surgical Translational Study. *J Comp Eff Res*. 2019; 8(1): 21-32.
  55. Rock C, Xie A, Andonian J, Hsu Y, Osei P, Keller SC, **Gurses AP**, Trexler P, Maragakis LL, Cosgrove SE, for the CDC Prevention Epicenters Program. Evaluation of environmental cleaning of patient rooms: Impact of different fluorescent gel markers. *Infect Control Hosp Epidemiol*. 2019; 40(1): 100-102.

56. **Gurses AP\***, Dietz AS, Nowakowski E, Andonian J, Schiffhauer M, Billman C, Abashian AM, Trexler P, Pronovost PJ, Benishek LE, Rosen MA, Xie A, Osei P, Maragakis LL, for the CDC Prevention Epicenters Program. Human factors-based risk analysis to improve the safety of doffing enhanced personal protective equipment. *Infect Control Hosp Epidemiol.* 2019; 40(2): 178-186.
57. Keller SC, Cosgrove SE, Kohut M, Kroesche A, Chang HE, **Gurses AP**. Hazards from physical attributes of the home environment among patients on outpatient parenteral antimicrobial therapy (OPAT). *Am J Infect Control.* 2019; 47(4): 425-430.
58. Durojaiye AB, Levin S, Toerper M, Kharrazi H, Lehmann HP, **Gurses AP\***. Evaluation of multidisciplinary collaboration in pediatric trauma using EHR data. *J Am Med Inform Assoc.* 2019; 26(6):506-515.
59. Wooldridge AR, Carayon P, Hoonakker P, Hose B, Ross J, Kohler JE, Brazelton T, Eithun B, Kelly MM, Dean SM, Rusy D, Durojaiye A, **Gurses AP**. Complexity of the pediatric trauma care process: Implications for multi-level awareness. *Cogn Technol Work.* 2019; 21(3): 397-416.
60. Hoonakker PLT, Wooldridge AR, Hose BZ, Carayon P, Eithun B, Brazelton TB, Kohler JE, Ross JC, Rusy DA, Dean SM, Kelly MM, **Gurses AP**. Information flow during pediatric trauma care transitions: things falling through the cracks. *Intern Emerg Med.* 2019; 14(5):797-805.su
61. Andonian J, Kazi S, Therkorn J, Benishek L, Billman C, Schiffhauer M, Nowakowski E, Osei P, **Gurses AP**, Hsu Y, Drewry D, Forsyth ER, Garibaldi BT, Rainwater-Lovett K, Trexler P, Maragakis LL, for the CDC Prevention Epicenters Program. Effect of an intervention package and teamwork training to prevent healthcare personnel self-contamination during personal protective equipment doffing. *Clin Infect Dis.* 2019; 69(S3):S248-S255.
62. Aboumatar H, Naqibuddin M, Chung S, Chaudhry H, Kim S, Saunders J, Bone L, **Gurses AP**, Knowlton A, Pronovost P, Nirupama P, Rand C, Roter D, Sylvester C, Thompson C, Wolff J, Hibbard J, Wise R. Effect of a hospital-initiated program combining transitional care and long-term self-management support on outcomes of patients hospitalized with chronic obstructive pulmonary disease: A randomized clinical trial. *JAMA.* 2019; 322(14): 1371-1380. Role: conceptual development, human factors engineering expertise, interpretation of findings.
63. Keller SC, Cosgrove SE, Arbaje AI, Chang RH, Krosche A, Williams D, **Gurses AP**. Roles and role ambiguity in patient- and caregiver-performed outpatient parenteral antimicrobial therapy. *Jt Comm J Qual Saf.* 2019; 45(11): 763-771.
64. Rock, C, Bryce AS, Hsu YJ, **Gurses AP**, Xie A, Scheeler V, Cummings S, Trexler, P, Milstone A, Maragakis LL and Cosgrove SE. Evaluating accuracy of sampling strategies for fluorescent gel monitoring of patient room cleaning. *ICHE.* 2019; 40(7): 794-797.
65. Chang BH, Hsu YJ, Rosen MA, **Gurses AP**, Huang S, Xie A, Speck K, Marsteller JA, Thompson DA. Reducing three infections across cardiac surgery programs: A multi-site across-unit collaboration. *Am J Med Quality.* 2020; 35(1):37-45.
66. Keller S, Arbaje A, Williams D, Chang R, Cosgrove S, **Gurses AP**. It's complicated: Patient and informal caregiver performance of outpatient parenteral antimicrobial therapy-related tasks. *Am J Med Qual.* 2020; 35(2), 133-146.
67. Katz MJ, Osei P, Vignesh A, Oresanwo I, Montalvo A, **Gurses AP**. Respiratory practices in the long-term care setting: A human-factors based risk analysis. *JAMDA.* 2020; 21(8): 1134-1140.
68. Wooldridge AR, Carayon P, Hoonakker P, Hose BZ, Eithun B, Brazelton T, Ross J, Kohler JE, Kelly MM, Dean SM, Rusy D, **Gurses AP**. Work system barriers and facilitators in inpatient care transitions of pediatric trauma patients. *Appl Erg.* 2020; 85:103059.
69. Lai AY, Yuan C, Marsteller J, Hannum S, Lasser E, Heughan J, Oberlander T, Berger Z, **Gurses AP**, Kharrazi H, Pitts S, Scholle S, Dy SM. Patient safety in primary care: Conceptual meanings to clinicians, administrators, staff, and patients. *JABFM.* 2020; 33(5): 754.
70. Keller SC, Tamma P, Salinas A, Williams D, Cosgrove SE, **Gurses AP**. Engaging patients and caregivers in a transdisciplinary effort to improve outpatient parenteral antimicrobial therapy. In *Open Forum Infect Diseases*, 2020; 7(6): ofaa188.
71. Lydecker AD\*, Osei PA\*, Pineles L, Johnson JK, Meisel J, Stine OC, Magder L, **Gurses AP**, Hebden J, Oruc C, Mody L, Slifka KJ, Stone ND, Roghmann MC. Targeted gown and glove use to prevent *staphylococcus aureus* acquisition in community-based nursing homes: A pilot study. *ICHE.* 2021; 42(4):448-454. (\*My mentee, Ms. Patience Osei, is first co-author on this work as she contributed equally to this work under my supervision).
72. Dy SM, Acton RM, Yuan CT, Hsu YJ, Lai AY, Marsteller J, Ye FC, McGee N, Kharrazi H, Mahabare D, Kim J, **Gurses AP**, Brittle M, Scholle SH. Association of implementation and social network factors with patient safety culture in medical homes: A coincidence analysis. *J Patient Saf.* 2022; 18(1): e249-e256.
73. Ehmann MR, Zink EK, Levin A, Suarez JI, Belcher HME, Daugherty-Biddison EL, Doberman DJ, D'Souza K, Fine DM, Garibaldi BT, Gehrie EA, Golden SH, **Gurses AP**, Hill PM, Hughes MT, Kahn J, Koch CG, Marx JJ,

- Meisenberg BR, Natterman JP, Rushton CH, Sapirstein A, Selinger SR, Stephens RS, Toner E, Unguru Y, Van Stone M, Kachalia A. Operational recommendations for scarce resource allocation in a public health crisis. *CHEST*. 2021; 159(3); 1076-1083.
74. Miller SD, Lee JA, Murphy Z, Screws J, Berg EA, Picoraro JA, **Gurses AP**, Huang JS. Telemedicine expansion in pediatric gastroenterology in response to COVID-19: early results of an international physician survey. *JPGN Reports*. 2021; 2(1):e030.
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**Peer-Reviewed Commentaries and Perspectives [CP] - Published - \*corresponding author; [SI/QI]: system innovation/quality improvement publication; Underlined names: Mentees**

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### Editorials [ED] \*corresponding author.

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### Electronic Letter

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### Peer-Reviewed Proceedings Reports [PR]

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42. Xie A, Sauders J, Speed T, Hsu Y, Khasawneh A, Kim S, McDonald E, Marsteller J, **Gurses A**, Shechter R and Hanna M. Perioperative pain management during the COVID-19 pandemic: A human factors approach to telemedicine adoption. In Proc of the IEA, 2021.
43. **Gurses AP**, Perry SJ, Pennathur P, Sax H, Bell M, Roth E. Human factors engineering in infection prevention & control: Opportunities, examples, and the future. In Proceedings of the Human Factors and Ergonomics Society Annual Meeting 2022 Sep (Vol. 66, No. 1, pp. 565-569). Sage CA: Los Angeles, CA: SAGE Publications.
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45. Phung T, Lee JJ, Oladapo-Shittu O, Klein EY, **Gurses AP**, Hannum SM, Weems K, Marsteller JA, Cosgrove SE, Keller SC, Shpitser I. Zero inflation as a missing data problem: a proxy-based approach. arXiv preprint arXiv:2406.00549, 2024 (in press).
46. Hoy K, Newsome E, Roth E, Klein G, Stewart CM, **Gurses AP**. Cognitive complexity interview method: A technique for identifying cognitive challenges in healthcare work. International Conference on Naturalistic Decision Making, 2024 Auckland, New Zealand. *Note: Recipient of the Robert R. Hoffman Award for Best Contribution to Naturalistic Decision Making Methodology.*

### **Guidelines/Protocols, Consensus Statement, Expert Opinion, Consortium Articles [GL]**

1. NISTIR 7865: A Human Factors Guide to Enhance EHR Usability of Critical User Interactions when Supporting Pediatric Patient Care <http://dx.doi.org/10.6028/NIST.IR.7865>, National Institute of Standards and Technology (NIST), 6/12, Role: Invited Expert Reviewer.
2. Lowry SZ, Ramaiah M, Ozok AA, **Gurses AP**, Gibbons MC, Brick D, Patterson ES, Lewis VR, Simmons D. NISTIR 7952: Toward a Shared Approach for Ensuring Patient Safety with Enhanced Workflow Design for Electronic Health Records <http://nvlpubs.nist.gov/nistpubs/ir/2013/NIST.IR.7952.pdf>, National Institute of Standards and Technology (NIST), 8/13.
3. Lowry SZ, Ramaiah M, Patterson ES, Brick D, **Gurses AP**, Ozok AA, Simmons D Gibbons MC. NISTIR 7988: Integrating Electronic Health Records into Clinical Workflow: An Application of Human Factors Modeling Methods to Ambulatory Care <http://dx.doi.org/10.6028/NIST.IR.7988> . 3/14
4. Ebola Personal Protective Equipment Donning and Doffing Procedures- Web-Based Training Development, <http://www.cdc.gov/vhf/ebola/hcp/ppe-training/>, Centers for Disease Control and Prevention (CDC), 10/14. Role: Project leader of the entire 40-people multi-professional team across multiple states and organizations (unfunded effort).
5. Ebola Preparedness Emergency Department Guidelines- Web-Based Training Development <http://www.cdc.gov/vhf/ebola/healthcare-us/emergency-services/emergencydepartment-training.html> , Centers for Disease Control and Prevention (CDC), 11/14. Role: Principal investigator, Co-PI: Lisa Maragakis.

### **Media Releases [MR]**

1. Making a better medical safety checklist. ScienceDaily, 2/15/10.  
<https://www.sciencedaily.com/releases/2010/02/100216101206.htm>
2. **Gurses AP.** Forward under 40 awards honor seven UW-Madison Alumni. University of Wisconsin-Madison, 3/4/14.  
<https://news.wisc.edu/forward-under-40-awards-honor-seven-uw-madison-alumni/>
3. **Gurses AP.** Scientific paper examines patient safety and risks from technologies the health care system. 4/16/14.  
<http://dhsi.med.jhmi.edu/news/dr-ayse-p-gurses-johns-hopkins-university-school-medicine-has-won-2014-liberty-mutual-best>
4. **Gurses AP.** CDC charges Johns Hopkins to lead development of Ebola training module. EurekAlert, 10/24/14.  
[https://www.eurekalert.org/pub\\_releases/2014-10/jhm-ccj102414.php](https://www.eurekalert.org/pub_releases/2014-10/jhm-ccj102414.php)
5. **Gurses AP.** Johns Hopkins and CDC prepare emergency department staff to care for patients with infectious disease. Medical Xpress, 2/17/15. <https://medicalxpress.com/news/2015-02-johns-hopkins-cdc-emergency-department.html>
6. **Gurses AP.** Johns Hopkins and CDC prepare emergency department staff to care for patients with infectious disease. EurekAlert, 2/17/15. [https://www.eurekalert.org/pub\\_releases/2015-02/jhm-jha021615.php](https://www.eurekalert.org/pub_releases/2015-02/jhm-jha021615.php)
7. University of Maryland School of Nursing Awarded National Council of State Boards of Nursing Grant 10/28/15.  
<http://www.nursing.umaryland.edu/news-events/news/umson-awarded-national-council-of-state-boards.php>

## Other Media [OM]

### Electronic and Print

1. **Gurses AP.** People on the Move: Professional Recognition in Health Care. Washington Business J. 3/13/13  
[https://www.bizjournals.com/washington/potmsearch/detail/submission/1545931/Ayse\\_Gurses](https://www.bizjournals.com/washington/potmsearch/detail/submission/1545931/Ayse_Gurses)
2. **Gurses AP.** People on the Move: Professional Recognition in Health Care. Baltimore Business J. 3/13/13.  
[https://www.bizjournals.com/baltimore/potmsearch/detail/submission/1545921/Ayse\\_Gurses](https://www.bizjournals.com/baltimore/potmsearch/detail/submission/1545921/Ayse_Gurses)
3. **Gurses AP.** Dr. Ayse Gurses receives an award from the Federation of Associations of Behavioral and Brain Science. 3/26/13. Turk of America (Turkish American Business Magazine)  
<http://www.turkofamerica.com/index.php/others/special-issues/health/item/734-dr-ayse-gurses-receives-an-award-from-the-federation-of-associations-of-behavioral-brain-science>
4. **Gurses AP.** The engineer who improves patient safety in the cardiac operating room (Turkish). Hurriyet (one of the top 3 most-popular Turkish daily newspapers). 3/30/13. <http://www.hurriyet.com.tr/doktorlara-makas-toplatan-muhendis-22934612>
5. **Gurses AP.** Hospitals test out new design concepts: Patient experience and health care trends guide design concepts created in hospital innovation centers. Health Facilities Management. 4/1/15.  
<https://www.hfmmagazine.com/articles/1520-hospitals-test-out-new-design-concepts> (Cover Story)
6. **Gurses AP.** Quality and productivity in health care. Anahtar (Monthly news magazine of Republic of Turkey Ministry of Science, Industry, and Technology). 5/15. <https://anahtar.sanayi.gov.tr/tr/News/saglikta-kalite-ve-verimlilik-paneli-turk-japon-vakfi-konferans-salonunda-gerceklestirildi/2014>
7. **Gurses AP.** Researchers explore ways to improve patient room cleaning. Health Facilities Management. 2/16/17.  
<https://www.hfmmagazine.com/articles/2735-researchers-explore-ways-to-improve-room-cleaning>
8. **Gurses AP.** Meet 2014 Forward under 40 award recipient Ayse Gurses. University of Wisconsin Alumni Association. 3/3/14. [http://www.uwalumni.com/awards/forward\\_gurses/](http://www.uwalumni.com/awards/forward_gurses/)

### Electronic

1. Magnet hospitals must do more on scheduling issues. Advance Healthcare Network. 8/17/10.  
<http://community.advanceweb.com/blogs/nurses3/archive/2010/08/17/magnet-hospitals-must-do-more-on-scheduling-issues.aspx>
2. Nurses working long work hours can be deadly for patients. Emax Health. 1/15/11.  
<https://www.emaxhealth.com/1020/nurses-working-long-work-hours-can-be-deadly-patients>
3. Nurses' long work hours, scheduling can increase patient mortality. Infection Control Today. 1/17/11.  
<http://www.infectioncontroltoday.com/news/2011/01/nurses-long-work-hours-scheduling-can-increase-patient-mortality.aspx>
4. Nurses' long hours lead to worse patient outcomes, study suggests. Massachusetts Nurses Association. 1/18/11.  
<http://www.massnurses.org/news-and-events/archive/2011/p/openItem/5514>
5. **Gurses AP.** Making surgery safer. Federation of Associations in Behavioral and Brain Sciences (FABBS). 3/19/13.  
<http://fabbs.org/honoring-our-scientists/impact-award-winners/former-award-winners/2012-impact-award-winners/making-surgery-safer/>

6. **Gurses AP.** Johns Hopkins som ska leda, att planlägga den växelverkande Webbaserade Ebola tränings programmet (Johns Hopkins to lead the design of the interactive Web-based Ebola training program) (in Swedish). 10/27/14. News Medical <https://www.news-medical.net/news/20141027/10862/Swedish.aspx>
7. **Gurses AP.** CDC unveils videos to help with Ebola, infectious disease ID, handling. Modern Healthcare. 2/17/15. <http://www.modernhealthcare.com/article/20150217/NEWS/150219914>
8. **Gurses AP.** Johns Hopkins develops bio preparedness training for emergency departments. Global Biodefense. 2/17/15. <https://globalbiodefense.com/2015/02/17/johns-hopkins-develops-biopreparedness-training-emergency-departments/>
9. **Gurses AP.** Our 2015 Badger of the Year Ayse Gurses. University of Wisconsin Alumni Association Baltimore Chapter. 5/28/15. <http://chapters.uwalumni.com/baltimore/2015/05/badger-of-the-year-gurses/>
10. **Gurses AP.** The people element: Patient safety story. Wellbeing: Johns Hopkins Aramco Health Care, 5/16; 30. <http://www.jhah.com/downloads/Wellbeing/English%20Wellbeing-May.pdf>
11. **Gurses AP.** Early Career Investigators. Capitol Shorts, American Society for Engineering Education. 11/4/17. <http://capitolshorts.cmail19.com/t/ViewEmail/y/F0A51BE397FC13ED/F1171AA9F9559CCC148F9D201EEB5695>
12. **Gurses AP.** Early career impact scholars share research contributions on Capitol Hill. Federation of Associations in Behavioral and Brain Sciences (FABBS). 11/15/17. <http://fabbs.org/2017/11/16/early-career-impact-scholars-share-research-contributions-on-capitol-hill/>
13. **Gurses AP.** Despite guidelines, more than 100 ways PPE doffing process can fail. 12/15/18. <https://www.healio.com/infectious-disease/nosocomial-infections/news/in-the-journals/%7Bd06d815a-5243-4b38-8033-652cb3697c7d%7D/despite-guidelines-more-than-100-ways-ppe-doffing-process-can-fail>
14. Longer sleeves reduce contamination during PPE removal. **Perspective by Ayse P Gurses.** 8/31/19. <https://www.healio.com/infectious-disease/practice-management/news/online/%7B9cc0ef9a-7c91-424d-b80e-a6bba15588e9%7D/longer-sleeves-reduce-contamination-during-ppe-removal>

## EXTRAMURAL Funding

**Research Extramural Funding** - Grants or contracts obtained to support a research initiative

### Current

- |                  |  |
|------------------|--|
| 9/30/19- 9/30/24 | PROMIS Learning Lab: Partnership in resilience for medication safety<br>R01 HS27277<br>Agency for Healthcare Research and Quality (AHRQ)<br>\$2,500,000<br>Principal investigator: Yan Xiao, Univ of Texas-Arlington<br>Role: Johns Hopkins Univ Subcontract PI, 16% effort          |
| 7/1/2020-4/30/25 | Enhancing nursing care reliability in neonatal intensive care units<br>R01<br>NICHD<br>\$2,500,000<br>Principal investigator: Heather Tubbs-Cooley, PhD (Ohio State University)<br>Role: Co-investigator, site PI, 8%  |
| 10/1/20-8/31/25  | The Home infusion collaborative to eliminate central line-associated bloodstream infections (CLABSI)<br>R01<br>AHRQ<br>\$2,488,265<br>PI: Sara Keller (I was Sara Keller's AHRQ funded K grant mentor).<br>Role: Co-investigator, Human factors and implementation science lead, 10% |
| 10/1/20-9/31/25  | Transforming kidney care in the emergency department using artificial intelligence driven clinical decision support<br>R01   |

AHRQ  
\$2,000,000  
PI: Jeremiah Hinson and Scott Levin  
Role: Co-investigator, 2%

9/1/20-8/31/25      Implementing and evaluating the impact of a transdisciplinary and multifaceted early mobility program in pediatric intensive care units: A stepped-wedge, cluster-randomized control trial.  
R01  
NICHD  
\$2,500,000  
PI: Sapna Kudchadkar  
Role: Co-investigator, 4%

6/1/21-05/31/26      Johns Hopkins Prevention Epicenter: Transdisciplinary Research Approaches to Prevent Healthcare Associated Infections and Antibiotic Resistance (TRAP)  
U54  
CDC  
\$2,000,000  
PI: Sara Cosgrove  
Role: Co-investigator, Human factors engineering lead, 10%

5/1/21-4/30/26      Real-time measurement of situational workload in NICU nurses to improve workload management and patient safety  
R01  
Agency for Healthcare Research and Quality  
\$1,595,875  
Multiple Principal Investigators: Dan France (Vanderbilt Univ) and Ayse Gurses (Johns Hopkins Univ)  
Role: Principal Investigator, 10%

7/1/22-6/30/27      EHR usability and usefulness, perceived missed nursing care and medication errors in critical care  
R01  
Agency for Healthcare Research and Quality  
\$1,996,926.66  
Multiple Principal Investigators: Alison Trinkoff (Univ of Maryland) and Ayse Gurses (Johns Hopkins)  
Role: Principal Investigator, 15%

9/1/22-8/31/26      Center for immersive learning and digital innovation: A patient safety learning lab advancing patient safety through design, systems engineering, and health services  
R18  
AHRQ  
\$1,996,505  
Principal Investigator: Vinciya Pandian  
Role: Co-investigator, 5%

9/30/22-9/29/26      Armstrong Institute Center for Diagnostic Excellence-Pursuing scalable system-level diagnostic quality, value and equity by applying safety science to emergency department diagnosis  
R18  
AHRQ  
\$3,999,993  
Multiple Principal Investigators: David Newman-Toker, Kathy McDonald  
Role: Co-investigator (1-5%, varies by year)

07/01/23-06/30/27      Measuring NICU nurse practitioner workload in real-time to improve care quality and patient safety  
R01



NIH/NICHHD

\$2M

Multiple Principal Investigators: Dan France (Vanderbilt Univ) and Ayse Gurses (Johns Hopkins Univ)

Role: Principal Investigator, 18%

9/30/23-9/29/27

Resilient EMS Patient Safety Learning Laboratory (PSLL): Using a Systems Engineering Approach to Enhance EMS Cognitive Work and Safety for Older Adults During Prehospital Care

R18: Patient Safety Learning Laboratory

AHRQ

\$2M

Role: Principal Investigator, 20%

### **Pending**

9/1/24-8/31/29

Patient Engagement in Primary Care to Improve Medication Safety

R18

AHRQ

\$2M

Principal Investigator: Yan Xiao

Role: Co-investigator, Johns Hopkins subcontract PI, 9%

9/1/24-8/31/29

PROMIS Learning Lab: Partnership in Resilience for Medication Safety

R01

AHRQ

\$2M

Principal Investigator: Yan Xiao

Role: Co-investigator, Johns Hopkins subcontract PI, 10%

1/1/25-12/31/30

Sepsis Attack Team Cognition and Performance Optimization: A Real-time, EMR-interactive, Data Visualization Product to Improve Antibiotic Decisions, Delivery, and Patient Outcomes

Phase I STTR

NIH

Principal Investigator: Marjorie Kanof, Rubicon Health, LLC

Johns Hopkins Principal Investigator: James Fackler

Role: Co-investigator, 10%

### **Previous**

6/1/04-2/28/05

ICU Nursing Workload: Causes and Consequences

Agency for Health Care Research and Quality (AHRQ) Health Services Research Dissertation Grant HS14517

\$30,000

Role: Principal Investigator, 100% effort

1/1/06-12/31/07

Supporting Rapid Transfer of Information and Responsibility

National Science Foundation (NSF)

0534646

\$302,866

Principal investigator: Yan Xiao

Role: Co-principal Investigator, 25% effort

10/1/06-9/30/08

In-Situ Simulation to Detect and Prevent Near Misses during Critical Events

Agency for Health Care Research and Quality (AHRQ)

1U18-HS16728

\$347,197  
 Principal investigator: William Riley  
 Role: Co-investigator, 10% effort

1/1/07-12/31/08      An Academic Health Center and Public Health Practice Collaboration: Disseminating Continuous Quality Improvement Capability to Local and State Public Health Agencies  
 Robert Wood Johnson Foundation (RWJF)  
 059951  
 \$150,481  
 Principal investigator: William Riley  
 Role: Co-investigator, 5% effort

8/15/08-10/31/11      SCAF FOCUS- Locating Errors through Networked Surveillance (LENS)  
 Society of Cardiovascular Anesthesiologists Foundation (SCAF)  
 \$627,748  
 Principal investigator: Peter Pronovost  
 Role: Co-investigator, 20% effort

2/1/09-1/31/11      Creating a Public-Private Partnership to Mitigate Health Hazards: The Commercial Aviation Safety Teams (CAST) in Healthcare  
 Robert Wood Johnson Foundation (RWJF)  
 \$202,539  
 Principal investigator: Peter Pronovost  
 Role: Co-investigator, 6% effort

7/1/09-6/30/12      Improving Patient Trajectory Management and Care Coordination with a Multidisciplinary Checklist  
 National Patient Safety Foundation (NPSF)  
 \$100,000  
 Role: Principal Investigator, 15% effort

8/1/10- 7/31/15      Improving the Safety of Care Transitions for Cardiac Surgery Patients  
 Agency for Health Care Research and Quality (AHRQ)  
 K01HS018762, K01 Research Career Development Award  
 \$600,000  
 Role: Principal investigator, 75% effort

7/1/12-6/30/14      Identification and Validation of Risks to Patient Safety during Care Transitions of Older Adults Receiving Skilled Home Healthcare Services after Hospital Discharge  
 National Patient Safety Foundation (NPSF)  
 \$86,957  
 Principal investigator: Alicia Arbaje (mentee of Dr. Gurses)  
 Role: Co-investigator, mentor, 3.8% effort

6/1/12-12/31/13      A Comprehension Study of the Co-packaged Product Compared to the Individual Packaging of the Two Components  
 Sanofi, Inc.  
 \$140,000  
 Role: Principal Investigator, 10% effort

3/1/13-2/27/14      Designing interactive health technologies for safety and user experience  
 Royal Society International Exchanges Scheme  
 £6,000  
 Principal applicant: Ann Blandford, University College –London  
 Role: Co-investigator; Notes: This scheme provides funding to support development of concrete research collaborations between scientists in the UK and scientists overseas.

10/1/13-9/30/16 An Integrative Multilevel Study for Improving Patient-Centered Care Delivery Among Patients with Chronic Obstructive Pulmonary Disease  
Patient-Centered Outcomes Research Institute (PCORI)  
IH-1304-7118  
\$1,499,671  
Principal investigator: Hanan Aboumatar  
Role: Co-investigator, 2% effort

11/6/14-2/6/15 Infection Control Healthcare Worker Training to Prepare for Potential Ebola Cases in the United States  
Center for Disease Control and Prevention (CDC)  
\$720,000  
Principal investigators: Ayse P Gurses, Lisa Maragakis  
Role: Principal Investigator, 25% effort

9/30/14-9/29/17 Transdisciplinary learning lab to eliminate patient harm  
P30HS023553-01  
Agency for Healthcare Research and Quality (AHRQ)  
\$4,000,000  
Principal investigator: Peter Pronovost  
Role: Co-investigator, 10% effort

9/30/15-9/29/18 Applying Human Factors and Mathematical Modeling Approaches to Prevent Transmission of High Consequence Pathogens  
1U54CK000447  
Centers for Disease Control and Prevention (CDC) Extramural Epicenter Grant  
\$2,199,418  
Principal investigator: Lisa Maragakis  
Role: Human Factors team lead, Co-investigator, 20% effort

7/1/15-6/30/17 HopScore: An Electronic Outcomes-Based Emergency Triage System  
Agency for Healthcare Research and Quality (AHRQ)  
R21HS023641  
\$300,000  
Principal investigator: Scott Levin  
Role: Co-investigator, 5% effort

2/29/16-2/28/17 Infection control training modules for US nurses  
Centers for Disease Control and Prevention (CDC)  
\$956,085  
Principal investigators: Lisa Maragakis, Ayse P Gurses  
Role: Principal investigator, 10% effort

7/1/16-6/31/18 Systems analysis of guideline adherence in neonatal intensive care  
1R21HD084863-01  
Eunice Kennedy Shriver National Institute of Child Health and Human Development  
\$300,000  
Principal investigator: Heather Tubbs Cooley (Ohio State University)  
Role: Johns Hopkins sub-award Principal Investigator, Co-investigator, 10% effort

9/29/17- 9/28/18 Implementation of a novel strategy to prevent Staphylococcus aureus (SA) acquisition in community-based nursing homes to prevent invasive SA infection  
200-2017-95512  
Centers for Disease Control and Prevention (CDC), subcontract from Univ Maryland-Baltimore  
\$62,877 (Johns Hopkins portion)  
Principal investigator: Mary-Ellen Roghmann  
Role: Johns Hopkins Sub-award Principal Investigator, Co-investigator, 5% effort

12/1/17- 11/30/18 Barriers and facilitators for implementation of infection prevention practices for device and wound care in high-acuity skilled nursing facilities: a human factors and system engineering approach  
200-2018-96313  
Centers for Disease Control and Prevention (CDC)  
\$487,334  
Principal investigators: Morgan Katz, Ayse P Gurses  
Role: Co-Principal Investigator, 20% effort

1/10/17-31/7/18 Perinatal Safety Program with HRSA: AHRQ Safety Program in Perinatal Care (SPPC)-II Project Planning Phase  
RFTOP: 17-233-SOL-00520  
Agency for Healthcare Research and Quality (AHRQ)  
\$353,221  
Principal investigators: Edith Gurewitsch and Asad Latif  
Role: Co-investigator, 10% effort

4/1/17-6/30/19 Preventing venous thromboembolism (VTE): Engaging patients to reduce preventable harm from missed/refused doses of VTE prophylaxis  
1603-34596  
PCORI  
\$377,995  
Principal investigator: Elliott Haut / Brandyn Lau  
Role: Co-investigator, 5% effort

9/30/15-9/29/20 Patient-centric risk model of medication errors during care transitions  
R01 HS024436  
Agency for Healthcare Research and Quality (AHRQ)  
\$1,500,000  
Role: Principal investigator

9/30/16-9/29/19 What is Patient Safety in the Medical Home?  
R01 HS024859  
Agency for Healthcare Research and Quality (AHRQ)  
\$1,500,000  
Principal investigator: Sydney Dy  
Role: Co-investigator, 10% effort

7/1/15-4/31/21 Care transitions and teamwork in pediatric trauma: Implications for HIT design  
R01 HS23837  
Agency for Healthcare Research and Quality (AHRQ)  
\$2,500,000  
Role: Principal investigator

9/15/19-8/31/21 Understanding Cancel RX: Impact on clinical workflows, medication safety risks, and patient outcomes  
R21 HS026584  
Agency for Healthcare Research and Quality (AHRQ)  
\$249,000  
Principal investigator: Samantha Pitts  
Role: Co-Investigator, 5%

9/29/18-9/29/20 Clostridium difficile over testing (C-DOT) improvement initiative; a multi-site prevention epicenter collaborative project  
CDC Prevention Epicenter Program  
\$1,378,420  
Principal Investigator: Clare Rock

Role: Co-investigator, Human Factors Engineering Lead, 10%

6/1/20-5/31/21 The Johns Hopkins Epicenters for the Prevention of Healthcare-Associated Infections Response to the COVID-19 Pandemic  
 CDC Prevention Epicenter Program U01CK000554-Supplement  
 \$790,703  
 Principal Investigator: Clare Rock, Sara Cosgrove  
 Role: Co-investigator, Human Factors Engineering Lead, 5%

9/30/19- 12/31/21 Percutaneous ultrasound gastrostomy: development and clinical evaluation of a safer, more affordable method for feeding tube placement  
 R44 DK115325 (Phase II SBIR)  
 National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)  
 \$1,144,995  
 Principal Investigator: Howard Carolan (COAPTECH LLC)  
 Role: Johns Hopkins Sub-award Principal Investigator, Co-investigator, 5% effort

9/1/19-8/31/21 Antibiotic knowledge and attitudes among nursing home patients, family and staff  
 R21 AG061482  
 National Institute of Aging (NIA)  
 \$275,000  
 Principal investigator: Jonathan Zenilman  
 Role: Co-investigator, 7.5% effort

1/1/20-12/31/21 PROMIS Learning Lab: Partnership in Resilience for Medication Safety  
 R18 Competitive COVID Supplement  
 AHRQ  
 \$350,000  
 PI: Yan Xiao (Univ of Texas-Arlington)  
 Johns Hopkins site PI: Ayse Gurses, 5% effort

2/1/20-1/31/21 PA-20-070: Evaluating home healthcare agency and home healthcare professional responsiveness to safety threats during older adults' care transitions in the era of COVID-19  
 R01 Competitive COVID Supplement  
 AHRQ  
 \$488,641  
 PI: Alicia Arbaje  
 Role: Co-investigator

9/30/18-7/31/22 Connected emergency care (CEC) patient safety learning lab  
 R18 HS026640  
 Agency for Healthcare Research and Quality (AHRQ)  
 \$2,500,000  
 Principal investigator: Scott Levin, Jeremiah Hinson  
 Role: Co-investigator, 5% effort

4/15/19-3/31/21 Investigating medication management during hospital-to-home transitions of older adults with Alzheimer's disease and related dementias  
 R03 AG063083  
 National Institute of Aging (NIA)  
 \$100,000  
 Principal investigator: Alicia Arbaje  
 Role: Co-investigator, 5% effort

8/1/19-5/31/22 Making health care safer for older adults receiving skilled home health care services after hospital discharge  
 R01 HS026599

Agency for Healthcare Research and Quality (AHRQ)  
 \$1,500,000  
 Principal investigator: Alicia Arbaje  
 Role: Co-investigator, Efforts: 10%

2/1/20-1/31/21 PA-20-070: Evaluating home healthcare agency and home healthcare professional responsiveness to safety threats during older adults' care transitions in the era of COVID-19  
 R01 Competitive COVID Supplement  
 AHRQ  
 \$488,641  
 PI: Alicia Arbaje  
 Role: Co-investigator, 5%  
 Impact score: 20 (1%)

11/1/20-10/31/22 Development of an interpretable AI system to support diagnosis and management of ear infections by non-medical users  
 Leon Lowenstein Foundation  
 \$150,000  
 PI: Therese Canares, James Clark  
 Role: Human factors expert

9/30/18-7/31/22 Connected emergency care (CEC) patient safety learning lab  
 R18 HS026640  
 Agency for Healthcare Research and Quality (AHRQ)  
 \$2,500,000  
 Principal investigator: Scott Levin, Jeremiah Hinson  
 Role: Co-investigator, 5% effort

4/15/19-3/31/21 Investigating medication management during hospital-to-home transitions of older adults with Alzheimer's disease and related dementias  
 R03 AG063083  
 National Institute of Aging (NIA)  
 \$100,000  
 Principal investigator: Alicia Arbaje  
 Role: Co-investigator, 5% effort

8/1/19-5/31/22 Making health care safer for older adults receiving skilled home health care services after hospital discharge  
 R01 HS026599  
 Agency for Healthcare Research and Quality (AHRQ)  
 \$1,500,000  
 Principal investigator: Alicia Arbaje  
 Role: Co-investigator, Efforts: 10%

9/30/19- 9/29/23 A human factors and systems engineering approach for understanding the diagnostic process and associated hazards in the emergency department  
 R01 HS027198  
 Agency for Healthcare Research and Quality (AHRQ)  
 \$1,050,000  
 Role: Principal investigator, 20%

9/30/19- 9/29/23 Strategies for improving opioid use in perioperative pain management  
 R01  
 CDC  
 \$1,871,344  
 Co-Principal investigators: Maria Hanna and Anping Xie

Role: Co-Investigator, 10%

11/20/20-9/30/23 CDC Project Firstline: foundational questions to inform infection control training and improvement  
Johns Hopkins Medicine subcontract: \$4,500,000  
Principal Investigator for the Johns Hopkins Medicine subcontract: Ayse P. Gurses, 20% effort  
Primary contractor: Applied Physics Laboratory, JHU

6/30/19-6/30/24 Evaluating the targeted use of gown and gloves to prevent transmission of pathogens, including antibiotic resistant organisms within ventilator units in nursing homes.  
BAA200-2017-95512  
CDC  
\$781,292  
PI: Mary-Claire Roghmann (Univ of Maryland)  
Role: Co-Investigator (10%) and Johns Hopkins subcontract PI

**Educational Extramural Funding** – Grants or contracts obtained to support an educational initiative, incl. training grants

**Previous**

4/19/14-5/15/14 Caring Communities and Peace Church Risk Retention Group Annual Spring Education:  
Improving Patient/ Resident Safety and Safety Culture with Human Factors Methods Workshop in Long Term Care Settings  
ECRI Institute  
\$12,397  
Role: Principal Investigator, 2% effort

**System Innovation or Quality Improvement Extramural Funding**

**Previous**

6/1/09-8/31/09 Medical Accident Investigation (details of this study are confidential)  
A healthcare system (name is kept confidential)  
\$17,618  
Principal investigator: Peter Pronovost, Richard Cook  
Role: Co-investigator, 60% effort. The goal of this contract was to investigate a specific medical accident to identify the active and latent contributing factors. We provided expert opinion and suggestions to the organization on how to use this accident as a learning opportunity to transform the organizational culture and patient safety practices.

**INTRAMURAL Funding**

**Research Intramural Funding**

**Current**

4/15/20-06/30/22 Improving health care worker (HCW) safety through appropriate PPE use during the COVID-19 pandemic: A human factors engineering (HFE) and implementation science approach  
Johns Hopkins University Provost's Office  
\$285,000  
Role: Principal investigator, 5%  
Note: This project is a multi-site, international initiative focusing on USA, Pakistan, and Kenya.

**Previous**

7/1/07- 6/30/08 Exploring the Value of a Personal Health Records System to Improve Preventive Health Screening  
University of Minnesota Medical Industry Leadership Institute  
\$30,000  
Role: Principal Investigator, 11% effort

7/1/15-6/31/2016 Developing a Clinical Decision Support System for Predicting Septic Shock in Intensive Care Units  
Johns Hopkins University Discovery Award  
\$100,000  
Role: Principal investigator, 10% effort

7/1/17-6/30/18 Development of a maternal early warning trigger tool for early recognition of severe maternal mortality  
Johns Hopkins University Discovery Award  
\$100,000  
Principal investigator: Andrea Creanga  
Role: Co-investigator, 5% effort

4/1/18-3/31/19 Strategies to promote timely and appropriate management of test results: Obtaining the patient perspective  
Johns Hopkins University Primary Care Consortium  
\$20,000  
Principal investigator: Samantha Pitts  
Role: Co-investigator, in-kind

**CLINICAL ACTIVITIES** None

## **EDUCATIONAL ACTIVITIES**

### **Educational Focus**

2008-present Since joining the Johns Hopkins University in 2008, I have led the development of a variety of human factor science-based educational activities including a graduate level course in the Bloomberg School of Public Health and a variety of workshops within and outside of the Johns Hopkins University. In 2019, I taught the graduate level Operations Management course in the Johns Hopkins Carey Business School. In addition, I have also led the development and implementation of educational programs (i.e., workshops, seminars, etc.) on human factors and patient safety nationally and internationally. I have guest lectured extensively within Johns Hopkins (Whiting Engineering, Bloomberg School of Public Health, School of Medicine).o

### **Teaching**

#### **Classroom Instruction**

#### **JHMI/Regional**

4/1/09 Guest lecturer, Human Factors in Computer System Design course, “How do clinicians design their information tools to support clinical work?” Department of Information Systems, University of Maryland Baltimore County

3/1/10 Guest lecturer, Quality of Medical Care course, “Human Factors in Patient Safety” Health Policy and Management, Johns Hopkins University Bloomberg School of Public Health

3/10 - 5/10 Co-instructor, Organizational and Human Factors in Patient Safety, Health Policy and Management, Johns Hopkins University Bloomberg School of Public Health

9/20/10 Guest lecturer, Quality of Medical Care online course, “Theoretical Basis for Quality Improvement: Human Factors and Ergonomics,” Health Policy and Management, Johns Hopkins University Bloomberg School of Public Health

10/20/10 Presenter, Patient Safety Practitioner Certificate Program, “Human Factors Engineering to Improve Patient Safety,” Center for Innovation in Quality Patient Care, Johns Hopkins Medicine

12/16/10 Guest lecturer, Systems Based Practice course for anesthesiology residents, “Barriers to Providing Safe Care: A Human Factors Approach,” Anesthesiology and Critical Care, Johns Hopkins University School of Medicine

1/5/11 Guest lecturer, Patient Safety Intersession course for second year medical students, “Human Factors in Patient Safety,” Johns Hopkins University School of Medicine

1/19/11 Presenter, In-house Patient Safety Training Program, “Human Factors in Health Care”, Johns Hopkins Medicine

3/11- 5/11 Lead instructor (Co-instructors: Jill Marsteller, Albert Wu), “Organizational and Human Factors in Patient Safety,” Health Policy and Management, Johns Hopkins University Bloomberg School of Public Health



- 10/19/11 Presenter, Patient Safety Practitioner Certificate Program, “Human Factors in Patient Safety,” Center for Innovation in Quality Patient Care, Johns Hopkins Medicine
- 3/12- 5/12 Lead instructor (Co-instructors: Jill Marsteller, Albert Wu), “Organizational and Human Factors in Patient Safety,” Health Policy and Management, Johns Hopkins University Bloomberg School of Public Health
- 3/15- 5/15 Lead instructor (Co-instructors: Michael Rosen, Albert Wu), “Organizational and Human Factors in Patient Safety,” Health Policy and Management, Johns Hopkins University Bloomberg School of Public Health
- 3/16- 5/16 Lead instructor (Co-instructors: Michael Rosen, Sydney Dy), “Organizational and Human Factors in Patient Safety,” Health Policy and Management, Johns Hopkins University Bloomberg School of Public Health
- 6/18- 6/18 Lead instructor (Co-instructors: Michael Rosen, Sydney Dy), “Human Factors in Patient Safety,” Summer Institute, Health Policy and Management, Johns Hopkins University Bloomberg School of Public Health
- 1/19- 3/19 Instructor, “Operations Management,” Johns Hopkins Carey Business School  
Operations management consists of ideas for shaping and innovating an organization’s business model. This graduate level business course provides a conceptual and actionable introduction to operations management and covers a wide range of topics, including operations strategy, process mapping and design, queuing theory, inventory management, lean manufacturing, and revenue management, unified by a thought framework known as "the operations prism" (flows, variability, and buffers).
- 3/24/20 Guest lecturer, Engineering design course for undergraduate students, “Human factors engineering for medical device design,” Johns Hopkins Whiting School of Engineering- Dept of Biomedical Engineering.
- 4/24/20 Guest lecturer, Surgineering: Systems engineering and data science in interventional medicine- graduate level, “Root cause analysis and failure modes and effects analysis (FMEA) in Medicine,” Johns Hopkins Whiting School of Engineering- Dept of Biomedical Engineering.

**National**

- 8/98- 12/98 Teaching assistant, Production Planning and Inventory Control, Department of Industrial and Systems Engineering, Virginia Tech
- 1/99- 5/99 Teaching assistant, Industrial Cost Control, Department of Industrial and Systems Engineering, Virginia Tech
- 9/99- 12/00 Teaching assistant, Design of Experiments, Department of Industrial and Systems Engineering, University of Wisconsin-Madison
- 9/01- 12/01 Instructor, Design of Experiments, Department of Industrial and Systems Engineering, University of Wisconsin-Madison
- 10/07- 12/07 Instructor, Health Care Delivery, Design, and Innovation, Health Policy and Management, University of Minnesota
- 1/08- 5/08 Co-instructor, Advanced Problem Solving in Health Services Administration, Health Policy and Management, University of Minnesota

**International:** None

**CME instruction**

**JHMI/Regional**

- 4/09 Presenter, Informatics Grand Rounds, “User-designed Information Tools to Support Care Coordination”, Division of Health Sciences Informatics, Johns Hopkins University, Baltimore, MD
- 2/13 Presenter, Transforming Health Systems for Accountable Care: An Experiential Inter-Professional Executive Education Program, “Quality and Effectiveness”, Johns Hopkins University, Baltimore, MD
- 1/18 Presenter, Clinical, Social, and Scientific Foundations of Geriatric Medicine Grand Rounds, “Patient-centric risk model for medication safety during care transitions,” Johns Hopkins University, Baltimore

**National**

- 5/12 Presenter, Medical Grand Rounds, “Time to Accelerate Integration of Human Factors Engineering in Health Care”, Christiana Care Health System, Newark, DE

**International:** None

**Workshops /seminars**

**JHMI/Regional**

- 10/6/11- 10/7/11 Lead faculty organizer and instructor, “Human Factors and Ergonomics in Patient Safety

- Workshop”, Johns Hopkins University, Baltimore, MD. Participants included clinicians and researchers from the Johns Hopkins University and Health System.
- 11/20/17 Instructor, “Improving Quality and Patient Safety Using a Human Factors and Systems Engineering Approach,” Armstrong Institute Patient Safety and Quality Improvement Leadership Institute, Johns Hopkins University, Baltimore, MD.
- 11/2/19 Instructor, “Improving Quality and Patient Safety Using a Human Factors and Systems Engineering Approach,” Armstrong Institute Patient Safety and Quality Improvement Leadership Academy, Johns Hopkins University, Baltimore, MD.

### **National**

- 11/8/11 Presenter (webinar), “Identifying Barriers to Evidence-Based Guideline Compliance” (as part of the CLABSI National Webinar Series). Participants were a nationwide audience including front-line clinicians and patient safety practitioners.
- 11/15/11 Presenter (webinar organized by Tennessee Center for Patient Safety), “Identifying Barriers to Evidence-Based Guideline Compliance.” Participants included front-line clinicians and patient safety practitioners in Tennessee.
- 5/14/12- 5/15/12 Lead faculty organizer and instructor, “Human Factors and Ergonomics in Patient Safety Workshop”, Baltimore, MD. Participants were a nationwide audience including clinicians, human factors practitioners, health informatics specialists, and patient safety practitioners, administrators and researchers
- 11/12/12- 11/13/12 Lead faculty organizer and instructor, “Human Factors and Ergonomics in Patient Safety Workshop”, Baltimore, MD. Participants were a nationwide audience including clinicians, human factors practitioners, health informatics specialists, and patient safety practitioners, administrators and researchers.
- 4/9/14- 4/10/14 Lead faculty member and instructor, ECRI Institute, “Improving Patient/ Resident Safety and Safety Culture with Human Factors Methods Workshop in Long Term Setting,” Philadelphia, PA. Participants were from US East Coast region long-term care facilities and home care services that are members of the ECRI institute. Participating representatives of these facilities include risk managers and risk management designees, executive directors and other leaders and employees.
- 4/12/12 Co-presenter (webinar), “Handoffs and Coordination of Care.” Participants were front-line clinicians from 17 national cardiac surgery centers.
- 4/23/14- 4/24/14 Lead faculty member and instructor, ECRI Institute, “Improving Patient/ Resident Safety and Safety Culture with Human Factors Methods Workshop in Long Term Care Settings.” Chicago, IL. Participants were from US Midwest region long-term care facilities and home care services that are members of the ECRI institute. Participating representatives of these facilities include risk managers and risk management designees, executive directors, administrators, directors of nursing, directors and other leaders and employees.
- 5/14/14- 5/15/14 Lead faculty member and instructor, ECRI Institute, “Improving Patient/ Resident Safety and Safety Culture with Human Factors Methods Workshop in Long Term Care Settings”. Marina del Ray, CA. Participants were from US West Coast region long-term care facilities and home care services that are members of the ECRI institute. Participating representatives of these facilities include risk managers and risk management designees, executive directors, administrators, directors of nursing, directors and other leaders and employees.
- 4/19 Presenter, The Society for Healthcare Epidemiology of America (SHEA) Pre-Conference Workshop. “Revisiting the Case with a Human Factors Engineering Approach - Introduction to Human Factors Engineering: Perspective on Meaningful Improvement,” Boston, MA.

### **International**

- 4/26/16- 4/27/16 Lead faculty member and instructor, “Improving Patient Safety with Human Factors Methods Workshop,” Johns Hopkins Aramco Healthcare, Saudi Aramco Technical Exchange Center, Dammam, Saudi Arabia. Participants were 40 Johns Hopkins Aramco Healthcare professionals from across the clinical spectrum.

**Mentoring****Pre-doctoral Advisees /Mentees**

- 2006 Sheila Gilger, RN, BSN, MS; Present Position: Informatics nurse specialist, University of Maryland Medical Center; Degree received: MS in Nursing, University of Maryland-Baltimore; Coauthored PR 6.
- 2007 Jessica Bilics, MPH; Present Position: Policy and Governmental Affairs Professional, World Trade Center Health Program, Centers for Disease Control and Prevention; Degree received: MPH, School of Public Health, University of Minnesota.
- 2008 Schelomo Marmor, MPH, PhD; Present Position: Assistant professor, Department of Surgery, University of Minnesota; Degree received: MPH, School of Public Health, University of Minnesota.
- 2007-2008 Matthew K Breitenstein, PhD; Present Position: Instructor, Biomedical Informatics, Perelman School of Medicine, University of Pennsylvania; Degrees received: BS, University of Minnesota; *Awards: Summer 2008 (no number) Undergraduate Research Opportunities Program (UROP) award, University of Minnesota: This award provided Mr. Breitenstein salary support to conduct research on Smart infusion pump technology implementation from a human factors engineering perspective in a pediatric hospital;* Coauthored PR 11.
- 2007-2008 Sheila Moroney, MPH; Present Position: Patient experience officer, Hennepin County Medical Center, Minneapolis, MN; Degrees received: MPH, School of Public Health, University of Minnesota.
- 2009-2014 Huijuan Wu, PhD  
Native country: China  
Present Position: Senior usability researcher, Communicate Health, Inc. Rockville, MD Degrees received: PhD, Department of Information Systems, UMBC, My Role: PhD co-advisor, Dissertation Topic: Exploring healthcare consumer acceptance of personal health information management technology- personal health record systems; Coauthored OR 8, 26, 39; PR 13, 16.
- 2009-2010 Michelle MacDonna, RN, MHA, CRNP; Present Position: Nurse practitioner, Healthstat Inc, Raleigh-Durham, NC, Degrees received: CRNP, School of Nursing, Johns Hopkins University; Coauthored Poster Presentation 1.
- 2010 Charlene Deuber, NNP-BC, DNP; Present Position: Nurse manager, Division of Plastic and Reconstructive Surgery, The Children’s Hospital of Philadelphia; Degrees received: DNP, School of Nursing, Johns Hopkins University; Coauthored PR 18.
- 2011 Ryan Lewis, MD, MPH; Present Position: Physician executive, Ethicon, Inc.- Megadyne Medical Products; Degrees received: MPH, Bloomberg School of Public Health, Johns Hopkins University, My Role: Primary mentor for the MPH capstone project.
- 2011 Kristin Miller, DrPH, Present Position: Senior Research Scientist, Medstar National Center for Human Factors in Health Care, Principal investigator, National Library of Medicine R01 grant titled “Signaling Sepsis: Developing a framework to optimize alert design?”; Degrees received: DrPH, Texas A&M University, My Role: Primary mentor for a human factors engineering internship at the Armstrong Institute; Internship project: Improving safety in the cardiac operating room using human factors engineering.
- 2012 Heather Halvorson, MD, MPH; Present Position: Unknown; Degrees received: Division of Health Sciences and Informatics, Johns Hopkins University, My Role: Primary mentor for the MPH capstone project.
- 2012 Gloria Opoku-Boateng, MS, PhD  
Native country: Ghana  
Present Position: Head of user interface research, Amazon Web Services  
Degrees received: MS, Division of Health Sciences and Informatics, Johns Hopkins University  
*My role:* Primary mentor for the MS capstone project titled “A Human Factors and Usability Evaluation Protocol for Injectable Medication Combination Packages and Patient Package Inserts.”
- 2014-2015 Koko Takatori, MS  
Native country: Japan  
Present Position: Design Researcher at IDEO, Tokyo, Japan  
Degrees received: MS in Health Informatics, Division of Health Sciences Informatics  
*My role:* MS thesis advisor

- 2016-2018 Ashimiyu B Durojaiye, MBBS, MS, PhD  
Native country: Nigeria  
Present Position: Resident physician at Yale New Haven Health Bridgeport Hospital, Bridgeport, CT;  
Degrees received: PhD in Health Informatics  
*My role:* PhD primary advisor (co-advisor: Harold Lehmann), Dissertation topic: Using process mining to model pediatric trauma care coordination and teamwork; *Awards:* Poster Award [see Poster Presentation 15], 4th Annual Meeting of the Pediatric Trauma Society, Nov 2017; Coauthored OR 48, 52, 58, 59; PR 25, 35; Poster Presentations 13, 15.
- 2016-present Patience Osei, MSE, Graduated from Dept of Biomedical Engineering, Johns Hopkins University School of Medicine.  
Native country: Botswana  
Present Position: Human factors research manager.  
*My role:* Primary advisor/ supervisor. Coauthored OR 50, 55, 56, 61, 67, 71, 78, 79, 81, 88; CP 17; PP 14, 18, 19, 26, 27, 28, 29; OP 22, 32; PR 30, 38.
- 2017 Priya Prakash, MS  
Native country: India  
Present Position: Manager - Supply Chain at the Narayana Group of Hospitals in Bengaluru, India; Degrees received: MS Health Care Management, Carey Business School, Johns Hopkins University  
*My role:* Primary mentor of Ms Prakash during her six months internship at the Armstrong Institute Center for Health Care Human Factors during her MS studies; Focus of internship work: Information needs of pediatric trauma care team members.
- 2017-2019 Cagla Oruc, MS  
Native country: Turkey  
Present Position: Manager of Emergency Management, Sibley Memorial Hospital, Johns Hopkins Health System.  
Research focus: Process mining of pediatric trauma registry data, work system barriers and facilitators in pediatric trauma care; Degrees received: MS in Health Care Management, Carey School of Business, Johns Hopkins University  
*My role:* Primary mentor of Ms Oruc during her internship at the Armstrong Institute Center for Health Care Human Factors while completing her MS degree at Carey Business School (5/17-8/17), Mentor and supervisor of Ms. Oruc in her role as a research coordinator at the Armstrong Institute Center for Health Care Human Factors; Coauthored OR 73; PR 35.
- 2018 Arjun Vignesh, MS  
Native country: India  
Present Position: Senior Consultant, Trinity, New York, NY; Degrees received: MS Health Care Management, Carey Business School, Johns Hopkins University; My Role: Primary mentor of Mr Vignesh for his graduate research assistant role at the Armstrong Institute Center for Health Care Human Factors; Focus of work: Improving infection prevention and control in long-term care settings. Coauthored OR 66; Poster Presentations 18, 19.
- 2018 Gurmehar Singh Deol, MS in Applied Health Sciences Informatics, Division of Health Sciences and Informatics, Johns Hopkins University  
Native country: India  
Present Position: Project manager at Johns Hopkins Medicine, *My role:* Primary mentor of Mr. Deol in his graduate assistant role at the Armstrong Institute Center for Health Care Human Factors while completing his MS degree; Research focus at Armstrong Human Factors Center: Process mining of electronic health records data to characterize care transitions and teamwork across units; Coauthored OR 52.
- 2018-2019 Ifeoluwa Oresanwo, MS student in Engineering Management, Johns Hopkins University; Coauthored OR 66; Poster Presentations 18, 19.
- 2018-present David Procaccini, PharmD, BCPS, CACP; Present Position: Clinical pharmacist, Johns Hopkins Children's Center, Baltimore, MD; My Role: DrPH practicum advisor; Research topic: Failure modes and effects analysis (FMEA) on the computerized pediatric venous thromboembolism screening tool.
- 2020-2022 Yong Jiang, MHA candidate  
Position: Research coordinator, Armstrong Institute Center for Health Care Human Factors, Research focus: COVID-19 PPE use in the Emergency Department; *My role:* Mentor/ supervisor.
- 2020-present Oluseyi Daodu, MS, Biotechnology  
Native country: Nigeria

Present Position: Research coordinator, Armstrong Institute Center for Health Care Human Factors, Research focus: Medical device usability and training development.

My role: Mentor/ supervisor

Coauthored Poster Presentation 26, 27, 33.

2021-present Nivedha Prabhu, MSE candidate in Data Science, Johns Hopkins University

Native country: India

My role: Primary mentor and supervisor of Ms Prabhu in her graduate research assistant role at the Armstrong Institute Center for Health Care Human Factors during her graduate studies.

Coauthored Poster Presentation 26, 27.

2021-present Srikanth Peddireddy, MS

Native country: India

Present Position: Sr. Director of Strategy and Performance Excellence, Hennepin Healthcare, Minneapolis, MN; My role: DrPH advisor.

2021-present Emma MacIntyre, MS candidate in Applied Biomedical Engineering, Johns Hopkins University

My role: Research mentor.

Coauthored Poster Presentation 28.

#### Post-doctoral Advisees /Mentees

2010- present Alicia Arbaje, MD, MPH, PhD; Present Position: Associate professor, Johns Hopkins University School of Medicine student; Degrees received: PhD in Graduate Training Program in Clinical Investigation, Johns Hopkins Bloomberg School of Public Health, My Role: PhD co-advisor; Initial Position (when mentoring efforts started: Assistant professor, PhD student); *Grants received under my mentorship: (1) National Patient Safety Foundation grant (2012-2014) titled: Identification and validation of risks to patient safety during care transitions of older adults receiving skilled home healthcare services after hospital discharge, (2) Agency for HealthCare Research and Quality, K08 (Career) grant (2015-2020), other mentor - Bruce Leff;* Coauthored articles OR 34, 35, 38, 40, 53, 63, 65, 78; 103 CP 6, 14; PR 21, 31; Poster Presentations 2, 3, 4, 5, 6, 7, 8, 9, 10, 16, 23; Oral Presentations 9, 10, 12.

2010-2012 Priyadarshini Pennathur, PhD

Native country: India

Present Position: Associate professor (tenured), University of Iowa Industrial Engineering Department; Degrees received: Postdoctoral research fellowship.

My role: Primary mentor during postdoctoral fellowship

Project: Human factors in the cardiac operating room; *Grants received under my mentorship: National Library of Medicine K99/R00 (Pathway to Independence), Pennathur, PR (PI), "Technology, Cognitive Work and Patient Safety: An Information-Oriented Model," (K99 portion: \$105,462.00. (September 1, 2012 - August 31, 2013); R00 portion \$671,750.00. (12/13-8/2017); Dr Pennathur applied for the K99 portion of this grant under my mentorship);* Coauthored OR 23; BC 7; PR 15, 17, 19; Poster Presentation 1.

2011-2012 Adjhaporn Khunlertkit, PhD

Native country: Thailand

Present Position: Human factors specialist, Bumrungrad International Hospital, Thailand; Degrees received: Postdoctoral research fellowship,

My role: Primary mentor

Project: Care transitions in cardiac surgery; Coauthored OR 19; PR 21.

2012-2013 Aysel Badir, RN, PhD

Native country: Turkey

Present Position: Associate professor, School of Nursing, Koc University, Istanbul, Turkey; *Awards: Visiting research fellowship funded by the Science and Technological Research Council of Turkey (TUBITAK);*

My role: Primary mentor

Research focus: ICU handoffs; Coauthored OR 36.

2012-2013 Susan Peterson, MD; Present Position: Assistant professor, Emergency Medicine, Johns Hopkins School of Medicine.

My role: Research mentorship during residency at Johns Hopkins University, Research focus: Resident handoffs in the emergency department; Coauthored OR 28; Poster Presentation 11; Oral Presentation 7.

2012-2014 Katherine Steffen, MD; Present Position: Instructor, Dept of Pediatrics, Washington University at St Louis;

My role: Research mentorship during her pediatric critical care fellowship program at Johns Hopkins University, Research focus: Improving safety of care transitions during inter-facility transport of pediatric

- patients; *Grants received under my mentorship (other mentor: Kristen Nelson): NIH National Research Service Award (T-32) for Postdoctoral Research Training in Anesthesiology, 7/12- 7/14.*
- 2012-2013 Mahiyar Nasarwanji, PhD  
Native country: India  
Present Position: Associate research fellow, National Institute for Occupational Safety and Health (NIOSH); Degrees received: Postdoctoral research fellowship.  
*My role:* Primary mentor, Project: Improving transitions of care using human factors engineering; Coauthored OR 34, 36; PR 24; Poster Presentations 2, 3, 4, 7, 9; Oral Presentations 8, 9, 10.
- 2013-2015 Nicole Werner, PhD; Present Position: Assistant professor, Dept of Industrial and Systems Engineering, University of Wisconsin-Madison; Degrees received: Postdoctoral research assistant at Johns Hopkins University, My Role: Research mentor, Research focus: Human factors in health care and transitions of care in the elderly population; Coauthored OR 34, 35, 38, 40; PR 31; Poster Presentations 3, 4, 5, 6, 7, 8, 9, 10, 16; Oral Presentations 9, 10, 12.
- 2013-2019 Anping Xie, PhD  
Native country: China  
Present position: Assistant professor, Anesthesiology and Critical Care Medicine and Armstrong Institute, Johns Hopkins University;  
*My role:* Primary mentor during postdoctoral research fellowship at Johns Hopkins University; primary mentor since he started working as an assistant professor in 2016; Coauthored OR 44, 50, 54, 55, 56, 64; CP 4; PR 24, 25, 29; Poster Presentations 11, 12, 13, 14, 20; Oral Presentations 14, 22.
- 2015-present Sara Keller, MD, MPH, MSHP; Present Position: Assistant professor, Infectious Disease, Johns Hopkins University; Research focus: Home-based outpatient parenteral antimicrobial therapy (OPAT); *Grants received under my mentorship (other mentor: Sara Cosgrove): (1) National Center for Advancing Translational Sciences, Johns Hopkins Institute for Clinical and Translational Research KL2 Award KL2T (2015- 2017); Agency for HealthCare Research and Quality, K08 (Career) grant (2018-2021) for the project titled "Outcomes of Outpatient Parenteral Antimicrobial Therapy and Interventions to Reduce Complications"; Awards: Society for Healthcare Epidemiology of America Epi Program Competition Best Project Award (2017) for the project titled "Home-based outpatient parenteral antimicrobial therapy (OPAT): learning about central venous catheter complication prevention when patients are the providers," awarded \$15,000; Coauthored articles OR 38, 42, 46, 50, 55, 57, 63, 65, 71, 78; CP 4, 6, 14; PR 29; Poster Presentation 14, 23; Oral Presentations 14, 16, 22.*
- 2016 Nicolette McGeorge, PhD; Present Position: Scientist, Charles River Analytics, Inc; Degrees received under my supervision: Postdoctoral research fellowship, My Role: Primary mentor, Research focus: Designing Health IT-supported pediatric trauma care transitions; *Awards: Poster Award [see Poster Presentation 15], 4th Annual Meeting of the Pediatric Trauma Society, 11/17; Coauthored OR 48, 49, 52; PR 35; Poster Presentations 13, 15.*
- 2017-2019 Ephrem Abebe, PhD, MPharm, MS  
Native country: Ethiopia  
Present Position: Assistant professor (tenure-track) Purdue College of Pharmacy, West Lafayette, IN; Degrees received under my supervision: Postdoctoral research fellowship, Anesthesiology and Critical Care and the Armstrong Institute Center for Health Care Human Factors, My role: Primary mentor; Research focus: Medication safety in care transitions from hospital to home among older adults; Coauthored CP 10; Poster Presentation 17; Oral Presentations 19, 21.
- 2017- 2019 Kristen Webster, PhD; Present Position: Patient safety program manager, University of Louisville Degrees received under my supervision: Postdoctoral research fellowship, Anesthesiology and Critical Care, Surgery and the Armstrong Institute Center for Health Care Human Factors, My role: Mentor (co-mentor: Elliot Haut); Research focus: Designing health IT-supported pediatric trauma care transitions; Coauthored OR 52; PR 35; Poster Presentation 24; Oral Presentation 20, 25.
- 2018-2022 Julia Kim, MD, MPH; Present Position: Associate Vice Chair, Ambulatory Quality, Johns Hopkins Children's Center; Co-Director, Armstrong Institute Patient Safety and Quality Leadership Academy; Assistant Medical Director, Harriet Lane Clinic; Assistant Professor, Department of Pediatrics, Division of General Pediatrics and Adolescent Medicine, My role: Co-mentor (primary mentor: Sydney Dy); Research focus: Medication safety in medically complex children in ambulatory care; Coauthored CP 8, 13; Poster Presentation 21.
- 2019-2020 Sarah Coppola, PhD; Present Position: Assistant Professor, University of Washington- Seattle, WA; Degrees received under my supervision: Postdoctoral research fellowship, Anesthesiology and Critical Care and the Armstrong Institute Center for Health Care Human Factors, My role: Co-mentored with Jake Abernathy; Research focus: Identifying and reducing errors in perioperative anesthesia medication delivery; Designing

- health IT-supported pediatric trauma care transitions; Coauthored CP 17; Poster Presentation 24; Oral Presentation 25.
- 2019-present Steve Miller, MD, MBE; Present positions: Assistant Professor, Pediatric Gastroenterology at Johns Hopkins University; Member, Johns Hopkins Technology Innovation Center Data Trust Analytic Team; Research focus: Development and evaluation of a clinical decision support system to improve delivery of care to children with inflammatory bowel disease using a human-centered design approach; Coauthored OR 74, 97; CP16; Poster Presentation 22, 31, 32; OP 27.
- 2020- present Santiago Alvarez, MD, PhD candidate  
Native country: Colombia  
Present position: Assistant Professor, Division of Allergy and Clinical Immunology, Johns Hopkins University. Awarded a 3-year KL2 Mentored Career Development Grant by the Johns Hopkins Institute for Clinical and Translational Research (04/21-03/24).  
My role: Co-mentor on the KL2 grant
- 2021-present Esosa Nosakhare, MBCChB, MPH, MBA.  
Native country: Nigeria  
Degree pursued under my supervision: Postdoctoral research fellowship, Anesthesiology and Critical Care, and the Armstrong Institute Center for Health Care Human Factors  
My role: Mentor  
Coauthored Poster Presentation 26, 27.
- 2022-present Aaron Case, MD,  
Present Position: Pulmonary and Critical Care Fellow, Johns Hopkins Medicine  
Degree pursued: Postdoctoral research fellowship.  
My role: Mentor (Other mentors: David Hager and Binu Koirala). *Grants received under this mentorship team's guidance: AHRQ Individual Postdoctoral Fellowship (F32), 2024*  
Project: Performance shaping features of intermediate care nursing workload.
- 2022-present Lamia Alam, PhD  
Native country: Bangladesh  
Degree pursued under my supervision: Postdoctoral research fellowship, Anesthesiology and Critical Care, and the Armstrong Institute Center for Health Care Human Factors  
My role: Mentor  
Coauthored Poster Presentation 33.
- 2022-2023 Andrea I. Melgar Castillo, PhD  
Native country: Republic of Panama  
Qualitative Researcher  
My role: Mentor

### Thesis Committees

- 2009-2014 Huijuan Wu, PhD  
Native country: China  
PhD dissertation title: Exploring healthcare consumer acceptance of personal health information management technology- personal health record systems;  
My role: PhD co-advisor and dissertation committee co-Chair, PhD completed in Information Systems at UMBC.
- 2011 Kyungsook Gartrell, RN, PhD  
Native country: South Korea  
PhD dissertation title: Factors Associated with Electronic Personal Health Records Acceptance Among Registered Nurses for Their Own Personal Health Management;  
My role: PhD dissertation committee member, PhD completed in Nursing at the University of Maryland;  
Present position: NIH/NLM/LHC postdoctoral fellow.
- 2013-2016 Kirk Hamilton, PhD dissertation title: Navigating the Patient Room: Critical Care Nurses' Interaction with the Designed Physical Environment.  
My role: PhD dissertation committee member, PhD completed in Nursing at the Arizona State University;  
Present position: Professor of Architecture, Texas A&M University.
- 2013-2017 Alicia Arbaje, PhD dissertation title: Information Management During Care Transitions of Older Adults Receiving Skilled Home Healthcare Services After Hospital Discharge;

- My role:* PhD co-advisor (primary advisor: Bruce Leff), PhD completed in Graduate Training Program in Clinical Investigation at the Johns Hopkins Bloomberg School of Public Health; Present position: Associate professor of Medicine, Director of the Center for Transformative Geriatric Research in the Division of Geriatric Medicine and Gerontology, Johns Hopkins University.
- 2016-2018 Ashimiyu B Durojaiye, MD, PhD  
Native country: Nigeria  
PhD dissertation title: Using Process Mining to Model Pediatric Trauma Care Coordination and Teamwork.  
*My role:* PhD primary advisor, dissertation committee chair (co-mentor: Harold Lehmann), PhD in Health Sciences Informatics at the Johns Hopkins University School of Medicine.
- 2016-2019 Megan Doede, RN, PhD  
PhD dissertation title: Neonatal Intensive Care Nurses' Work in the Single Family Room Setting.  
*My role:* PhD dissertation committee member, PhD in Nursing at the University of Maryland.
- 2017-2018 Abigail Wooldridge, PhD  
PhD dissertation title: Team Cognition Distributed in Spatio-Temporal Processes: A Macroergonomic Approach to Pediatric Trauma Care.  
*My role:* Dissertation committee member, PhD in Industrial and Systems Engineering at the University of Wisconsin-Madison.
- 2019- present Jeremy Ramirez, DrPH candidate in Health Policy and Management, Johns Hopkins Bloomberg School of Public Health,  
DrPH Dissertation title: An evaluation of the veteran and psychiatric service dog team.  
Dissertation advisor: Jill Marsteller.  
*My role:* Dissertation committee member.
- 2019- present Marietta M. Squire, PhD candidate in Civil Engineering at the Johns Hopkins University Whiting School of Engineering, PhD dissertation title: Cost-effectiveness, prioritization of monetary resources, and determination of power resources in power-distressed areas, within a healthcare facility setting.  
Dissertation advisor: Tak Igusa.  
*My role:* Dissertation committee chair and member.
- 2020- 2022 Bat-zion Hose, PhD candidate in Industrial and Systems Engineering at the University of Wisconsin-Madison. PhD dissertation title: Collaborative design for team health IT: The case of pediatric trauma care transitions.  
Dissertation advisor: Pascale Carayon.  
*My role:* Dissertation committee member.

## RESEARCH ACTIVITIES

### Research Focus

I am one of the few faculty members trained as an industrial and systems engineer in a School of Medicine, with specialization in human factors and health systems engineering. I am passionate about three critical and related public health topics: patient safety, health IT design and implementation, and occupational health and safety of healthcare workers. My specific research interests include reengineering work systems to prevent infections, improving patient safety in the cardiac operating room, health IT design and implementation, improving coordination and teamwork in pediatric trauma, transitions of care, clinician working conditions, medication safety among elderly, and patient-centered care.

### Research Program Building / Leadership

9/17 Director, Armstrong Institute Center for Health Care Human Factors ([https://www.hopkinsmedicine.org/armstrong\\_institute/centers/human\\_factors\\_engineering](https://www.hopkinsmedicine.org/armstrong_institute/centers/human_factors_engineering)). At the Johns Hopkins University, I have established the first Human Factors science-based research infrastructure that focuses on improving patient safety, health care worker safety, and patient-centeredness of care. The center brings together experts in human factors and organizational psychology with an interdisciplinary group of researchers, practitioners and educators who aim at designing innovative, human-centered health care systems and technologies that support individual and team performance. The Center researchers have been consistently funded since 2008 [before the official recognition of our efforts as a new center] by federal and foundation research grants and contracts, including, but not limited to, the Agency for Healthcare Research and Quality (AHRQ), the Centers for Disease Prevention and



Control (CDC), the National Aeronautics and Space Administration (NASA), the Patient Centered Outcomes Research Institute (PCORI), and the Anesthesia Patient Safety Foundation (APSF).

## SYSTEM INNOVATION AND QUALITY IMPROVEMENT ACTIVITIES

### System Innovation and Quality Improvement efforts within JHMI

- 2012 Led the efforts in the evaluation of a new hospital-wide authentication software system (Tap &Go® combined with Single Sign-On) from human factors and usability, patient safety, and information security perspectives.
- 2016- 2018 Member, Johns Hopkins Office of Home Based Services
- 2020 Member, Scarce Resources Allocation Committee. Supporting the scarce resources allocation committee implementation planning efforts. Recommended and helped with the development of an electronic tool to support the cognitive needs of the newly formed triage teams. Helped develop workflow, roles/ responsibilities, and procedures for different team members (data extractor, triage team, triage officer, etc.). Have been supporting efforts for the simulation development and proactive risk analysis using a human factors engineering approach as part of preparation for a possible COVID-19 surge. These efforts have contributed to the publication of a paper in CHEST.
- 2020 Human factors expert, Pediatric Ambulatory Care Clinic Response to COVID-19. Guided the pediatric ambulatory clinic team with respect to conducting a human factors engineering based clinic workflow redesign in response to COVID-19 and identify opportunities for improvement. In addition to operational changes, these efforts have also led to a published commentary on the role of human factors and ergonomics in COVID-19.

## ORGANIZATIONAL ACTIVITIES

### Institutional Administrative Appointments

- 2001-2002 Vice President, Student Quality Society, University of Wisconsin, Madison, WI.
- 3/07 Member, Masters of Healthcare Administration (MHA) Student Admissions Panel, School of Public Health, University of Minnesota, Minneapolis, MN.
- 5/07 Member, Public Health Administration and Policy (PHAP) Best Masters Project Award Committee, School of Public Health, University of Minnesota, Minneapolis, MN.
- 2007 Member, Collaborative Research Committee, Division of Health Policy and Management, School of Public Health, University of Minnesota, Minneapolis, MN.
- 3/08 Member, Masters of Healthcare Administration (MHA) Student Admissions Panel, School of Public Health, University of Minnesota, Minneapolis, MN.
- 5/08 Member, Public Health Administration and Policy (PHAP) Best Masters Project Award Committee, School of Public Health, University of Minnesota, Minneapolis, MN.
- 9/18-present Member, Anesthesiology and Critical Care Medicine Quality Research Committee, Johns Hopkins University School of Medicine.
- 10/18-present Member, Anesthesiology and Critical Care Medicine Research Committee, Johns Hopkins University School of Medicine.
- 5/18-4/19 Member, Johns Hopkins Bloomberg School of Public Health Appointment and Promotions Ad-hoc Committee
- 1/22-present Member, Associate Professor Mentoring and Promotion Committee, Anesthesiology and Critical Care Medicine, Johns Hopkins University School of Medicine.

### Editorial Activities

- 2016- 2021 Scientific Editor, *Applied Ergonomics*
- 2016- 2020 Editor, *Institute of Industrial Engineering (IIE) Transactions on Healthcare Systems Engineering Sociotechnical Analysis Department*
- 2014- 2017 Associate Editor, *BMC Health Services Research Journal*
- 2009- 2016 Associate Editor, *IIE Transactions on Healthcare Systems Engineering- Socio-Technical System Analysis*
- 2010 Guest Co-Editor, Special issue on "Usability and Privacy Issues in Electronic Government," *Electronic*

### **Editorial Board Assignments**

2015- 6/16 Editorial Board Member, *Applied Ergonomics*

### **Journal Peer Review Activities**

2008- present American Journal of Critical Care  
2008- present Applied Ergonomics  
2014- present BMC Medical Informatics and Decision Making  
2006- present BMJ Quality and Safety  
2011- present Critical Care  
2011- present Ergonomics  
2006- present Health Care Management Science  
2011- present Human Factors  
2006- present IEEE Transactions on Systems, Man, and Cybernetics  
2010- present IIE Transactions on Healthcare Systems Engineering- SocioTechnical Systems Analysis Department  
2013- present IIE Transactions on Occupational Ergonomics and Human Factors  
2010- present International Journal of Industrial Ergonomics  
2007- present International Journal of Nursing Studies  
2008- present International Journal on Human-Computer Interaction  
2011- present Joint Commission Journal on Quality and Patient Safety  
2013- present Journal of American Medical Informatics Association  
2016- present Journal of Biomedical Informatics  
2010- present Journal of Experimental Psychology: Applied  
2010- present Journal of Healthcare Engineering  
2006- present Journal of Patient Safety  
2013- present Journal of Thoracic and Cardiovascular Surgery  
2009- present Medical Care Research and Review  
2007- present Medical Decision Making  
2019- present Quality Management in Health Care

### **Other peer review activities**

#### *Book chapter peer reviewer*

2010 Bidgoli H (ed). The Handbook of Technology Management. Hoboken, NJ: Johns Wiley Sons Ltd.

#### *Conference proceedings and abstract peer reviewer*

2005- present Human Factors and Ergonomics Society Annual Meeting  
2009- 2011 International Conference on Human Computer Interaction  
2009-2010 International Conference on Applied Human Factors and Ergonomics  
2013- present Human Factors and Ergonomics in Health Care Symposium  
2009 Association for Computing Machinery (ACM) Conference on Computer Supported Cooperative Work  
2016 Healthcare Systems Ergonomics and Patient Safety (HEPS) Conference

### **Advisory Committees, Review Groups/Study Sections**

2007 Member, INFORMS Bonder Scholarship Award Committee. Reviewed and evaluated dissertation proposals of 18 PhD students in operations research with health care focus and selected the top proposals to receive the award.  
2009 Grant reviewer, Health Services Research Grants, Ministry of Health, Singapore.  
2010 Chair, Human Factors and Ergonomics Society Health Care Technical Group Student Conference Paper Award Committee.  
2011 Expert reviewer, Health Technology and Safety Research Group, University Health Network and University of Toronto, Toronto, Canada.  
2015-2016 Standing Member, Agency for Healthcare Research and Quality (AHRQ) Healthcare Information Technology Research Study Section (appointed as a regular member of the review panel for 3 years, stepped out before completing the term due to other competing priorities).

- 2016-2018 Member, Technical Expert Panel for the Usability Change Package Development Initiative for Health IT Implementation, The Office of the National Coordinator for Health Information Technology (ONC), Washington, DC.
- 2019 Ad-hoc reviewer, National Science Foundation (Decision, Risk and Management Sciences).
- 2020-2022 Committee member and human factors engineering expert, ***National Academy of Sciences (NAS) Committee*** convened for a 2-year study titled “Respiratory Protection for the Public and Workers without Respiratory Protection Programs at their Workplaces.” Study Sponsors: National Institute for Occupational Safety and Health, U.S. Department of State, CDC Foundation.
- 2020 Member, International Ergonomics Association KU Smith Student Award Committee. Reviewed and evaluated research papers of 11 students in human factors and ergonomics and selected the top papers to receive the award.
- 2023- Invited committee member, **AHRQ Director’s Roundtable Discussion Series on Patient Safety: A Call to Action to Improve Healthcare Safety Significantly and Sustainably**. This call for action by the AHRQ Director invited around **20 safety improvement champions across the nation** from various factions of the healthcare industry that affect and are affected by patient safety, to engage in this roundtable discussion.
- 2023 Member, International Ergonomics Association KU Smith Student Award Committee. Reviewed and evaluated research papers of graduate students in human factors and ergonomics and selected the top papers to receive the award.
- Mar 2024 Ad-hoc reviewer, National Institutes of Health (NIH) Special Emphasis Panel for SBIR/STTR grants titled “Small Business: Health Services and Systems.”
- 2024 Member, ***AHRQ’s National Action Alliance for Patient and Workforce Safety Engineering Safe Practices Affinity Group***

### Professional Societies

- 2002-present Member, Human Factors and Ergonomics Society
- 2021-2024 Secretary Treasurer and Executive Committee Member, Human Factors and Ergonomics Society

### Conference Organizer

#### ***JHMI/Regional***

- 11/17 Organizing committee member, The Johns Hopkins Research Symposium on Engineering in Health Care, Baltimore, MD.
- 12/18 Poster session moderator, Quality Improvement, The Johns Hopkins University Anesthesiology and Critical Care Medicine Research Day, Baltimore, MD.
- 11/23 Organizing committee member, Proactive Engineering for Quality, Safety, and Equity in Healthcare: The 7th Annual Johns Hopkins Research Symposium on Engineering in Healthcare, The Johns Hopkins Malone Center, Baltimore, MD.

#### ***National***

- 10/7- 9/9 Health Care Technical Group Program Chair, Human Factors and Ergonomics Society. Responsibilities included developing the conference program for the Health Care track including finding expert reviewers for more than 60 conference paper submissions, making the editorial acceptance/rejection decisions based on the reviews, developing and scheduling the sessions for accepted papers, and identifying and inviting session chairs and co-chairs.
- 10/9-9/11 Health Care Technical Group Chair, Human Factors and Ergonomics Society. Responsibilities included overseeing all activities of the Health Care Technical Group.
- 2011-2012 Program Track Co-chair, Patient and Health Care Provider Safety Track, Symposium on Human Factors and Ergonomics in Health Care: Bridging the Gap, Baltimore, MD.
- 2012-2013 Program Committee Member, Operating Room Human Factors and Ergonomics, Symposium on Human Factors and Ergonomics in Health Care: Advancing the Cause, Baltimore, MD.
- 10/13-10/15 Macroergonomics Technical Group Program Chair, Human Factors and Ergonomics Society. Responsibilities include developing the conference program for the Macroergonomics track including finding expert reviewers for more than 20 conference paper submissions, making the editorial acceptance/rejection decisions based on the reviews, developing and scheduling the sessions for accepted papers, and identifying and inviting session chairs and co-chairs.

6/21-8/21 Proposal Reviewer, Human Factors and Ergonomics Society (HFES) Seed Grants Targeting the Intersections of Human Factors and Ergonomics and Anti-Racism/ Anti-Bias.

### ***International***

2009 Program Board Member, 13<sup>th</sup> International Conference on Human-Computer Interaction, San Diego CA  
2010 Program Board Member, 3<sup>rd</sup> International Conference on Applied Human Factors and Ergonomics, Miami, FL  
2011 Program Board Member, 14<sup>th</sup> International Conference on Human-Computer Interaction, Orlando, FL  
2014 International Scientific Advisory Board Member, Human Factors in Organizational Design and Management (ODAM) Conference, Copenhagen, Denmark  
2016 Scientific Committee Member, Healthcare Systems Ergonomics and Patient Safety (HEPS) Conference, Toulouse, France

### **Session Chair**

#### *National*

10/06 Session Chair, Human Factors and Ergonomics Society Annual Meeting, San Francisco, CA.  
11/06 Session Chair, The Institute for Operations Research and the Management Sciences (INFORMS) Annual Meeting, Pittsburgh, PA.  
9/11 Session Co-chair, Human Factors and Ergonomics Society Annual Meeting, Las Vegas, NV.  
3/12 Session Chair, Human Factors and Ergonomics in Health Care Symposium, Baltimore, MD.  
10/12 Session Chair Human Factors and Ergonomics Society's 56th Annual Meeting, Boston, MA.

#### *International*

2/12 Session Co-chair, International Ergonomics Association Conference, Recife, Brazil.

### **Consultantships**

2008-2010 Expert consultant on a research study funded by **National Council of State Boards of Nursing** (Grant no. P17006) titled "*Linking Nursing Work Environments and Patient Outcomes.*" Principal Investigator was Dr. Alison Trinkoff, professor at University of Maryland School of Nursing.  
2012-2013 **National Institutes of Standards and Technology (NIST)** consultantship on development of standards and a human factors engineering framework for integrating health information technology and clinical workflow.  
2013-2016 Advisory Board Member on an **AHRQ**-funded study (R24) titled "Community Health Workers, Evidence Based Resources, and Online Knowledge Exchanges." Principal Investigator is Harold Lehmann, MD, PhD from the Johns Hopkins University Division of Health Sciences Informatics.  
2019-2021 Human Factors and Implementation Science Consultant for the **CDC**-funded study (contract #: 200-2016-91793 based upon the RFTOP 2019 Domain 1-A005) titled "Cluster-randomized study of targeted gown and glove intervention designed to prevent staphylococcus aureus (SA) acquisition in community-based nursing homes." Principal investigator: Mary-Claire Roghmann, MD, MS from the University of Maryland School of Medicine.  
2023-2026 Human Factors and Cognitive Engineering Consultant, **DARPA In the Moment Project: Developing Trustworthy Artificial Intelligence for Making Difficult Triage Decisions.** Subcontractor: Macrocognition LLC (PI: Gary Klein).

This project aims to support the development of algorithms that are trusted to independently make decisions in difficult domains. Military operations – such as mass casualty triage and disaster relief – require complex and rapid decision-making in dynamic situations where there is often no human consensus and no ground truth. By identifying key attributes underlying trusted human decision-making in dynamic settings and computationally representing those attributes, the ITM program seeks to generate a quantitative alignment framework for a trusted human decision-maker and an algorithm. This alignment framework will form the basis for understanding algorithm alignment with trusted humans, enable algorithms to incorporate key trusted attributes, and support the development of algorithms that can be tuned to align with specific, trusted humans. We will investigate these decision-making problems in the context of two specific domains: **small unit triage in austere environments** in Phase 1 and **mass casualty triage** in Phase 2 using cross-disciplinary research in the fields of decision-making, cognitive science, experimental psychology, simulation

environments, artificial intelligence, machine learning, algorithm evaluation, and decision-making policy for autonomous systems.

2023-2025 External Advisory Board Member for the **NIH**-funded research study (5R01HL153735) titled “Handoffs and Transitions in Critical Care – Understanding Scalability study (HATRICC-US).” Principal investigator: Meghan B. Lane-Fall, MD, MSHP, FCCM, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA.

## RECOGNITION

### Awards, Honors

- 2003 *INFORMS Doctoral Colloquium Participant*: The purpose of this colloquium was to provide the attendees with technical material, career experiences from senior and junior professionals in industrial engineering/operations research, and an environment for networking. Participation in this colloquium was highly competitive and by nomination only by the leading industrial engineering/operations research departments in the nation.
- 2003 *Graduate Student Mentor Award, University of Wisconsin-Madison*: This award was given to graduate students who helped their peers go through graduate school by taking an active role in their professional development and personal well-being. It recognized those students who, in addition to their academic duties, assumed responsibility for the well-being of their fellow graduate students, often those in their first or second year.
- 2003 *Vilas Travel Fellowship, University of Wisconsin-Madison*: This fellowship was granted to a small number of University of Wisconsin-Madison dissertators for presenting their research at a professional conference.
- 2003 *Conference Travel Award, Department of Industrial Engineering, University of Wisconsin-Madison*: This grant was awarded, through a competition, to University of Wisconsin-Madison Industrial and Systems Engineering students for presenting their research at a professional conference.
- 2012 *Sommer Scholar for MPH program, Bloomberg School of Public Health, Johns Hopkins University*: The goal of the Hopkins Sommer Scholars Program is to develop the next generation of public health leaders. The program provides tuition support, the opportunity to participate in various leadership and communication skills development activities, and the opportunity for networking with peers and prominent professionals in the field of Public Health. It supports up to 15 masters in public health and 11 doctoral scholars each year at the Johns Hopkins Bloomberg School of Public Health.
- 2012 *Dean's Scholarship, MPH program, Bloomberg School of Public Health, Johns Hopkins University*: This scholarship program provides partial tuition support for a small percentage of the part-time MPH students each year.
- 2013 *Federation of Associations in Behavioral and Brain Sciences (FABBS) Foundation Early Career Investigator Award*: The purpose of this award is to recognize scientists who have made major research contributions to the sciences of mind, brain, and behavior during the first 10 years post-PhD. Dr. Gurses was nominated for the award by the leadership of the Human Factors and Ergonomics Society (HFES).
- 2014 *University of Wisconsin-Madison Forward Under 40 Award*: This award recognizes the University of Wisconsin Graduates under age 40 who are making an impact on the world by living the Wisconsin idea.
- 2014 *Co-recipient of the 2014 Liberty Mutual Best Paper in Ergonomics Award*: Established by the Liberty Mutual Research Institute for Safety and the UK Institute for Ergonomics and Human Factors, this award promotes excellence in safety and health research and recognizes the paper published in the journal *Ergonomics* that best contributes to the advancement of ergonomics.
- 2014 *Co-recipient of the 2014 International Ergonomics Association (IEA)/Liberty Mutual Award in Occupational Safety and Ergonomics*: This is the most prestigious prize that the IEA awards and the award consists of a cash amount of \$10,000. Through this award, the IEA and Liberty Mutual seeks to reduce or mitigate work-related injuries through the advancement of theory and understanding, innovation and development of new directions or approaches
- 2014 *'Badger of the Year,' University of Wisconsin-Madison Baltimore Alumni Chapter*: This award is given to a University of Wisconsin-Madison graduate who has distinguished themselves in the Baltimore, MD area as a volunteer and through their dedicated service to our community and their profession.
- 2017 *'Poster Award,' 4th Annual Meeting of the Pediatric Trauma Society, Charleston, SC*: This award was given for the poster titled “Supporting clinicians and teamwork through better HIT design: Understanding the trauma care system at a Level 1 pediatric trauma center using a mixed methods approach.”
- 2019 *Society for Healthcare Epidemiology of America (SHEA) Top Poster Abstract Award recipient, SHEA Spring Conference: Science Guiding Prevention, Boston, MA*: This award was given for the poster titled “Evaluating the accuracy of sampling strategies for fluorescent gel monitoring of patient room cleaning.” Poster Presentation 20.

- 2022 *Society for Healthcare Epidemiology of America (SHEA) Top Poster Abstract Award recipient, SHEA Spring Conference: Colorado Springs, CO. This award was given for the poster titled “Work system factors affecting COVID-19 PPE use: A human factors approach to analysis of video recordings of emergency department clinical work.”* Poster Presentation 26.
- 2022 *Society for Healthcare Epidemiology of America (SHEA) Top Poster Abstract Award recipient, SHEA Spring Conference: Colorado Springs, CO. This award was given for the poster titled “Work system factors affecting COVID-19 PPE use: A human factors approach to analysis of video recordings of emergency department clinical work.”* Poster Presentation 27.
- 2024 *The Robert R. Hoffman Award for Best Contribution to Naturalistic Decision Making Methodology, Naturalistic Decision Making Conference: Auckland, New Zealand. This award was given for the poster titled “Cognitive complexity interview method: A technique for identifying cognitive challenges in healthcare work.”* Poster Presentation 46.

## **Invited Talks**

### ***JHMI/Regional***

- 4/09 “User-designed Information Tools to Support Care Coordination,” Informatics Grand Rounds, Division of Health Sciences Informatics, School of Medicine, Johns Hopkins University, Baltimore, MD (*also listed under the “CME instruction” section*).
- 6/10 “Human Factors in Health Care,” First Annual Patient Safety Summit, Johns Hopkins Medical Institutions, Baltimore, MD.
- 10/11 “Improving Transitions of Care for Cardiac Surgery Patients,” Grand Rounds, Division of Geriatric Medicine and Gerontology, Johns Hopkins University School of Medicine, Baltimore, MD.
- 4/12 “A Human Factors Engineering Approach to Clinician Workload,” Armstrong Institute for Patient Safety and Quality Grand Rounds, Johns Hopkins University School of Medicine, Baltimore, MD.
- 2/13 “Quality and Effectiveness,” Transforming Health Systems for Accountable Care: Inaugural Experiential Inter-Professional Executive Education Program, Johns Hopkins University, Baltimore, MD (*also listed under the “CME instruction” section*).
- 5/14 “Human Factors Engineering to Improve Health Care,” Armstrong Institute Patient Safety and Quality Safety Fellowship Program Rounds, Johns Hopkins University School of Medicine, Baltimore, MD.
- 11/17 “Care Transitions and Teamwork in Pediatric Trauma: Implications for Health IT Design,” The Johns Hopkins Research Symposium on Engineering in Health Care, Baltimore, MD.
- 1/18 “Patient-Centric Risk Model for Medication Safety During Care Transitions,” Geriatric Medicine Grand Rounds, Johns Hopkins University School of Medicine, Baltimore, MD.
- 5/18 “Engineering Work Systems to Improve Patient and Health Care Worker Safety,” Anesthesiology and Critical Care Medicine Discovery Rounds, Johns Hopkins University School of Medicine, Baltimore, MD.
- 5/19 “Human Factors and Systems Engineering to Improve Patient and Health Care Worker Safety.” Neurocritical Care CME Lecture Series Anesthesiology and Critical Care Medicine, Johns Hopkins University School of Medicine, Baltimore, MD
- 6/19 “Supporting Distributed Cognitive Team Work in Pediatric Trauma.” Pediatric Trauma Research Meeting, Johns Hopkins University School of Medicine, Baltimore, MD
- 6/24 “Designing Health IT to Support Team Cognition and Patient Safety in Pediatric Trauma: A Human Factors and Sociotechnical Systems Approach.” JHU Quality and Safety Research Day, Baltimore, MD.

### ***National Talks***

- 11/03 “Evaluating Work Obstacles and Facilitators for Intensive Care Nurses,” INFORMS Annual Mtg, Atlanta, GA.
- 1/04 “Performance Obstacles of Intensive Care Nurses,” Industrial Engineering, University of Arkansas, Fayetteville, AR.
- 2/04 “Performance Obstacles of Intensive Care Nurses,” Miami Center for Patient Safety Research, University of Miami, Miami, FL.
- 2/04 “Impact of Performance Obstacles on ICU Nurses’ Workload,” School of Medicine, University of Maryland, Baltimore, MD.
- 10/04 “Impact of Performance Obstacles on ICU Nurses’ Workload,” Center for Quality and Productivity Improvement, University of Wisconsin, Madison, WI.
- 3/05 “Impact of Performance Obstacles on ICU Nurses’ Workload,” School of Nursing, University of Maryland, Baltimore, MD.
- 1/06 “Performance Obstacles, Workload, Quality of Working Life and Perceived Quality and Safety of

- Care Among Intensive Care Nurses,” School of Rural Public Health, Texas A&M University, College Station, TX.
- 2/06 “Performance Obstacles, Workload, Quality of Working Life and Perceived Quality and Safety of Care Among Intensive Care Nurses,” Health Management and Informatics, University of Missouri, Columbia, MO.
- 5/06 “Performance Obstacles, Workload, Quality of Working Life and Perceived Quality and Safety of Care Among Intensive Care Nurses,” School of Public Health, University of Minnesota, Minneapolis, MN.
- 3/07 “Secondary Design of Information Systems: A Field Study of Coordination in a Trauma Hospital,” Center for Quality and Productivity Improvement, University of Wisconsin, Madison, WI.
- 5/07 “Systems Ambiguity and Compliance with Evidence-Based Guidelines in Intensive Care Units,” Production and Operations Management Society Annual Conference, Dallas, TX.
- 6/07 “Impact of Performance Obstacles on ICU Nurses’ Workload, Quality of Working Life and Perceived Quality and Safety of Care,” School of Public Health, Harvard University, Boston, MA.
- 6/07 “Role of Action Research in Patient Safety and Human Factors,” Health Organizational Research Association Conference, Minneapolis, MN.
- 3/08 “Impact of Performance Obstacles on ICU Nurses’ Workload, Quality of Working Life and Perceived Quality and Safety of Care,” School of Public Health, University of Maryland, College Park, MD.
- 6/08 “Teaching and Assessing System Design and Evaluation Competencies,” Association of University Programs in Health Administration (AUPHA) Quality Improvement Forum, Washington, DC.
- 4/09 “User-designed Information Tools to Support Care Coordination,” Department of Information Systems, University of Maryland, Baltimore County, MD.
- 5/10 “Design and Use of Information Tools to Improve Patient Safety and Quality of Care,” Drexel University, College of Information Science and Technology, Philadelphia, PA.
- 4/11 “Integrating Human Factors and Systems Engineering into Health Care,” Pennsylvania Hospital, Patient Safety Deltas Group, University of Pennsylvania Health Systems, Philadelphia, PA.
- 10/11 “Using Human Factors Engineering to Improve Patient Safety in the Cardiovascular Operating Room,” Department of Industrial and Systems Engineering, University of Buffalo, The State University of New York, Buffalo, NY.
- 10/11 “Human Factors Engineering in Health Care and Patient Safety,” School of Rural Public Health, Texas A&M Health Science Center, College Station, TX.
- 10/11 “Human Factors Engineering to Improve Transitions of Care,” Institute for Health Care Research and Improvement, Baylor Health Care System, Dallas, TX.
- 10/11 “Improving Nursing Working Conditions and Patient Safety Using a Human Factors Engineering Approach,” Nursing Research Council, Baylor Health Care System, Dallas, TX.
- 4/12 “Improving Patient Safety in the Cardiac Operating Room Using Human Factors Engineering,” Department of Anesthesiology and Perioperative Medicine Grand Rounds, University of Louisville, Louisville, KY.
- 4/12 “Human Factors Engineering in Health Care,” Patient Safety Grand Rounds, University of Louisville Hospital, Louisville, KY.
- 5/12 “Time to Accelerate Integration of Human Factors Engineering in Health Care,” Medical Grand Rounds, Christiana Care Health System, Newark, DE (*also listed under the “CME instruction” section*).
- 2/13 “Improving Patient Safety in the Cardiac Operating Room,” Human Factors Grand Rounds, Medstar Health, Washington, DC.
- 3/13 “Improving Patient Safety in the Cardiac Operating Room with Human Factors Engineering,” International Symposium on Human Factors and Ergonomics in Health Care: Advancing the Cause, Baltimore, MD.
- 4/13 “Human Factors and Systems Engineering to Improve Health Care,” Industrial and Systems Engineering Research Seminar Series, Rutgers University, New Brunswick, NJ.
- 9/13 “Human Factors and Systems Engineering Approaches to Risk Evaluation and Mitigation Strategies,” Brookings Institute, Washington DC.
- 4/14 “Types and Levels of Strategies to Improve System Performance: Examples from Health Care,” Conference on Strategies in Human-Technical Systems, Georgia Tech, Atlanta, GA.
- 11/14 “Using Human Factors Engineering to Improve Public Health, Health Informatics, and Patient Safety: Three Recent Examples,” Veterans Administration Human Factors Engineering Brown Bag Sessions (Webinar)
- 3/15 “Human Factors Engineering in Health Care,” Human Factors and Applied Cognition Program Seminars, The College of Humanities and Social Sciences, George Mason University.
- 5/15 “Transitions of Care in the Hospital: Structured Communication Approaches and Tools for Improving Hand Offs/ Sign Outs,” Patient Safety Symposium, Fayetteville VA Medical Center, NC.
- 7/15 “Designing Electronic Health Records Usability to Improve Patient safety” Pew Charitable Trusts, Washington, DC.
- 10/15 “From Ebola Management to Cardiac Surgery: Applications of Human Factors Engineering to Improve Patient and Care Provider Safety,” Cincinnati Children’s Hospital, Cincinnati, OH.

- 4/16 “Human Factors Engineering and Safety Science to Improve Healthcare,” 4<sup>th</sup> Annual National Summit on Safety & Quality for Rehabilitation Hospitals, *Plenary speaker*, Baltimore, MD.
- 6/16 “Human Factors Engineering to Improve Team Performance and Patient Safety,” Grand Rounds, Department of Population Health, NYU School of Medicine, New York, NY.
- 12/16 “Health IT Design and Implementation: A Human Factors and Systems Engineering Perspective,” Digital Learning Collaborative, National Academy of Medicine, Washington, DC.
- 11/17 “Improving Patient Safety and Health Care Worker Safety,” Congressional Briefing, Capitol Hill, Washington, DC (sponsored by the Federation of Associations in Behavioral and Brain Sciences and the SAGE Publishing, Inc.).
- 6/18 “Systems Approach to Designing for Safety,” Patient and Staff Safety Symposium (organized by the Center for Health Design), *Keynote Speaker*, Chicago, IL.
- 2/19 “Engineering Work Systems to Improve Patient and Health Care Worker Safety,” University of Maryland School of Nursing, Baltimore, MD.
- 4/19 “Reengineering Work Systems to Reduce Healthcare Acquired Infections,” Infectious Disease Epidemiology and Outbreak Response Bureau, Maryland Department of Health, Baltimore, MD.
- 4/19 “The Role of Human Factors Engineering in Clostridium Difficile Prevention,” The Society for Healthcare Epidemiology of America (SHEA), Boston MA.
- 4/19 “Ebola 5 Years Later: Applying Lessons Learned from the Biocontainment Units to the Ward,” The Society for Healthcare Epidemiology of America (SHEA), Boston MA.
- 5/19 “Human Factors and Systems Engineering to Improve Patient and Health Care Worker Safety,” University of Illinois-Urbana Champaign, IL.
- 9/19 “Identifying Performance Shaping Factors for Infection Prevention in Long-Term Care using a Human Factors and Systems Engineering Approach,” CDC Webinar (co-presenter: Dr Morgan Katz).
- 11/19 “Human Factors Engineering to Improve Patient and Health Care Worker Safety,” Children’s Hospital of Philadelphia, Department of Radiology, Philadelphia, PA.
- 11/19 “Medication Safety in Care Transitions from Hospital to Home Among Older Adults,” The Regenstrief Institute and the Center for Health Innovation and Implementation Science, Indiana University School of Medicine, IN.
- 3/20 “Human Factors and Ergonomics and the Coronavirus (COVID-19) Pandemic and Beyond.” Human Factors and Ergonomics Society (HFES) Town Hall Webinar (more than 375 participants).
- 3/20 “Human Factors and Systems Engineering to Improve Pediatric Trauma Teamwork and Care Coordination,” Clemson University and Prisma Health, Greenville, SC. (will be rescheduled due to COVID-19 pandemic).
- 4/20 “Reengineering Health Care Work Systems to Support Distributed Cognitive Work: Examples from Care Transitions,” Industrial and Systems Engineering, University of Florida-Gainesville (virtual seminar).
- 4/20 “Improving Care Transitions and Team Work: A Human-Centered Design and Implementation.” The Regenstrief Institute and the Indiana University School of Medicine, IN. (virtual seminar)
- 8/20 “Respiratory Protective Devices for Non- Traditional Workers and Public Use: A Human Factors Engineering Perspective.” The National Academies of Sciences, Engineering and Medicine Webinar.
- 8/20 “Effective and Impactful Systems Engineering Methods in Healthcare Settings Focusing on Problem Analysis and Design Phases.” The Agency for Health Care Research and Quality, Annual Patient Safety Learning Lab Meeting, Invited panelist (webinar).
- 10/20 “Human Factors and Safety Science Seminar Part I.” The North Carolina State Association Webinar.
- 11/20 “Human Factors and Safety Science Seminar Part II: Case-Based Discussions.” The North Carolina State Association Webinar.
- 4/21 “What do We Mean by a Systems Approach? – Discussion of a Systems Framework for Respiratory Protection.” The National Academies of Sciences, Engineering and Medicine.
- 11/21 “Systems and Cognitive Human Factors in Digital Age: Development of a Health IT Solution to Support Team Work in Pediatric Trauma.” Human Systems Integration (HSI) 2021 Conference, a joint conference by INCOSE and HIS. San Diego, CA. *Panelist* (webinar).
- 3/22 “Infusing human factors and systems approach into health care: Examples, opportunities, and the future” Industrial and Operations Engineering Departmental Seminar (webinar).
- 4/22 “Embracing human factors to unleash innovation” Panel. 2022 World Patient Safety, Science and Technology Summit, Patient Safety Movement, *Panelist* (webinar).
- 4/22 “Human Factors and Systems Engineering Approach to Improve Patient Safety and Health Care Worker Safety.” University of Pittsburgh Medical Center (UPMC) Advanced Quality Education External Speaker Series. (Co-presenter: Dr Shawna Perry).
- 6/22 “Designing health IT to support team cognition and clinical work: A human factors and socio-technical systems approach.” IEEE ICHI 2022 Rochester, MN, *Keynote Speaker*.



- 9/22 “Reflecting on Safety I and Safety II” AHRQ Patient Safety Learning Laboratories, Washington, DC. *Panelist*.
- 4/23 “Human Factors and Systems Engineering Approach to Improve Patient Safety and Health Care Worker Safety.” University of Pittsburgh Medical Center (UPMC) Advanced Quality Education External Speaker Series. (Co-presenter: Dr Shawna Perry).

#### *International Talks*

- 1/04 “Performance Obstacles of Intensive Care Nurses,” School of Business, Koc University, Istanbul, Turkey.
- 1/04 “Performance Obstacles of Intensive Care Nurses,” School of Business, Bilkent University, Ankara, Turkey.
- 1/04 “Performance Obstacles of Intensive Care Nurses,” School of Nursing, Koc University, Istanbul, Turkey.
- 3/10 “Using Human Factors Engineering to Reduce Healthcare Associated Infections,” Center for Inter-University Research and Analysis on Organizations (CIRANO), Montreal, Canada.
- 3/11 “Human Factors Engineering in Health Care,” Department of Industrial Engineering and the Institute of Biomedical Engineering, Istanbul, Turkey.
- 12/11 “Human Factors Engineering to Improve Cardiac Surgery,” Health Technology and Safety Research, University Health Network and University of Toronto, Toronto, Canada.
- 2/12 “Human Factors Engineering to Improve Patient Safety,” Industrial Engineering, Federal University of Rio Grande Do Norte, Natal, Brazil.
- 2/12 “An Application of Structural Equation Modeling in Health Care,” Applied Mathematics and Statistics, Federal University of Rio Grande Do Norte, Natal, Brazil.
- 4/13 “Patient Safety and Health Information Technology,” WHO Patient Safety Reporting and Learning Group Webinar.
- 8/13 “Human Factors Engineering to Improve Patient Safety,” Saudi Arabia Hospitals CLABSI Initiative Webinar.
- 11/13 “Human Factors Engineering in Infection Control,” University Hospitals of Geneva, Geneva, Switzerland.
- 12/13 “Engineering a Safer Health Care System,” Istanbul Technical University, School of Management, Istanbul, Turkey.
- 1/14 “Using Human Factors Engineering to Improve Patient Safety in Cardiac Surgery,” University College-London, London, United Kingdom.
- 9/14 “Human Factors Engineering in Infection Control,” Aesculap Academy, Geneva, Switzerland.
- 11/14 “Proactive Risk Assessment in Health Care, 5<sup>th</sup> International Conference on Performance and Quality in Health Care, organized by Republic of Turkey Ministry of Health, Antalya, Turkey.
- 4/15 “Quality in Health Care: An Interdisciplinary Approach,” co-sponsored by the Turkish Ministry of Science, Industry and Technology and the Turkish Society for Quality, Ankara, Turkey.
- 9/15 “Applications of Human Factors and Systems Engineering in Health Care,” 35<sup>th</sup> National Operations Research and Industrial Engineering Congress, Ankara, Turkey.
- 2/16 “Human Factors and Systems Engineering to Improve Team Performance and Patient Safety,” Johns Hopkins Aramco Healthcare, Dhahran, Saudi Arabia.
- 2/16 “Root Cause Analyses: A Human Factors and Systems Engineering Based Approach,” Johns Hopkins Aramco Healthcare, Dhahran, Saudi Arabia.
- 3/16 “Proactive Risk Assessment for Preventing HealthCare Acquired Infections,” 6<sup>th</sup> International Performance and Quality in HealthCare Congress, organized by Republic of Turkey Ministry of Health, Antalya, Turkey.
- 4/16 “Patient Safety 2.0: Using Human Factors Engineering to Improve patient Safety,” Saudi American Healthcare Forum, Riyadh, Saudi Arabia.
- 8/16 “Improving Transitions of Care from Cardiac Operating Room to Intensive Care Unit: A Participatory Ergonomics Approach,” 26<sup>th</sup> Argentine Congress on Intensive Care, Salta, Argentine.
- 8/16 “Preventing Healthcare Acquired Infections in ICUs: A Human Factors and Systems Engineering Approach,” 26<sup>th</sup> Argentine Congress on Intensive Care, Salta, Argentine.
- 1/17 “Medical errors due to communication issues: Improving quality and safety of handoffs and care transitions,” Johns Hopkins Aramco Healthcare, Dhahran, Saudi Arabia.
- 4/18 “How to practice evidence-based medicine more consistently: A human factors engineering approach,” Brazilian Institute for Patient Safety 3<sup>rd</sup> Annual Symposium, Sao Paulo, Brazil.
- 4/18 “Improving quality and safety of care transitions and handoffs: A human factors engineering approach,” Brazilian Institute for Patient Safety 3<sup>rd</sup> Annual Symposium, *Keynote Speaker*, Sao Paulo, Brazil.
- 4/18 “Patient Safety Almost Two Decades After the ‘To Err is Human’ Report: Current Progress and Future Directions. Invited discussion panel featuring Drs. Ayse Gurses and Charles Vincent, Brazilian Institute for Patient Safety 3<sup>rd</sup> Annual Symposium, Sao Paulo, Brazil.
- 9/20 “The intersection of patient safety and pandemic – How the human factors and ergonomics can improve the adaptative capacity in the complex systems inside the dynamism and uncertainty?,” *Keynote Speaker*. International

- Forum for Patient Safety, Sponsored by Aspen Pharma Patient Safety in collaboration with 7 national health care organizations and societies in Brazil.
- 3/21 “Infusing Systems Thinking into Health Care: Implications for Patient and Health Care Worker Safety.” Prof. Dr. Halim Dogrusoz Annual Seminar- webcasted. (Dr. Halim Dogrusoz was the founder of operations research and systems thinking in Turkey). Sponsored by the METU and the Operational Research Society of Turkey (webcasted across Turkish universities).
- 6/23 “Reengineering Health Care Work Systems to Support Distributed Cognitive Work: Examples from Care Transitions.” *Keynote Speaker*. Symposium on the Challenges of Transitioning Care for Patients and Medical Staff and the Future of Health Care Engineering Research, University of Nantes, Nantes, France.
- 9/23 “Systems Design for Infection Prevention.” The Swiss National Strategy for the Monitoring, Prevention and Control of Healthcare-Associated Infections (NOSO) Strategy Workshop. Sponsored by the Swiss National Center for Infection Prevention, Swiss Office of Public Health. *Keynote Speaker*. Bern, Switzerland (virtual presentation).
- 10/23 “A Socio-technical Systems Approach to Technology Design and Implementation.” *Keynote Speaker*. The MIC and CAI with Humans in the Loop Tutorial, 26<sup>th</sup> International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), Vancouver, Canada.
- 8/24 “Human Systems Integration Across the Health Care Continuum: Examples, Opportunities, and the Future.” *Keynote Speaker*. International Ergonomics Association IEA Triennial Congress- INCOSE Meeting, Jeju, Republic of Korea.

## OTHER PROFESSIONAL ACCOMPLISHMENTS

### Poster Presentations [PP]

- 3/12 1. Pennathur P, Xiao Y, MacDonna M, Owens S, **Gurses AP**. Multidisciplinary discharge communication: To structure or not to structure? Poster presented at Human Factors and Ergonomics in Healthcare Symposium, Baltimore, MD.
- 6/13 2. Arbaje AI, Nasarwanji M, Leff B, **Gurses AP**. Critical tasks and challenges associated with initiating care transitions for hospitalized patients receiving skilled home healthcare services after hospital discharge, Academy Health Annual Research Meeting.
- 4/14 3. Arbaje AI, Werner NE, Nasarwanji MF, Leff BA, **Gurses AP**. Evaluation of healthcare professionals’ information management during older adults’ transitions from hospital to home care, Association for Clinical and Translational Science Meeting, Washington, DC.
- 11/14 4. Werner NE, Malkan S, Nasarwanji MF, **Gurses AP**, Leff B, Arbaje AI. Identifying medication management challenges during older adults' transitions from hospital to skilled home care: A human factors approach. Late Breaking Poster Session, Gerontological Society of America Annual Meeting.
- 4/15 5. Werner NE, **Gurses AP**, Malkana S, Leff B, Arbaje AI. System-level barriers, outcomes and design implications for managing older adults’ medications across transitions from the hospital to skilled home care. International Symposium on Human Factors and Ergonomics in Health Care.
- 4/15 6. Arbaje AI, Werner NE, Leff B, **Gurses AP**. How do older adults manage information across transitions from the hospital to skilled home care: The role of patients and their informal caregivers. International Symposium on Human Factors and Ergonomics in Health Care.
- 5/15 7. Nguyen ET, Werner NE, Nasarwanji MF, **Gurses AP**, Leff B, Arbaje AI. From hospital to skilled home health care: Identifying physician communication of challenges during care transitions older adults. American Geriatrics Society Annual Scientific Meeting. *Note: This abstract was selected for presentation as a poster during the Presidential Poster Session at the 2015 Annual Scientific Meeting of the American Geriatrics Society. Abstracts receiving the highest scores through the peer review process are included in the Presidential Poster Session.*
- 5/15 8. Arbaje AI, Werner NE, Callister C, **Gurses AP**, Leff B. Identifying risks to older adults’ safety during hospital to skilled home health care transitions: A human factors engineering approach. American Geriatrics Society Annual Scientific Meeting. *Note: This abstract was selected for presentation as a poster during the Presidential Poster Session at the 2015 Annual Scientific Meeting of the American Geriatrics Society. Abstracts receiving the highest scores through the peer review process are included in the Presidential Poster Session.*
- 5/15 9. Arbaje AI, Werner NE, Nasarwanji MF, Leff B, **Gurses AP**. Using a human factors approach to identify and categorize barriers to older adults’ care transitions from the hospital to home care. American Geriatrics Society Annual Scientific Meeting.
- 6/15 10. Arbaje AI, Werner NE, Callister C, Leff B, **Gurses AP**. Identifying risks to older adults’ safety during hospital to skilled home health care transitions: A human factors engineering approach. Academy Health Annual Research Meeting.

- 5/16 11. **Gurses AP**, Edwards-Molello N, Di Mattina J, Trexler P, Pronovost P, Jenkins L, Peterson S, Rosen M, Xie A, Dietz A, Benishek L, Leslie M, Perl T, Doyle P, Halligan C, Weaver S, Black M, Harris J, Justice P, Neire P, Tolson T, Hiber K, Platt G, Maragakis LL. Using human factors engineering to improve guideline compliance: The case of Ebola. SHEA Spring Conference, Atlanta, GA.
- 5/16 12. Xie A, King AF, Woods-Hill CZ, Ascenzi J, **Gurses AP**, Fackler JC, Milstone AM. Human factors approach to disseminating an intervention for improving blood culture utilization. SHEA Spring Conference, Atlanta, GA.
- 10/16 13. McGeorge NM, Durojaiye AB, Fackler JC, Xie A, Rosen MA, Hunt EA, Stewart D, Puett LL, Wooldridge AR, Carayon P, Hoonakker P, **Gurses AP**. Pediatric Trauma Care Transitions: Understanding teamwork for Health IT design. Seventh Annual Johns Hopkins Medicine Patient Safety Summit, Baltimore, MD.
- 5/17 14. Xie A, Rock C, Andonian J, Keller SC, Osei P, Cosgrove SE, **Gurses AP**. Work system challenges to patient room cleaning. SHEA Spring Conference, Atlanta, GA.
- 11/17 15. McGeorge N, Durojaiye A, Fackler J, Stewart D, Puett L, **Gurses AP**. Supporting clinicians and teamwork through better HIT design: Understanding the trauma care system at a Level 1 pediatric trauma center using a mixed methods approach. Poster presentation at the 4th Annual Meeting of the Pediatric Trauma Society, Nov 2017, Charleston, SC. (*Poster Award Winner*).
- 5/18 16. Arbaje AI, Hughes A, Werner NE, **Gurses AP**, Leff B. Analysis of suboptimal information management during older adults' hospital-to-home health care transitions and implications for improvement. American Geriatrics Society Annual Scientific Meeting. *Note: This abstract was selected for presentation as a poster during the Presidential Poster Session at the 2018 Annual Scientific Meeting of the American Geriatrics Society. Abstracts receiving the highest scores through the peer review process are included in the Presidential Poster Session.*
- 6/18 17. Abebe E, Hannum S, **Gurses AP**, Xiao Y. Identifying gaps for patient-centric model of medication management during care transitions. Academy Health Annual Research Meeting. June 24-26, 2018, Seattle, WA.
- 12/18 18. Oresanwo I, Vignesh A, Osei P, Benishek LE, Kazi S, Dietz AS, Nowakowski E, Andonian J, Schiffhauer M, Billman C, Maragakis LL, **Gurses AP**, for the CDC Prevention Epicenter Program. Healthcare personnel attitudes and perceptions of risks factors for the doffing of enhanced PPE. Anesthesiology and Critical Care Medicine Research Day, Johns Hopkins Medicine, Baltimore, MD.
- 3/19 19. Oresanwo I, Vignesh A, Osei P, Benishek LE, Kazi S, Dietz AS, Nowakowski E, Andonian J, Schiffhauer M, Billman C, Maragakis LL, **Gurses AP**, for the CDC Prevention Epicenter Program. Healthcare personnel attitudes and perceptions of risks factors for the doffing of enhanced PPE. Human Factors Health Care Conference, Chicago, IL.
- 4/19 20. Rock C, Small BA, Hsu Y-J, **Gurses AP**, Xie A, Scheeler V, Haft M, Trexler P, Milstone A, Maragakis LL, Cosgrove S, for the CDC Prevention Epicenters Program. Evaluating the accuracy of sampling strategies for fluorescent gel monitoring of patient room cleaning. SHEA Spring Conference: Science Guiding Prevention, Boston, MA.
- 4/19 21. Kim J, Dy S, **Gurses AP**, Solomon B. A human factors approach to improving ambulatory medication reconciliation in medically complex children. Primary Care Consortium 4th Biennial Retreat to Advance Primary Care, Baltimore, MD.
- 5/19 22. Murphy Z, Lehmann H, Oliva-Hemker M, **Gurses AP**, Maslen A, Hutless SM, Miller SD. Anemia in pediatric inflammatory bowel disease: What do providers want from electronic clinical decision support? Digestive Disease Week, May 2019, San Diego, CA.
- 10/19 23. Sharara SL, Cosgrove SE, Arbaje A, **Gurses AP**, Dzintars K, Keller SC. A healthcare worker-informed approach to the hospital-to-home transition on oral antibiotics. Infectious Diseases Week (IDWeek), Washington DC.
- 3/20 24. Coppola S, Webster K, Nasr I, **Gurses AP**. Barriers to communication and coordination of care in pediatric trauma handoffs. Annual John M. Templeton Jr Pediatric Trauma Symposium, Philadelphia, PA.
- 5/21 25. Daniel KM, **Gurses A**, Hendrix N, Xiao Y. Virtual visits during the COVID-19 pandemic: Opportunities and challenges in medication safety. American Geriatrics Society Annual Meeting (virtual).
- 4/22 26. Daodu O, Osei P, Nosakhare E, Perry S, Sultan M, Prabhu N, Peterson S, MacIntyre E, Vo K, Yuan C, Benishek L, Li J, **Gurses AP**. Work system barriers to & resilience strategies for COVID-19 PPE use in the emergency department: A qualitative interview study SHEA Spring Meeting ASHE. 2022; 2(S1):S10-S10. (*selected among top 28 featured posters*).
- 4/22 27. Nosakhare E, Perry S, Peterson S, Catalfumo F, Osei P, Williams K, Bradley M, Sultan M, Daodu O, Prabhu N, **Gurses AP**. Work system factors affecting COVID-19 PPE use: A human factors approach to analysis of video recordings of emergency department clinical work. SHEA Spring Meeting ASHE. 2022 2(S1):S9-10. (*selected among top 28 featured posters*).

- 4/22 28. MacIntyre E, Perry S, Osei P, Terhorst R, **Gurses AP**. Development of a human factors-based tool for evaluating and improving infection prevention and control protocols. SHEA Spring Meeting. ASHE. 2022; 2(S1):S60-S61.
- 6/22 29. Yuan CT, Benishek LE, Osei P, Sultan M, Perry SJ, Peterson SM, Myers CG, **Gurses AP**. Leveraging “Safety Officers” to promote learning and safe use of personal protective equipment during the COVID-19 pandemic. Academy Health Annual Research Meeting, Washington, D.C., June 2022.
- 6/22 30. Greyson S, Hsu YJ, **Gurses AP**, Keller S, Marsteller J, Bowles K, McDonald M, Vergez S, Harbison K, Hohl D, Carl K, Leff B, Arbaje AI. Measuring safety threats to older adults receiving home health services after hospital discharge and relationship to patient outcomes in Baltimore, MD and New York City, NY. Academy Health Annual Research Meeting, Washington, D.C., June 2022.
- 10/22 31. Miller SD, Rosen A, Muralidharan N, Beck TG, McDonald EM, Asim B, Omaki E, Shields W, Cordon M, **Gurses AP**, Solomon B. Human centered design of clinical decision support to prevent sudden unexpected infant death. High Value Practice Academic Alliance (HVPAA) Conference.
- 10/22 32. Miller S, Hays T, Gast-Whitaker CG, Thompson J, **Gurses AP**. Using clinical informatics to address the elemental formula shortage crisis. North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition (NASPGHAN) Annual Conference.
- 4/23 33. Xie A, Sax H, Daodu O, Alam L, Sultan M, Rock C, Perry SJ, Stewart M, **Gurses AP**. Environmental cleaning in operating rooms: A systematic review from the human factors engineering perspective. SHEA Spring Meeting ASHE. 2023.
- 5/23 34. Case AS, Koirala B, Flanagan E, Daodu O, Hochberg CH, Alam L, **Gurses AP**, Hager DN. Performance shaping features of intermediate care nursing workload: A qualitative study. In B23. Promoting high-quality patient-and family-centered critical care during the ICU stay and beyond. American Thoracic Society. May 2024: A3120-A3120.

#### Oral/Podium Presentations [OP]

- 11/02 1. **Gurses AP**, Sullivan, W.G. An activity-based costing and theory of constraints model for product-mix decisions. INFORMS Annual Meeting, San Jose, CA.
- 7/03 2. **Gurses AP**, Carayon, P. Workload, quality of working life, and quality of care among intensive care nurses. EURO/INFORMS Joint International Meeting, Istanbul, Turkey.
- 10/03 3. Carayon P, **Gurses AP**. A preliminary study of performance obstacles and facilitators of ICU nurses. European Society for Computing and Technology in Anaesthesia and Intensive Care (ESCTAIC) Conference, Berlin, Germany.
- 10/03 4. **Gurses AP**, Carayon P. Evaluating work obstacles and facilitators for intensive care nurses. INFORMS Annual Meeting, Atlanta, Georgia.
- 10/04 5. **Gurses AP**, Carayon P. Work obstacles and facilitators, workload, quality of working life, and quality of care among intensive care nurses. Wisconsin Quality and Safety Forum, Eau Claire, WI.
- 6/11 6. **Gurses AP**, Xiao Y, Seidl K. Impact of systems ambiguity on guideline compliance in intensive care units. International Conference on Prevention and Infection Control, Geneva, Switzerland.
- 3/13 7. Peterson S, Regan L, **Gurses AP**. Resident to resident handoffs in the emergency department: An observational study. 16<sup>th</sup> Annual SAEM MidAtlantic Regional Research Forum, 2013.
- 3/14 8. Greulich P, Yu S, Davidov M, Wanat-Hawthorne A, Challa L, **Gurses AP**, Nasarwanji M, Landgraf K, Hynan LS. Reliability of an evaluation tool for assessing transfers of care (“handoffs”) from the OR to the ICU following cardiac surgery. Society of Cardiovascular Anesthesiologists Annual Meeting, New Orleans, LA.
- 9/14 9. Arbaje AI, Werner NE, Nasarwanji MF, Leff BA, **Gurses AP**. Learning from lawsuits: Application of a human factors engineering approach to investigate hospital-to-home care transitions using malpractice data. Journal of American Geriatrics Society, 2014 (62); s2: s357.
- 9/14 10. Arbaje AI, Werner NE, Nasarwanji MF, **Gurses AP**, Leff B. Identifying information management challenges during older adults’ transitions from hospital to home care. Journal of the American Geriatrics Society 2014 (62); s2:S396-S401.
- 12/14 11. Chang B, Hsu Y, Marsteller Jill, Speck K, Rosen M, **Gurses AP**, Pronovost P, Thompson D. Reducing three infections and improving culture across cardiac surgery units. Critical Care Medicine. 42(12) (S1):A1556, Dec 2014.
- 9/16 12. Werner NE, Leff B, **Gurses AP**, Arbaje AI. Older adults’ transitions of care from hospital to home. Presented within the panel titled “Conceptualizing Sociotechnical System Boundaries in Healthcare Settings: Within and Across Teams, Organizations, Processes, and Networks.” Human Factors and Ergonomics Society Annual Meeting, Washington, DC.
- 9/16 13. **Gurses AP**. Reengineering work system boundaries to improve care transitions: Examples from cardiac surgery and pediatric trauma care transitions. Presented within the panel titled “Conceptualizing Sociotechnical System

- Boundaries in Healthcare Settings: Within and Across Teams, Organizations, Processes, and Networks.” Human Factors and Ergonomics Society Annual Meeting, Washington, DC.
- 10/16 14. Rock C, Enos-Graves H, Andonian J, Keller S, Cosgrove S, **Gurses AP**, Xie A. Human factors engineering approach, including observations and contextual enquiry, to improve patient room cleaning. ID Week; 3(suppl\_1):271-271.
- 4/18 15. Tubbs-Cooley H, Pickler RH, Alvarez TC, Zimmerman S, Skiles M, Sealschott S, **Gurses AP**. Identifying work system hazards to patient safety guideline adherence in neonatal intensive care. Midwest Nursing Research Society 42nd Annual Research Conference, Cleveland, OH.
- 4/18 16. Keller SC, Williams D, Kohut M, Cosgrove SE, **Gurses AP**. It’s a big world out there: Barriers and hazards related to the physical environment in patients on outpatient parenteral antimicrobial therapy. Society of Healthcare Epidemiology of America Spring Meeting, Portland, OR.
- 11/18 17. Aboumatar H, Naqibuddin M, Chung S, Chaudhry H, Kim S, Saunders J, Bone L, **Gurses AP**, Knowlton A, Putcha N, Rand C, Roter D, Shattuck E, Sylvester C, Wolff J, Hibbard J, Pronovost P, Wise R. A patient and family-centered transitional care program for patients with chronic obstructive lung disease reduced healthcare utilization and improved quality of life: Results of the BREATHE study. American Public Health Association (APHA) Annual Meeting and Expo, San Diego, CA.
- 8/18 18. **Gurses AP**, Carayon P. Methodological and conceptual advances in human-centered design: The case of pediatric trauma multi-team systems. In Special Session: 50 years of Applied Ergonomics; International Ergonomics Association, Florence, Italy.
- 10/18 19. **Gurses AP**, Abebe E, Xiao Y. Patient-centric risk model of medication safety among elderly patients: Transitioning from hospital to home. Human Factors and Ergonomics Society's 2018 International Annual Meeting, Philadelphia, PA.
- 3/19 20. Webster KL, Kazi S, **Gurses AP**. Barriers to shared mental models in care transitions between pediatric trauma bay and pediatric intensive care unit. International Symposium on Human Factors and Ergonomics in Health Care, Chicago, IL.
- 3/19 21. Abebe E, **Gurses AP**, Xiao Y. Cognitive artifacts supporting medication management tasks during the hospital-to-home care transition: Implications for Design. International Symposium on Human Factors and Ergonomics in Health Care, Chicago, IL.
- 3/19 22. Osei P, Rock C, Scheeler V, Keller SC, Cosgrove SE, **Gurses AP**, Xie A, for the CDC Prevention Epicenter Program. Development of a daily patient room cleaning checklist. International Symposium on Human Factors and Ergonomics in Health Care, Chicago, IL.
- 4/19 23. Tubbs-Cooley H, **Gurses AP**, Alvarez TC, Pickler R. A human factors approach to analyzing patient safety guideline adherence in neonatal intensive care. Pediatric Academic Societies (PAS) 2019 Meeting, Baltimore, MD.
- 3/20 24. **Gurses AP**. Human factors in pediatric patient safety: The SEIPS model and beyond. Pediatric Academics Societies Meeting, Philadelphia, PA.
- 3/20 25. Coppola S, Webster KL, **Gurses AP**. Team trust and performance in pediatric trauma. International Symposium on Human Factors and Ergonomics in Health Care, Toronto, Canada.
- 4/20 26. Wooldridge AR, Carayon P, Hoonakker P, Hose B-Z, Kelly MM, Brazelton TB, Eithun B, Dean SM, Kohler JE, Ross JC, Rusy D, **Gurses AP**. Contextual factors influencing barriers and facilitators in pediatric trauma care transitions. Ergonomics & Human Factors Conference, Stratford-upon-Avon, UK.
- 11/21 27. Miller SD, Joseph S, McCracken A, Pherson E, Olivia-Hemker M, Huang JS, McNamee S, Norko K, **Gurses AP**. The process improvement of biological infusions and injections for children with inflammatory bowel disease (P3-IBD). North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition (NASPGHAN) Annual Conference.
- 11/21 28. Young R, Kenny T, Hendrix N, Espinoza A, Fulda K, **Gurses A**, Xiao Y. Ambulatory medication safety in primary care: A systematic review of its measurements and outcomes. North American Primary Care Research Group (NAPCRG) 49<sup>th</sup> Annual Meeting.
- 11/21 29. Strauss AT, Sidoti CN, Jain VS, Sung HC, Purnell TS, **Gurses AP**, Gurakar A, Jackson J, Levan ML, Gray SH, Hamilton JP. Artificial intelligence: The newest member of the liver transplant evaluation team? AASLD The Liver Meeting. In Hepatology 2021 2021; 74:370A-370A, NJ USA: Wiley.
- 6/22 30. Greyson S, Keita M, Sharma R, Keller S, **Gurses AP**, Samus Q, Arbaje A. Cultural perceptions of trust and resource access during post-acute care transitions of older Latinos living with dementia. 22<sup>nd</sup> World Congress of Gerontology and Geriatrics, Buenos Aires City, Argentina.
- 10/22 31. **Gurses AP**, Roth E, Stewart M, Perry SJ, Pennathur P, Sax H, Bell M. Human factors engineering in infection prevention and control: Opportunities, examples, and the future. Human Factors and Ergonomics Society Annual Meeting.

- 10/22 32. Klein G, **Gurses AP**, Perry SJ, Eisenberg E, Osei P. Contributions of the patient (and family) to a successful diagnosis in the emergency department. Human Factors and Ergonomics Society Annual Meeting.
- 7/24 33. Klein G, Newsome E, Hoy K, Eisenberg E, Perry S, Osei P, Peterson S, **Gurses AP**. Diagnostic expertise in the emergency department, 17<sup>th</sup> International Conference on Naturalistic Decision Making, Auckland, New Zealand.
- 9/24 34. Xiao Y, **Gurses AP**, Rayo M, Werner N. Improving healthcare safety: What new and not-so-new insights from the Safety-II framework for safety improvement in complex adaptive systems. Human Factors and Ergonomics Society Annual Meeting.
- 9/24 35. Alam L, Daodu O, Myles R, Patel R, Slagle J, Dye E, Wael A, France D, Khyzer A, France D, **Gurses AP**. A Safety II approach to NICU nursing workload: Unanticipated workload challenges and self-initiated mitigation strategies. Human Factors and Ergonomics Society Annual Meeting.
- 10/24. 36. Han-Oh S, Adam D, He K, Peng Y, Marsh I, Jia X, Wright JL, Narang A, Bell L, Urie DL, **Gurses AP**, Biddison LD, Liu A. Artificial intelligence assisted radiotherapy quality assurance workflow for radiation oncology clinical staff well-being improvement. International Conference on Physician Health, Halifax, Nova Scotia, Canada.