

Vincent Staggs, PhD, PStat®

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Kansas City, MO 64108
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EXPERIENCE

- 2015-present Research Faculty, Biostatistics & Epidemiology, Health Services & Outcomes Research, Children's Mercy Kansas City
Associate Professor (2016-present), Assistant Professor (2015-2016), School of Medicine, University of Missouri-Kansas City
Adjunct Assistant Professor, School of Nursing, University of Kansas Medical Center
- 2010-2014 Research Assistant Professor, University of Kansas Medical Center,
Department of Biostatistics (2011-2014), School of Nursing (2010-2014)
- 2009-2010 Senior Defense Analyst, Booz Allen Hamilton
- 2007-2009 Assistant Psychology Instructor and Graduate Teaching Assistant, University of Kansas
- 2005-2009 Adjunct Mathematics Professor, Johnson County Community College
- 2006-2007 Graduate Research Assistant, University of Kansas, Schiefelbusch Life Span Institute
- 2004-2006 Adjunct Mathematics Instructor, University of Missouri-Kansas City
- 2002-2003 National Science Foundation VIGRE Fellow, Iowa State University, Department of Statistics
- 2001-2002 Graduate Psychology Instructor, University of Illinois at Urbana-Champaign
- 2000-2001 Graduate Research Assistant, University of Illinois at Urbana-Champaign

EDUCATION

- 2009 **PhD, Quantitative Psychology, University of Kansas**
Emphases: Mixed models, bootstrap methods, psychometrics
- 2004 **MA, Psychology, University of Illinois at Urbana-Champaign**
Emphases: Social psychology, statistics
- 2002-2003 **National Science Foundation VIGRE Fellowship, Statistics, Iowa State University**
- 2000 **MS, Mathematics, Missouri State University**
Emphases: Statistics, differential equations
- 1995 **BS, Mathematics, Evangel University**

PROFESSIONAL

Accredited Professional Statistician (PStat®), American Statistical Association, 2016-present

International Biometric Society, East North American Region, 2015-present

American Statistical Association, 2011-present

Kansas/Western Missouri Chapter, 2011-present

Section on Statistical Consulting, 2011-present

SERVICE

Editorial Board, *Research in Nursing & Health* (2015-present)

Ad hoc reviewer: *Medical Care*, *American Journal of Critical Care*, *Contemporary Clinical Trials Communications*, *Research in Nursing & Health*, *BMJ Open*, *International Journal of Nursing Studies*, *The Joint Commission Journal on Quality and Patient Safety*, *BMC Geriatrics*, *Nursing Research*, *Australian Health Review*, *Archives of Gerontology and Geriatrics*, *Nursing Outlook*

Leader and co-founder, Children's Mercy Advanced Analytics Group (2015-present)

University of Kansas Cancer Center Protocol Review and Monitoring Committee (2016-present)

Children's Mercy Hematology/Oncology/BMT Protocol Review Committee (2016-present)

SOFTWARE

SAS, R, WinBUGS, Mplus, C, S-plus, CEFA, BILOG, StatXact, Resampling Stats

PEER-REVIEWED PUBLICATIONS

1. **Staggs VS**, Cramer EC. Can nursing units with high fall rates be identified using one year of data? Reliability of fall rates as a function of the number of quarters on which they are based. *Research in Nursing & Health*. 2016. DOI: 10.1002/nur.21770
2. **Staggs VS**, Olds D, Cramer E, Shorr RI. Nursing skill mix, nurse staffing level, and physical restraint use in U.S. hospitals: A longitudinal study. *Journal of General Internal Medicine*. 2016. DOI: 10.1007/s11606-016-3830-z
3. **Staggs VS**. Deviations in monthly staffing and injurious assaults against staff and against patients on psychiatric units. *Research in Nursing & Health*. 2016. DOI: 10.1002/nur.21735
4. **Staggs VS**, Cramer EC. Reliability of pressure ulcer rates: How precisely can we differentiate among providers, and does the standard signal-noise reliability measure reflect this precision? *Research in Nursing & Health*. 2016;29(4):298-305. DOI: 10.1002/nur.21727
5. **Staggs VS**. Reliability assessment of a hospital quality measure based on rates of adverse outcomes on nursing units. *Statistical Methods in Medical Research*. 2015. DOI: 10.1177/0962280215618688

6. **Staggs VS.** Comparison of naïve, Kenward-Roger, and parametric bootstrap interval approaches to small-sample inference in linear mixed models. *Communications in Statistics - Simulation and Computation*, 2015. DOI: 10.1080/03610918.2015.1019002
7. **Staggs VS, Gajewski BJ.** Bayesian and frequentist approaches to assessing reliability and precision of health care provider quality measures. *Statistical Methods in Medical Research*. 2015. DOI: 10.1177/0962280215577410
8. **Staggs VS.** Injurious assault rates on inpatient psychiatric units: Associations with RN and non-RN staffing. *Psychiatric Services*. 2015;66(11):1162-1166. DOI: 10.1176/appi.ps.201400453
9. **Staggs VS.** Trends in use of seclusion and restraint in response to injurious assault in U.S. psychiatric units, 2007-2013. *Psychiatric Services*. 2015;66(12):1369-1372. DOI: 10.1176/appi.ps.201400490
10. **Staggs VS.** Correlates of licensed and unlicensed nurse staffing levels on inpatient psychiatric units. *Journal of Nursing Care Quality*. 2015;30:359-65. DOI: 10.1097/NCQ.0000000000000120
11. **Staggs VS, Mion LC, Shorr RI.** Consistent differences in medical unit fall rates: Implications for research and practice. *Journal of the American Geriatrics Society*. 2015;63(5):983-987. DOI: 10.1111/jgs.13387
12. **Staggs VS.** Trends, victims, and injuries in injurious patient assaults on adult, geriatric, and child/adolescent psychiatric units in U.S. hospitals, 2007-2013. *Research in Nursing & Health*. 2015;38(2):115-120. DOI: 10.1002/nur.21647
13. **Staggs VS, Davidson J, Dunton N, Crosser B.** Challenges in defining and categorizing falls on diverse unit types: Lessons from the expansion of the NDNQI falls indicator. *Journal of Nursing Care Quality*. 2015;30:106-112. DOI: 10.1097/NCQ.0000000000000085
14. **Staggs VS, Mion LC, Shorr RI.** Assisted and unassisted falls: Different events, different outcomes, different implications for quality of hospital care. *The Joint Commission Journal on Quality and Patient Safety*. 2014;40:358-364.
15. **Staggs VS, Dunton N.** Associations between rates of unassisted inpatient falls and levels of registered and non-registered nurse staffing. *International Journal for Quality in Health Care*. 2014;26:87-92. DOI: 10.1093/intqhc/mzt080
16. **Staggs VS.** Nurse staffing, RN mix, and assaults on psychiatric units. *Research in Nursing and Health*. 2013;36:26-37. DOI: 10.1002/nur.21511
17. **Staggs VS, He J.** Recent trends in nurse staffing in hospitals in the United States. *Journal of Nursing Administration*. 2013;43:388-393. DOI: 10.1097/NNA.0b013e31829d620c
18. **Staggs VS, Dunton N.** Hospital and unit characteristics associated with nursing turnover include skill mix but not staffing level: An observational cross-sectional study. *International Journal of Nursing Studies*. 2012;49:1138-1145. DOI: 10.1016/j.ijnurstu.2012.03.009
19. **Staggs VS, Knight JE, Dunton N.** Understanding unassisted falls: Effects of nurse staffing level and nursing staff characteristics. *Journal of Nursing Care Quality*. 2012;27:194-199. DOI: 10.1097/NCQ.0b013e318241da2d
20. **Clements MA, Staggs VS.** A mobile app for diabetes data sharing: impact on adherence and glycemic control among youths with type 1 diabetes in routine care. *Journal of Diabetes Science and Technology*. 2017.

21. Fox AT, Martin LE, Bruce J, Moreno JL, **Staggs VS**, Lee HS, Goggin K, Harris KJ, Richter K, Patten C, Catley D. Executive function fails to predict smoking outcomes in a clinical trial to motivate smokers to quit. *Drug and Alcohol Dependence*. 2017.
22. He J, **Staggs VS**, Bergquist-Beringer S, Dunton N. Nurse staffing and patient outcomes: A longitudinal perspective on trend and seasonality. *BMC Nursing*. 2016. DOI:10.1186/s12912-016-0181-3
23. Boyle DK, Jayawardhana A, Burman ME, Dunton N, **Staggs VS**, Bergquist-Beringer S, Gajewski BJ. A pressure ulcer and fall rate quality composite index for acute care units: A measure development study. *International Journal of Nursing Studies*. 2016. DOI: 10.1016/j.ijnurstu.2016.08.020
24. Cheng N, Yao M, Yu E, **Staggs VS**, Fan F. Elevated expression of Chemokine C-C Ligand 2 in stroma is associated with recurrent basal-like breast cancers. *Modern Pathology*. 2016;29:810-823. DOI: MODPATHOL.2016.78
25. Goggin K, Wexler C, Nazir N, Staggs VS, Gautney B, Okoth V, Khamadi SA, Ruff A, Sweat M, Cheng A, Finocchiaro-Kessler S. Predictors of infant age at enrollment in Early Infant Diagnosis services in Kenya. *AIDS and Behavior*. 2016;20:2141-2150. DOI: 10.1007/s10461-016-1404-z
26. Harris KJ, Bradley-Ewing A, Goggin K, Richter KP, Patten C, Williams K, Lee HS, **Staggs VS**, Catley D. Recruiting unmotivated smokers into a smoking induction trial. *Health Education Research*. 2016;31(3):363-374. DOI: 10.1093/her/cyw018
27. Woldetsakid MH, Goggin K, **Staggs VS**, Wanyenze RK, Beyeza-Kashesya J, Mindry D, Finocchiaro-Kessler S, Khanakwa S, Wagner GJ. Safer conception methods and counseling: Psychometric evaluation of new measures of attitudes and beliefs among HIV clients and providers. *AIDS and Behavior*. 2016;20(6):1370-1381. DOI: 10.1007/s10461-015-1199-3
28. Goggin K, Finocchiaro-Kessler S, **Staggs VS**, Woldetsadik MA, Wanyenze RK, Beyeza J, Mindry D, Khanakwa S, Wagner, GJ. Attitudes, knowledge and correlates of self-efficacy for the provision of Safer Conception Counseling among Ugandan HIV providers. *AIDS Patient Care and STDs*. 2015;29(12):651-550. DOI: 10.1089/apc.2015.0089
29. Boyle DK, Cramer E, Potter C, **Staggs VS**. Longitudinal association of Registered Nurse national nursing specialty certification and patient falls in acute care hospitals. *Nursing Research*. 2015;64(4):291-299. DOI: 10.1097/NNR.0000000000000107
30. Hayat MJ, Higgins M, Schwartz TA, **Staggs VS**. Statistical challenges in nursing education and research: An expert panel consensus. *Nurse Educator*. 2015;40: 21-25. DOI: 10.1097/NNE.0000000000000080
31. McGill MR, **Staggs VS**, Sharpe MR, Lee WM, Jaeschke H, Acute Liver Failure Study Group. Serum mitochondrial biomarkers and damage-associated molecular patterns are higher in acetaminophen overdose patients with poor outcome. *Hepatology*. 2014;60:1336-1345. DOI: 10.1002/hep.27265
32. Waters TM, Daniels MJ, Bazzoli GJ, Perencevich EN, Dunton N, **Staggs VS**, Potter C, Fareed N, Liu M, Shorr RI. Effect of Medicare's nonpayment for hospital acquired conditions: Lessons for future policy? *JAMA Internal Medicine*. 2015;175(3):347-354. DOI: 10.1001/jamainternmed.2014.5486
33. Woolbright BL, McGill MR, **Staggs VS**, et al. Glycodeoxycholic acid levels as prognostic biomarker in acetaminophen-induced liver failure. *Toxicological Sciences*. 2014;142:436-444. DOI: 10.1093/toxsci/kfu195

34. Choi J, **Staggs VS**. Comparability of nurse staffing measures in examining the relationship between RN staffing and unit-acquired pressure ulcers: A unit-level descriptive, correlational study. *International Journal of Nursing Studies*. 2014;51:1344-1352. DOI: 10.1016/j.ijnurstu.2014.02.011
35. Park SH, Boyle DK, Bergquist-Beringer S, **Staggs VS**, Dunton N. (2014). Concurrent and lagged effects of unit-level registered nurse turnover and staffing on unit-acquired pressure ulcer outcomes in acute care hospitals. *Health Services Research*. 2014;49:1205-1225. DOI:10.1111/1475-6773.12158
36. Choi J, Bergquist-Beringer S, **Staggs VS**. Linking RN workgroup job satisfaction to pressure ulcers among older adults on acute care hospital units. *Research in Nursing and Health*. 2013;36:181-190. DOI: 10.1002/nur.21531
37. He J, Bergquist-Beringer S, **Staggs VS**, Dunton N. Unit-level time trends and seasonality in the rate of hospital-acquired pressure ulcers in U.S. acute care hospitals. *Research in Nursing and Health*. 2013;36:171-180. DOI: 10.1002/nur.21527
38. Parks J, Klaus SF, **Staggs VS**, Pena M. Outcomes of nasal bridling for enteral tube securement in burn patients. *American Journal of Critical Care*. 2013;22:136-142. DOI: 10.4037/ajcc2013105
39. He J, Dunton N, **Staggs VS**. Unit-level time trends in inpatient fall rates of U.S. hospitals. *Medical Care*. 2012;50: 801-807. DOI: 10.1097/MLR.0b013e31825a8b88
40. Riazi M, Marcario JK, Samson FK, Kenjale H, Adany I, **Staggs V**, Ledford E, Marquis J, Narayan O, Cheney PD. Rhesus macaque model of chronic opiate dependence and neuro-AIDS: longitudinal assessment of auditory brainstem responses and visual evoked potentials. *Journal of Neuroimmune Pharmacology*. 2009;4: 260-275. DOI: 10.1007/s11481-009-9149-3

PAPERS SUBMITTED

Staggs VS. Beyond the Bland-Altman plot: Hypothesis testing and improved prediction limits for assessing agreement between two raters or methods of measurement. (in revision).

Mehyar F, Wilson S, Santos M, **Staggs VS**, Sharma N. Immediate effect of lumbar mobilization on back muscles. (under review). *Journal of Manipulative and Physiological Therapeutics*.

Carlson J, Mitchell T, Saelens B, **Staggs VS**, Kerr J, Frank L, Schipperijn J, Conway T, Glanz K, Chapman J, Cain K, Sallis J. Within-person associations of young adolescents' physical activity across five primary locations: Is there evidence of cross-location compensation? (under review). *International Journal of Behavioral Nutrition and Physical Activity*.

Mehyar F, Wilson S, **Staggs VS**, Aoyagi K, Sharma NK. Validity and reliability of inertial measurement unit for measuring lumbar mobilization. (under review). *Journal of Biomechanics*.

Becker M, van Haandel L, Funk R, Gaedigk R, Matzuka B, **Staggs VS**, Leeder JS. Dynamic changes in erythrocyte methotrexate and folate associated with response in juvenile idiopathic arthritis. (in revision).

Fang WB, Warren K, Fraga G, Huang L, Shyr Y, Li W, Xie L, **Staggs VS**, Cheng N. A CCL2 chemokine signaling pathway as a prognostic signature to distinguish breast ductal carcinoma in situ associated with invasive progression. (under review). *Breast Cancer Research*.

Han A, McDougall GJ, **Staggs VS**, Johnson DK, McDowd JM. Executive function as predictors of instrumental activities of daily living and physical function in community-dwelling older adults. (in revision). *Journal of Gerontological Nursing*.

Shorr RI, **Staggs VS**, Waters TM, Daniels MJ, Liu M, Dunton N, Mion LC. The effect of Centers for Medicare & Medicaid Services nonpayment on rates of fall injury and physical restraint use in U.S. hospitals. (in revision).

RESEARCH REPORTS, BRIEFS, AND OTHER PUBLICATIONS

Staggs VS. Reported versus actual assault rates: In reply [Letter to the editor]. *Psychiatric Services*; 2016;67(3):358-359.

Staggs VS, Cramer E. Falls Measures Reliability Study. Report to the American Nurses Association; 2014.

Staggs VS. Hospital-Acquired Pressure Ulcer Reliability Study. Report to Press Ganey Associates, Inc.; 2014.

Staggs VS, Cramer E. Understanding the work environment and its effects: Research involving the RN Survey. In: Dunton N, Montalvo I, Staggs VS, eds. *The NDNQI RN Survey: A Tool for Assessing, Understanding, and Improving the Nursing Work Environment*. Silver Spring, MD: American Nurses Association; 2013:80-89.

Staggs VS. Nurse staffing and patient falls. Partnership for Patients Newsletter. U.S. Department of Health and Human Services; 2013. (Invited article)

Staggs VS. Focusing on unassisted falls. Partnership for Patients Newsletter. U.S. Department of Health and Human Services; 2012. (Invited article)

Staggs VS, Boyle DK, Cramer E, Dunton N. Evidence on Total Fall Rate (NQF# 0141) and Injury Fall Rate (NQF #0202). Brief submitted by the American Nurses Association to the National Quality Forum; 2012.

Staggs VS, Dunton N. What unit and hospital characteristics are linked to RN turnover? *Clinical Connections* 2011;10(3). (Invited article for KU Hospital Department of Nursing online newsletter)

Staggs VS, Knight J, Dunton N. Understanding unassisted falls: Effects of nurse staffing level and nursing staff characteristics. *Clinical Connections* 2011;10(5). (Invited article for KU Hospital Department of Nursing online newsletter)

Staggs VS, Dunton N. National Database of Nursing Quality Indicators Methods Development Project: Final Report to the American Nurses Association; 2011.

Cramer EC, **Staggs VS**, Dunton N. Improving the nursing work environment. *American Nurse Today* 2014;9(1):55-57.

Dunton N, Montalvo I, **Staggs VS**, eds. *The NDNQI RN Survey: A Tool for Assessing, Understanding, and Improving the Nursing Work Environment*. Silver Spring, MD: American Nurses Association; 2013.

Park SH, Boyle DK, **Staggs VS**, Potter C, Dunton N. Reliability and Validity Study of the NDNQI Nurse Turnover Indicators: Final Report to the American Nurses Association; 2013.

Dunton N, Miller P, **Staggs VS**. Report on the 2010 Nursing Quality Indicators Customer Satisfaction Survey. Prepared for the American Nurses Association; 2010.

PRESENTATIONS—NATIONAL/INTERNATIONAL

Staggs VS. Teaching statistics in the context of the larger research enterprise: Toward an holistic approach to teaching non-statisticians how to use data to gain knowledge. Topic contributed paper, Joint Statistical Meeting, Boston, MA. 2014, August.

Staggs VS, Mion LC, Dunton NE, Shorr RI. Assisted and unassisted falls in U.S. hospitals. Presented at the American Geriatrics Society 2013 Annual Scientific Meeting, Grapevine, TX. Selected for Presidential Poster Session based on peer review score. 2013, May.

Staggs VS, Cramer E, Choi J, Park SH. The scientific core of nursing-sensitive indicators. Presented at the American Nurses Association Nursing Quality Conference, Atlanta, GA. 2013, February.

Staggs VS, Dunton N. Magnet status and other unit and hospital characteristics as predictors of nursing turnover. Presented at the American Nurses Credentialing Center National Magnet Conference, Baltimore, MD. 2011, October.

Staggs VS, Fall EC, Templin J, Henson R. Evaluating cognitive diagnostic model Q-matrix completeness: Using covariance and Cohen's κ to detect violations of local independence. Student poster presented at the Annual Meeting of the National Council on Measurement in Education, Chicago, IL. 2007, April.

Khoury MN, **Staggs VS**, Robinson AL, Dunoski BS, Pacicca DM. The relationship of anterior cruciate ligament insertion sites to the distal femoral growth centers: an MRI study. Poster presented at the Orthopaedic Research Society Annual Meeting, San Diego, CA. 2017, March.

Khoury MN, Robinson AL, **Staggs VS**, Dunoski BS, Pacicca DM. The posterior cruciate ligament insertion site to the proximal tibia growth center: an MRI study. Poster presented at the Orthopaedic Research Society Annual Meeting, San Diego, CA. 2017, March.

Mehyar F, Wilson S, **Staggs VS**, Aoyagi K, Sharma N. Measuring lumbar mobilization with inertial measurement unit. Poster presented at the Combined Sections Meeting of the American Physical Therapy Association, Austin, TX. 2017, February.

Hadi H, Barnes C, **Staggs VS**. Likelihood of sensitization to alternate ingredients in patients evaluated for chocolate allergy. Presented at the 71st Annual Scientific Meeting of the Canadian Society for Allergy and Clinical Immunology Society, Montreal, Quebec. 2016, September.

Hadi H, Portnoy JM, Barnes CS, **Staggs VS**. Is there a temporal relationship between outdoor *Alternaria alternata* spore counts and specific IgE *Alternaria alternata* levels? Presented at the American Academy of Allergy, Asthma, and Immunology Annual Meeting, Los Angeles, CA. 2016, March.

Fox AT, Martin LE, Bruce J, **Staggs VS**, Moreno JL, Lee HS, Goggin K, Harris KJ, Richter K, Patten C, Catley D. Executive function fails to predict smoking outcomes in a clinical trial to motivate smokers to quit. Poster presented at the 37th Annual Meeting & Scientific Sessions of the Society of Behavioral Medicine, Washington, DC. 2016, March.

Shirali G, Erickson L, Goggin K, Apperson J, Bingler M, Tucker D, Williams D, Bradley-Ewing A, **Staggs VS**, Lay A, Rabbitt L, Stroup R. Interstage clinical outcomes and resource utilization among babies with single ventricle: Results of a randomized crossover-study comparing standard of care (notebook) to tablet PC-based monitoring. American Heart Association Scientific Sessions, Orlando, FL. 2015, November.

Waters TM, Daniels MJ, Bazzoli GJ, Perencevich EN, Dunton N, **Staggs VS**, Potter C, Fareed N, Liu M, Shorr RI. Effect of Medicare's nonpayment for hospital acquired conditions. Oral presentation, AHRQ Research Conference, Crystal City, VA. 2015, October.

Clements M, **Staggs VS**, Paprocki E, Habib S, Leisner K, Barnes M, Patton S. Glycemic variability: A peril of modern insulin therapy among youths with type 1 diabetes? Joint Annual Conference of the International Society for Pediatric and Adolescent Diabetes and Australasian Paediatric Endocrine Group, Brisbane, Australia. 2015, October.

Erickson L, Shirali G, Stroup R, Apperson J, Bingler M, O'Brien J, Bradley-Ewing A, Williams D, **Staggs VS**,

Goggin K. eHealth (CHAMP App) to improve outcomes and reduce caregiver burden in infants with single ventricle heart disease. Symposium presentation at the 36th Annual Meeting & Scientific Sessions of the Society of Behavioral Medicine, San Antonio, TX. 2015, April.

He J, **Staggs VS**, Bergquist-Beringer S, Dunton N. Longitudinal analyses of the association of nurse staffing and patient outcomes for U.S. acute care hospitals. Contributed paper, Joint Statistical Meeting, Boston, MA. 2014, August.

Hayat MJ, Higgins M, Schwartz T, **Staggs VS**. Statistical challenges in nursing research. Contributed panel session at the Joint Statistical Meeting, Montreal, Canada. 2013, August.

Waters TM, Daniels MJ, Bazzoli GJ, Perencevich EN, Dunton N, **Staggs VS**, Potter C, Fareed N, Liu M, Shorr RI. Hospital responses to Medicare nonpayment for hospital acquired conditions. Presented at the International Health Economics Association 9th World Congress on Health Economics, Sydney, Australia. 2013, July.

He J, Dunton N, **Staggs VS**. Unit-level time trends in inpatient fall rates of US hospitals. Symposium presentation at the Council for the Advancement of Nursing Science 2012 State of the Science Congress on Nursing Research, Washington, DC. 2012, September.

Dunton N, **Staggs VS**, Potter CP. NDNQI research findings for the advanced site coordinator. Presented at the American Nurses Association Nursing Quality Conference, Las Vegas, NV. 2012, January.

Beck SL, Dunton N, **Staggs VS**. Dissemination and implementation of evidence-based methods to measure and improve pain outcomes. Presented at the 6th Annual Meeting of the Robert Wood Johnson Foundation's Interdisciplinary Nursing Quality Research Initiative, Princeton, NJ. 2011, July.

He J, Dunton N, **Staggs VS**. Performance reports and trends in inpatient fall rates in the NDNQI. Presented at the AcademyHealth Annual Research Meeting, Seattle, WA. 2011, June.

PRESENTATIONS—LOCAL/REGIONAL

Staggs VS. Statistical considerations in genomics research. Presented at the Children's Mercy Center for Pediatric Genomics Medicine Master Class. 2016, Nov.

Staggs VS. Healthcare quality measurement: How reliably can we differentiate among providers based on rates of nursing-sensitive adverse events? Presented at the 9th Annual Innovations in Design, Analysis, and Dissemination: Frontiers in Biostatistics Symposium. 2016, April.

Staggs VS. Small-sample inference in the linear mixed model: Comparison of analytic and parametric bootstrap approaches. Presented at the University of Missouri-Kansas City Department of Mathematics Graduate Seminar Series, Kansas City, MO. 2014, September.

Staggs VS. Exploring non-linear associations between nurse staffing and patient assaults in psychiatric units using cubic splines in a three-level generalized mixed model for longitudinal, clustered, over-dispersed count data. Presented at the University of Kansas Center for Research Methods and Data Analysis Weekly Colloquium, Lawrence, KS. 2013, December.

Staggs VS. Current topics, trends, and opportunities in the field of statistics. Presented at the University of Kansas Quantitative Psychology Proseminar, Lawrence, KS. 2013, December.

Staggs VS, Dunton N. Does increased nurse staffing prevent or provoke assaults on psychiatric units? Generalized mixed modeling of longitudinal data from the National Database of Nursing Quality Indicators. Presented at the University of Kansas Medical Center Department of Biostatistics Seminar Series, Kansas City, KS. 2011,

November.

Garbi L, Welde L, **Staggs VS**. Parental preferences for delivery at periviability. Abstract submitted to the Eastern Society for Pediatric Research Annual Meeting, Philadelphia, PA. 2017, March.

McGill MR, **Staggs VS**, Sharpe MR, Lee WM, Jaeschke H. Mitochondrial damage biomarkers predict outcome in patients with acetaminophen-induced acute liver failure. Presented at the University of Kansas School of Medicine's 5th Annual Residents, Postdocs and Fellows Research Forum, Kansas City, KS. 2014, May.

Groutas C, **Staggs VS**. Unassisted falls and their association with various nursing workforce variables. Poster presented at the Kansas Undergraduate Research Day at the Capitol, Topeka, KS. 2014, February.

Dunton N, Cramer E, **Staggs VS**, Potter C. The latest research from NDNQI on nursing quality and safety. Panel presentation at KUMC School of Nursing Scholarship Forum, Kansas City, KS. 2013, December.

Groutas C, **Staggs VS**. Unassisted falls and their association with various nursing workforce variables. Student poster presented at the 7th Annual Mind and Heart Symposium, Kansas City, MO. 2013, November.

He J, **Staggs VS**, Bergquist-Beringer S, Dunton N. Nurse staffing and patient outcomes: A longitudinal analysis at the aggregate level of data. Poster presented at the University of Kansas Medical Center Women in Medicine and Science Poster Session, Kansas City, KS. 2013, September.

Miller PA, Davidson J, Shea S, Longhofer D, **Staggs VS**. Development of Emergency Department Nurse Staffing and Patient Volume Indicators. Poster presented at the Midwest Nursing Research Society Annual Research Conference, Chicago, IL. 2013, March.

Banh M, **Staggs VS**. Relationship between Pathway to Excellence designation and pressure ulcer acquisition. Student poster presented at the 7th Annual Mind and Heart Symposium, Kansas City, MO. 2011, November.

Dudley K, Boyle DK, **Staggs VS**, Miller PA. The Relationship between nurses' meal breaks and the rate of injury falls and hospital acquired pressure ulcers on medical units. Student poster presented at the Midwest Nursing Research Society Annual Research Conference, Columbus, OH. March, 2011.

GRANTS FUNDED

Specialized Centers in Research in Pediatric Developmental Pharmacology (U54)

PI: Steve Leeder

Dates: 09/01/2016-08/31/2021

Major goal(s): Provide an arena for multidisciplinary interactions between basic and clinical scientists interested in establishing high quality translational research programs in the area of pediatric developmental pharmacology, and a national resource for the education of new scientists pursuing translational research careers in high-priority areas of pediatric developmental pharmacology.

Funding source: NIH/NICHD

Role: Co-investigator

Direct costs: \$2,5000,000

Fall prevention in high- and low-fall hospital nursing units (R56)

PI: Ronald Shorr

Dates: 11/1/2016 – 10/31/2017

Major goal(s): Compare patient- and organization-level approaches to fall prevention in a large sample of high- and low-fall units.

Role: Site PI/Co-Investigator

Direct costs: \$310,000

Determinants of use of safer conception strategies among HIV clients in Uganda (R01 HD072633)

PI: Glen Wagner

Dates: 07/18/2012 – 3/31/2017

Major goal(s): Examine reproductive decision-making and use of conception risk reduction methods of HIV patients with fertility intentions; knowledge, attitudes, and practices of providers regarding safer conception counseling for

PLHA; and structural barriers to provision of support services.
 Role: Co-Investigator Direct costs: \$259,185

Exosome miRNAs as biomarkers and targets for chemo-resistance in Ewing Sarcoma
 PIs: Andrew Godwin, Glenson Samuel
 Major goal(s): Identify miRNAs associated with chemo-resistance in Ewing Sarcoma, identify potential therapeutic targets of chemo-resistance, and design and deliver siRNA payloads via exosomes to reverse chemotherapy resistance.
 Funding source: Braden's Hope for Childhood Cancer
 Role: Co-investigator Direct costs: \$99,913

Exosomes as biomarkers of disease and therapy-resistance in Ewing Sarcoma
 PI: Glenson Samuel Dates: 08/15/16-08/14/18
 Major goal(s): Examine exosome micro-RNA signatures as prognostic biomarkers to monitor disease response/progression during therapy and detect post-therapy recurrence.
 Funding source: Noah's Bandage Project
 Role: Co-investigator Total costs: \$100,000

Characterization of the impact of the low-income young African-American child stress phenotype on asthma
 PI: Bridgette Jones Dates: 06/01/16-505/30/2018
 Major goal(s): Understand the contributions of stress experienced by low-income African American children to asthma control, including epigenetic effects on expression of asthma-associated genes.
 Funding source: Marion Merrell Dow Clinical Scholar Award
 Role: Co-Investigator Total costs: \$84,396

Enhanced intervention to improve adolescent outcomes: A clinical trial (K23 HD083405-01A1)
 PI: Melissa Miller Dates: 05/01/2016-04/30/2020
 Major goal(s): Enhance and test emergency department SexHealth intervention to prevent STIs/HIV and unintended pregnancy among adolescents.
 Funding source: NIH
 Role: Co-Investigator Total costs: \$489,990

An interactive mHealth app for better glycemic control in families of young kids with T1D (DP3 DK108211)
 PI: Susana Patton Dates: 09/20/2015-09/19/2019
 Major goal(s): Build, refine, and pilot/feasibility test a tailored diabetes education program for parents of young children.
 Funding source: NIH/NIDDKD
 Role: Co-Investigator Direct costs: \$775,464

Linking autism screening in primary care to long-term health outcomes
 PI: Cy Nadler Dates: 04/01/2016-03/31/2017
 Major goal(s): Provide first empirical evidence of effect of routine Autism Spectrum Disorder screening on child health by comparing children who did and did not receive their positive ASD screening result.
 Funding source: Kansas City Area Life Sciences Institute
 Role: Co-Investigator Direct costs: \$45,454

Reducing the Extent of Variation in Infant Sepsis Evaluation (the REVISE Study)
 PI: Russell McCulloh Dates: 01/01/2016-12/31/2016
 Major goal(s): Assess the impact of using the iGuideline decision aid app in the management of infants ≤ 90 days old with suspected sepsis on hospitalization, diagnostic testing and treatment practices, and clinical outcomes.
 Funding source: Kansas City Area Life Sciences Institute
 Role: Co-Investigator Total costs: \$50,000

Detection of biliary stricture post orthotopic liver transplantation using serum biomarkers

PI: Hartmut Jaeschke Dates: 1/1/2015-12/31/2015
Major goal(s): Evaluate molecular aspects of biliary stricture development using serum biomarkers of liver injury and dysfunction and evaluate these biomarkers as predictors of progression to biliary stricture in post-transplantation patients.
Funding source: Frontiers: The Heartland Institute for Clinical and Translational Research
Role: Biostatistician Direct costs: \$35,000

National Database of Nursing Quality Indicators (NDNQI) Master Services Agreement
PI: Nancy Dunton Dates: 06/09/2014-2/31/2014
Major goal(s): Manage the NDNQI database and conduct related activities, including research.
Funding source: Press Ganey Associates, Inc.
Role: Researcher Total costs: \$2,500,000 (approx)

U.S. Army Comprehensive Soldier Fitness Project
PI: Peter Harms Dates: 10/01/2013-3/31/2014
Major goal(s): Assess the effectiveness of a resilience-building program and conduct related research.
Funding source: U.S. Department of Defense
Role: Site PI Direct costs (site portion): \$32,029

U.S. Army Comprehensive Soldier Fitness Project
PI: Peter Harms Dates: 10/01/2012-9/30/2013
Major goal(s): Assess the effectiveness of a resilience-building program and conduct related research.
Funding source: U.S. Department of Defense
Role: Site PI Direct costs (site portion): \$51,246

CMS Nonpayment for Iatrogenic Injury and the Risk of Falls in Hospitals (R01AG033005)
PI: Ronald Shorr Dates: 9/1/2009-6/30/2013
Major goal(s): Determine the effect of Medicare hospital payment reforms on rates of falls, injurious falls and physical restraint use in hospitals participating in the NDNQI.
Funding source: NIH
Role: Researcher Direct costs: \$1,319,286

Hospital Responses to Medicare's Nonpayment for Preventable Complications (R01HS020627)
PI: Teresa Waters Dates: 9/1/2011-5/31/2013
Major goal(s): Examine the impact of Medicare's new nonpayment rule on hospital behavior for four of the eight conditions (falls with injury, pressure ulcers, catheter-associated UTIs and central line associated blood infections) in hospitals participating in the NDNQI.
Funding source: NIH (AHRQ)
Role: Researcher Direct costs: \$788,892

National Database of Nursing Quality Indicators (NDNQI) Master Services Agreement
PI: Nancy Dunton Dates: 8/1/2011-06/08/2014
Major goal(s): Manage the NDNQI database and conduct related activities, including research.
Funding source: American Nurses Association
Role: Researcher Total costs: \$13,500,000 (approx)

GRANTS SUBMITTED

Novel strategies in the design of chimeric antigen receptors for neuroblastoma [under review]
PI: Thomas Yankee
Major goal(s): Design next-generation chimeric antigen receptors that are subject to endogenous regulatory mechanisms and give rise to immune responses that closely mimic physiologic immune responses.
Funding source: NIH
Role: Co-Investigator

Functions of CXCR1 chemokine signaling in the inflammatory breast cancer microenvironment [under review]
PI: Nikki Cheng
Major goal(s): Determine the relevance of CXCL8, CXCL1 and CXCR1 chemokine expression in inflammatory breast cancer tissues.
Funding source: NIH
Role: Co-Investigator

Analysis of neutrophil related factors in inflammatory breast cancer [under review]
PI: Nikki Cheng
Major goal(s): Determine the relevance of neutrophils and chemokine-related factors in inflammatory breast cancer tissues.
Funding source: Susan G. Komen
Role: Co-Investigator

Adherence-focused prevention and intervention in pediatric Hematopoietic stem cell transplantation [under review]
PI: Rukhsana Rahmetulla
Major goal(s): Examine the efficacy of a multi-component adherence-promoting intervention package on medication adherence among adolescent and young adult HSCT recipients.
Funding source: Children's Mercy Cancer Center
Role: Co-Investigator

Transforming T1DM care via device data, actionable alerts, and on-time care: The David Project (DP3) [not funded]
PI: Susana Patton
Major goal(s): Build, refine, and pilot test a real-time data listening-driven intervention to promote parent-provider communication and child adherence and glycemic control between in-person clinic visits.
Funding source: NIH/NIDDK
Role: Co-investigator

Optimizing weight management interventions for children with ASD: Adaptive design (R21) [not funded]
PI: Meredith Dreyer Gillette
Major goal(s): Determine feasibility, acceptability, and impact on health outcomes of an adaptive weight management intervention for families of overweight 4-8 year olds with ASD
Funding source: NIH
Role: Co-investigator

Central adrenal insufficiency secondary to radiation therapy in childhood cancer survivors: Comparing the Performances of low-dose and high-dose corticotropin stimulation tests [not funded]
PI: Sripriya Raman
Major goal(s): Examine prevalence and measurement of central adrenal insufficiency in childhood cancer survivors.
Funding source: Marion Merrell Dow Clinical Scholar Award
Role: Co-Investigator

Linking autism screening in primary care to long-term health outcomes [not funded]
PI: Cy Nadler
Major goal(s): Provide first empirical evidence of effect of routine Autism Spectrum Disorder screening on child health by comparing children who did and did not receive their positive ASD screening result.
Funding source: Marion Merrell Dow Clinical Scholar Award
Role: Co-Investigator

Fall prevention in high- and low-fall hospital nursing units (R01 AG051799-01 A1) [not funded]
PI: Ronald Shorr
Funding source: NIH
Major goal(s): Compare patient- and organization-level approaches to fall prevention in a large sample of high- and low-fall units.
Role: Site PI/Co-Investigator

Scientist development award [not funded]

PI: Elizabeth Kessler

Funding source: Rheumatology Research Foundation

Major goal(s): Determine if clinical care for children with juvenile idiopathic arthritis provided via telemedicine is non-inferior to care delivered by a traditional in-person encounter

Role: Mentor/co-investigator

Fall prevention in high- and low-fall hospital nursing units (R01 AG051799-01) [not funded]

PI: Ronald Shorr

Funding source: NIH

Major goal(s): Compare patient- and organization-level approaches to fall prevention in a large sample of high- and low-fall units.

Role: Site PI/Co-Investigator

Development of a neurobehavioral checklist for the identification of symptomology detrimental to mission performance (NNJ13ZSA002N-BMED) [not funded]

PI: Peter Harms

Funding source: NASA

Major goal(s): Develop a neurobehavioral checklist of conditions and symptoms relevant to NASA exploration-class missions based isolated, confined, and extreme environments research.

Role: Site PI/Co-Investigator

Understanding variation in hospital falls (R21) [not funded]

PI: Ronald Shorr

Funding source: NIH

Major goal(s): Compare patient- and organization-level approaches to fall prevention in a large sample of high- and low-fall units.

Role: Site PI/Co-Investigator

Effect of music therapy on self-reported pain as manifested through sleep disturbances in military personnel (R34) [not funded]

PI: Christopher Johnson

Funding source: NIH

Major goal(s): Assess effects of music therapy protocol on sleep disturbance and self-reported pain among military personnel

Role: Co-investigator

Toward a model of healthy eating in aging: the role of nutrition literacy, motivation, and cognition [not funded]

PI: Joan McDowd

Funding source: Frontiers: The Heartland Institute for Clinical and Translational Research

Major goal(s): Examine psychological moderators of relation between nutrition literacy and diet quality in older adults

Role: Co-investigator

Patient and nurse outcomes associated with patient turnover in acute care hospital units [not funded]

PI: Shin Hye Park

Funding source: National Council of State Boards of Nursing

Major goal(s): Assess attributed of high-turnover nursing work environments and examine associations between patient turnover rates and nurse and patient outcomes.

Role: Co-investigator

STUDENT SUPPORT

2016-present	Faculty mentor for Janelle Noel-MacDonnell, post-doctoral fellow, Biostatistics & Epidemiology
2012-present	Dissertation committee for Fahed Mehyar, PhD student, Physical Therapy
2013-2015	Dissertation committee for Ivy Razmus, PhD student, Nursing
2014	Dissertation committee for Kyle Lang, PhD student, Quantitative Psychology

2013-2014 Dissertation committee for Brandon Hidaka, MD/PhD student, Dietetics and Nutrition
 2013-2014 Faculty mentor for Christopher Groutas, BSN honors student, Nursing
 2011-2012 Faculty mentor for Micheal Banh, BSN honors student, Nursing
 2010-2011 Faculty consultant for Elaine Davis, BSN honors student, Nursing
 2010-2011 Faculty consultant for Kayla Dudley, BSN honors student, Nursing

COURSES TAUGHT

2013-2014 Sampling Methods (BIOS 833) [co-taught w/ Jianghua He], KUMC
 2013-2014 Applied Multivariate Methods (BIOS 740), KUMC
 2012-2013 Multivariate Statistics (BIOS 850) [co-taught w/ Jianghua He], KUMC
 2012-2013 Applied Multivariate Methods (BIOS 740), KUMC
 2011-2012 Applied Multivariate Methods (BIOS 740), KUMC
 2010-2011 Mathematical Essentials of Modern Statistics (PSYC 690/993), University of Kansas (KU)
 2008-2009 Statistics (MATH 181), Johnson County Community College (JCCC)
 2008-2009 Calculus II (MATH 242), JCCC
 2007-2008 Statistical Methods in Psychology II (PSYC 651/791), KU
 2007-2008 Statistical Methods in Psychology I (PSYC 650/790) [2 sections], KU
 2006-2007 Calculus II (MATH 242), JCCC
 2006-2007 Business and Applied Calculus I (MATH 231), JCCC
 2005-2006 Business and Applied Calculus II (MATH 232) [2 sections], JCCC
 2005-2006 Calculus III (MATH 241), JCCC
 2005-2006 Calculus I (MATH 241) [2 sections], JCCC
 2005-2006 Calculus I (MATH 210), University of Missouri-Kansas City (UMKC)
 2005-2006 Calculus II (MATH 220) [2 sections], UMKC
 2005-2006 Calculus III (MATH 250) [2 sections], UMKC
 2005-2006 Statistics (MATH 181) [2 sections], JCCC
 2005-2006 Intro to Mathematical Statistics I (MATH 436), UMKC
 2004-2005 Calculus III (MATH 243), JCCC
 2004-2005 Calculus I (MATH 241), JCCC
 2004-2005 Intro to Mathematical Statistics I (MATH 436), UMKC
 2004-2005 Differential Equations (MATH 244), JCCC
 2004-2005 Discrete Mathematics (MATH 205) [2 sections], UMKC
 2004-2005 Calculus II (MATH 220) [2 sections], UMKC
 2004-2005 Introduction to Psychology (PSYC 103), Northwest Missouri State University
 2004-2005 Psychology of Gender (PSYC 314), Avila University
 2004-2005 Foundations of College Math I (MATH 090), Avila University
 2001-2002 Intro to Social Psychology (PSYC 201) [4 sections], University of Illinois at Urbana-Champaign
 1999-2000 Basic Algebra (MATH 122), Evangel University
 1999-2000 Intermediate Algebra (MATH 110) [4 sections], Ozarks Technical Community College
 1999-2000 Intermediate Algebra (MATH 103) [2 sections], Missouri State University
 1998-1999 Intermediate Algebra (MATH 103) [2 sections], Missouri State University
 1995-1996 Intermediate Algebra (MATH 103), Missouri State University