UNIVERSITY OF PENNSYLVANIA – SCHOOL OF NURSING

Curriculum Vitae

DATE: AUGUST 21, 2021

Rebecca R. S. Clark, PhD, MSN, RN, CNM, WHNP-BC

BUSINESS ADDRESS

418 Curie Blvd.

Philadelpia, PA 19104

EDUCATION

PhD, 2018, Johns Hopkins University School of Nursing

MSN, 2010, University of Pennsylvania School of Nursing, Nurse-Midwifery and Women's Health

BSN, 2007, University of Pennsylvania School of Nursing

BA, 2005, University of Pennsylvania School of Arts and Sciences, Classics

POSTGRADUATE TRAINING & FELLOWSHIP APPOINTMENTS

2019-2021, University of Pennsylvania School of Nursing, Center for Health Outcomes and Policy Research Postdoctoral Fellow

2019-2021, Leonard Davis Institute of Health Economics, Associate Fellow

2021, American College of Nurse-Midwives' 2021 Leadership Link program, Participant

2021, University of Pennsylvania's Center for Teaching and Learning Preparing to Teach College STEM, Participant

2021, Implementation Science Institute, University of Pennsylvania School of Medicine, Participant

2021, Penn Science Policy and Diplomacy Group, Science Communication Certificate

2020, Jonas Salk Health Activist, Fellow

PROFESSIONAL EXPERIENCE

2020 - Present, Founder and CEO, MeaSure Co., Philadelphia, PA

ACADEMIC POSITIONS

2021-Present, Assistant Professor, University of Pennsylvania School of Nursing, Philadelphia, PA

2016-2017, Teaching Assistant, Johns Hopkins University School of Nursing, Baltimore, MD

2011-2012, Clinical Instructor, Shepherd University, Sherpherdstown, WV

CLINICAL & ADMINISTRATIVE POSITIONS

- 2021-Present, Nurse Scientist, Pennsylvania Hospital, Philadelphia, PA
- 2011 2015, Midwife, Shenandoah Valley Medical System, Martinsburg, WV
- 2008 2010, Registered Nurse, Hospital of the University of Pennsylvania, Philadelphia, PA

OTHER APPOINTMENTS

- 2021 Present, Leonard Davis Institute of Health Economics, Senior Fellow
- 2015 2018, Robert Wood Johnson Future of Nursing Scholar
- 2012 2015, National Health Service Corps Member

CERTIFICATION/LICENSURE

Specialty Certification

- 2011 Present, Certified Nurse-Midwifer, American Midwifery Certification Board
- 2011 Present, Women's Health Nurse Practitioner, National Certification Corporation

Licensure

Pennsylvania, 2008 - Present

West Virginia, 2011-2015, Inactive

Maryland, 2015-2018, Inactive

HONORS/AWARDS/MEMBERSHIPS IN HONORARY SOCIETIES

- 2016 2017, Best Manuscript of the Year, Journal of Perinatal and Neonatal Nursing
- 2009, DAISY Award for Extraordinary Nurses, Hospital of the University of Pennsylvania
- 2007, Summa Cum Laude, University of Pennsylvania
- 2006 2007, Dean's List, University of Pennsylvania
- 2005, Member, Phi Beta Kappa, Delta Chapter
- 2005, Magna Cum Laude, University of Pennsylvania
- 2002 2005, Dean's List, University of Pennsylvania

2002 – 2005, University Scholar, University of Pennsylvania

2002 – 2005, Benjamin Franklin Scholar, University of Pennsylvania

RESEARCH

Past/Present Funded Research Grants

Pilot Grant, Leonard Davis Institute of Health Economics, Clark, Rebecca (PI), 01/01/21-12/31/21

Hospital nursing resources as a health equity lever to address racial disparities in cesarean birth

Cesarean birth, the most common surgery in the United States, is marked by stark racial disparities. Black women receive cesareans far more frequently than white women, regardless of sociodemographic or medical risk factors. Quality improvement efforts to reduce cesarean birth rates do not address this racial inequity. The purpose of this study is to describe differences in cesarean rates between black and white women across hospitals serving high to low proportions of black women and to determine the extent to which racial disparities in cesarean rates are explained by variation in hospital nursing resources across hospitals.

Role: PI, Mentors/Co-Investigators: Eileen Lake and Sindhu Srinivas

T32NR007104, National Institute of Nursing Research, Aiken, McHugh, Lake (PI), 07/01/19-06/30/21

Advanced Training in Nursing Outcomes Research

Research focused on describing maternity nursing care and resources in the United States and its association with maternal and infant outcomes and the disparities in those outcomes. Focus of research is on patient safety and quality of care outcomes, particularly birth outcomes, and nursing workforce issues, specifically the relationship between nursing work environment and patient outcomes. Published work includes, but is not limited to: the association of the clinical work environment with the quality and safety of maternity care in the United States; the association of nurse burnout and job dissatisfaction with missed maternity care in the United States; and variation in SVB rates across hospitals in the United States.

Role: Post-Doctoral Scholar

Future of Nursing Scholar, Robert Wood Johnson Foundation/Johns Hopkins University (PI)

09/01/15-06/30/18

Synthetic Oxytocin Use in Obstetrics and the Outcomes of Postpartum Hemorrhage and Primary Cesarean

Research focused on maternal morbidity and quality outcomes (postpartum hemorrhage and cesarean section) among low-risk women and the association of these outcomes with the use of synthetic oxytocin, a high-alert medication frequently used in managing labors in the United States. Cesarean section, in particular, is a maternal outcome marked by racial disparities in the United States and, while not the specific aim of this study, this association held true in this study sample. Black women in this sample were more likely than their white counterparts to have a cesarean section and, unlike their white counterparts, were more likely to have a cesarean section due to non-reassuring fetal heart tones.

Role: GR

Doctoral Dissertation

Clark RRS. Oxytocin Use in Obstetric Practice and its Association with Postpartum Hemorrhage and Primary Cesarean Section in the United States. Dissertation Supervisor: Dr. Nicole Warren

PUBLICATIONS – Latest first

Journal Articles: Research, Peer Reviewed [Print or other media; * indicates data-based]

Clark RRS, Peele ME, Lake ET. Maternity Nursing Resources by Unit Type Across Regions of the United States. (Under Review).*

Lake ET, Narva AM, Holland S, Smith JG, Cramer E, Rosenbaum KEF, French R, Clark RRS, Rogowski J. Hospital Nurses' Moral Distress and Mental Health during COVID-19. JAN. 2021. https://doi.org/10.1111/jan.15013*

Clark RRS, French R, Lorch S, O'Rourke K, Lake ET. Within-Hospital Concordance of Opioid Exposure Diagnosis Coding in Mothers and Newborns. Hosp Peds. pp. 1-17. (In Press).*

Clark RRS, Hou J. Three machine learning algorithms and their utility in exploring risk factors associated with primary cesarean section in low-risk women: A methods paper [published online ahead of print, 2021 Mar 2]. Res Nurs Health. 2021. doi:10.1002/nur.22122

Lake ET, French R, Clark RRS, O'Reilly K, Lorch S. Neonatal Abstinence Syndrome Newborns Are Clustered in Poorer Quality Hospitals. Hosp Peds. (In Press).*

Clark RRS, Lake ET. Spontaneous vaginal birth varies significantly across US hospitals [published online ahead of print, 2020 Nov 10]. *Birth*. 2020. doi:10.1111/birt.12508*

Lasater KB, **Clark RRS**, McCabe M, Frankenberger WD, Agosto PM, Riman KA, Aiken LH. Predictors of Specialty Certification among Pediatric Hospital Nurses. *J Clin Nurs*. 2020. doi.org/10.1111/JOCN.15540. Epub ahead of print.*

Clark RRS, Warren N, Shermock KM, Perrin N, Lake E, Sharps PW. The Role of Oxytocin in Primary Cesarean Birth Among Low-Risk Women. *J Midwifery Womens Health*. 2020 Sep 15. doi: 10.1111/jmwh.13157. Epub ahead of print. PMID: 32930507.*

Clark RRS, Lake ET. Association of Clinical Nursing Work Environment with Quality and Safety in Maternity Care in the United States. *MCN Am J Matern Nurs*. 2020;1-6. doi:10.1097/nmc.0000000000000053*

Clark RRS, Lake E. Burnout, job dissatisfaction and missed care among maternity nurses. *J Nurs Manag*. 2020;(April):1-6. doi:10.1111/jonm.13037*

Journal Articles: Research, Peer Reviewed Reviews

Clark RRS. Breastfeeding in Women on Opioid-Maintenance Therapy: A Review of Policy and Practice. *Journal of Midwifery and Women's Health.* 2019;64(5):545-558. doi: 10.1111/jmwh.12982

Safley R, Swietlikowski J. Pain Management in Opioid-Dependent Pregnant Women: A Clinical Review. *Journal of Perinatal and Neonatal Nursing*. 2017;31(2):118-125. doi: 10.1097/JPN.000000000000244.

Journal Articles: Non-Peer Reviewed Research/Other

Clark RRS. Updates from the Literature. J Midwifery Womens Health. 2021. (In Press).

Clark RRS. Updates from the Literature, November/December 2020 [published online ahead of print, 2020 Nov 10]. *J Midwifery Womens Health*. 2020;10.1111/jmwh.13171. doi:10.1111/jmwh.13171

Guest Editorials, Book Reviews, Other publications

Clark RRS, French R. Conflating Race and Genetics among Newborns with Neonatal Abstinence Syndrome, 2021 (Accepted).

Lake ET, Rosenbaum K, Clark RRS, French R, O'Rourke K. Treating Newborns in Opioid Withdrawal: A Nursing-First Approach. *Smerconish*. 2021. https://www.smerconish.com/exclusive-content/treating-newborns-in-opioid-withdrawal-a-nursing-first-approach. Accessed May 26, 2021.

Clark RRS. Toward More Optimal Birth Outcomes. *Leonard Davis Institute of Health Economics' Health Policy\$ense Blog*. 1 December 2020.

PATENTS & COPYRIGHTS

U.S. Patent 17/337,036, "Postpartum blood loss collection and measurement device and method of use," June 2, 2021

RECENT LECTURES BY INVITATION, SPEECHES AND WORKSHOPS

Clark RRS. Abstract Writing. Pennsylvania Hospital Research and Evidence-Based Practice Council, August 2021.

Clark RRS. Effects of Nurse Staffing and Nurse Education on Missed Nursing Care and Breastfeeding Support in Maternity Units with Different Nurse Work Environments (webinar). AcademyHealth's Interdisciplinary Research Group on Nursing Issues, October 2021.

Clark RRS, Peele M, Lake E. Effects of Nurse Staffing and Nurse Education on Missed Care and Breastfeeding Support in Maternity Units with Different Nurse Work Environments (poster). AcademyHealth Annual Research Meeting, June 2021.

E Lake, A Narva, S Holland, J Smith, E Cramer, K Rosenbaum, R French, **RRS Clark**, J Rogowski. *Hospital Nurses' Moral Distress and Mental Health during COVID-19* (poster). AcademyHealth Annual Research Meeting, June 2021.

Clark RRS, Lake, E. *Spontaneous Vaginal Birth Varies Significantly Across U.S. Hospitals* (poster). American College of Nurse-Midwives 2021 Annual Conference. (accepted).

Clark RRS, Lake E. *Poor Grades in Obstetric Quality and Safety* (poster). AcademyHealth Annual Research Meeting, June 2020.

Lake E, **Clark RRS**, French R, O'Reilly K, Lorch S. *Neonatal Abstinence Syndrome or Opioid Exposure? Inconsistent Coding of Opioid Exposure among Mothers and Infants* (poster). AcademyHealth Annual Research Meeting, June 2020.

Lake E, French R, Clark RRS, O'Reilly K, Lorch S. Racial Disparities Among Opioid Exposed Infants (poster). AcademyHealth Annual Research Meeting, June 2020.

Clark RRS. *Maternal Morbidity, Mortality, Disparities and the Role of Nursing* (invited talk). Center for Global Women's Health, University of Pennsylvania School of Nursing, 30 September 2019.

Rao K, Warren N, Mayra K, Srivastava S, **Safley R**, and Gupta J. *AMANAT Evaluation* (poster). International Confederation of Midwives 2017 Triennial, Toronto, Canada.

Safley R and Swietlikowski J. *Pain Management in Opioid-Dependent Pregnant Women* (podium). American College of Nurse-Midwives (ACNM) 2017 Annual Conference, Chicago, IL.

Safley R. Adapting the Quality-Caring Model to Guide Women-Centered Care in the Third Stage of Labor (podium). International Council on Women's Health Issues 2016 Annual Conference, Baltimore, MD.

Safley R. Those Magic Moments: The state-of-the-science regarding the Third Stage of Labor (podium). ACNM 2016 Annual Conference, Albuquerque, NM.

Safley R. University of Pennsylvania School of Nursing's Midwifery and Women's Health Program 35th Anniversary Celebration. Invited Speaker. 2016.

MEMBERSHIPS IN PROFESSIONAL & SCIENTIFIC SOCIETIES & OFFICES HELD

International

- 2007 Present, Sigma Theta Tau, Xi Chapter
- 2020 Present, AcademyHealth
- 2020 Present, AcademyHealth's Interdisciplinary Research Group on Nursing Issues
- 2020 Present, Quality Maternal and Newborn Care Research Alliance

National

- 2010 Present, American College of Nurse-Midwives (Students and New Midwives Committee Member, 2015 2019)
- 2015 Present, American Nurses Association
- 2020 Present, Association of Women's Health, Obstetric, and Neonatal Nurses
- 2019 Present, Leonard Davis Institute of Health Economics

State

2020 – Present, American College of Nurse-Midwives Pennsylvania Affiliate (Board Member, Legislative Committee Member, and Health Equity and Anti-Racism Committee from 2020 – Present)

SELECTED PROFESSIONAL ACTIVITIES

- 2021 Present, Birth, Peer Reviewer
- 2021 Present, Health Services Research, Peer Reviewer
- 2020 Present, Journal of Midwifery and Women's Health, Contributing Editor

- 2020 Present, Medical Care, Peer Reviewer
- 2020 Present, Research in Nursing and Health, Peer Reviewer
- 2020 Present, Amerian Nurse, Peer Reviewer
- 2016 Present, Journal of Midwifery and Women's Health, Peer Reviewer
- 2017, Journal of Midwifery and Women's Health, Award Selection Committee Member

Codes for past/present funded research and program grants

R01 – NIH R01

PP – NIH Program Project, Center or Core Grants

FG – Federal Grants – Other (including other individual NIH grants and grants from VA, NSF, DOJ, DOD, AHRQ, DOE, etc.)

CT - Clinical Trials

TG - Training Grants

IG – Industrial Grants (including pharmaceutical)

PG - Private Foundation Grants (including internal Penn grants)

 \mathbf{O} – Other

Notes:

- 1. For Program projects, specify whether PI, co-leader or project leader. For center, core and training grants, similarly specify your role.
- 2. Include any additional, brief information. For clinical trials, for example, specify if multicenter or single center and indicate role of Penn site. Explain any grants in "Other" category.

12/6/96, Personnel Committee revised 2/26/97, 3/3/97, 4/14/97, 11/6/00, 1/14/08