

Kenneth J. Nieser, PhD

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EDUCATION & TRAINING

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| 2023–present | Postdoctoral Fellow, Center for Innovation to Implementation
VA Palo Alto Health Care System, Menlo Park, CA |
| 2023–present | Postdoctoral Fellow, Department of Surgery
Stanford-Surgery Policy Improvement Research and Education Center
Stanford School of Medicine, Stanford, CA |
| 2018–2023 | Ph.D. Epidemiology, Minor in Statistics
Department of Population Health Sciences, University of Wisconsin–Madison
School of Medicine and Public Health, Madison, WI |
| 2009–2013 | B.A. Physics and Mathematics, High Honors
Swarthmore College, Swarthmore, PA |

RESEARCH & PROFESSIONAL EXPERIENCE

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|-----------|---|
| 2020–2023 | Research Assistant, Department of Population Health Sciences, University of Wisconsin–Madison, Madison, WI. (PI: Amy Cochran) |
| 2019–2020 | Project Assistant, Department of Population Health Sciences, University of Wisconsin–Madison, Madison, WI. (PI: Amy Cochran) |
| 2017–2018 | Senior Analyst, Healthgrades, Madison, WI |
| 2015–2017 | Market Analyst, Healthgrades, Madison, WI |
| 2014–2015 | Healthcare Data Analyst for Wisconsin Medicaid, HP Enterprise Services, Madison, WI |
| 2013–2014 | Technical Services Analyst, Epic, Verona, WI |

AWARDS & FELLOWSHIPS

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| 2023–26 | Big Data-Scientist Training Enhancement Program, U.S. Department of Veterans Affairs & National Cancer Institute |
| 2020 | Rankin/Skatrud Travel Award |
| 2019 | Biology and Medicine through Mathematics (BAMM!) Travel Award |
| 2019 | Student Research Grants Competition–Conference Presentation Funds |
| 2018–19 | New Graduate Student Fellowship |

PEER-REVIEWED JOURNAL ARTICLES

1. **Nieser, K. J.**, Ortiz-Torres, B. S., Cochran, A. L., Zayas-Cabán, G. (2025). REMLA: An R package for robust expectation-maximization estimation for latent variable models. *SoftwareX*, 30, 102112. <https://doi.org/10.1016/j.softx.2025.102112>
2. **Nieser, K. J.**, Harris, A. H. S., Binswanger, I. A., Clark, S. C., Finlay, A. K. (2025). Legal-involved veterans are less likely to receive guideline-concordant colorectal cancer screening. *BMC Health Services Research*, 25(1), 333. <https://doi.org/10.1186/s12913-025-12490-6>
3. Harris, A. H. S., Davis-Lopez, K., Schmidt, E., **Nieser, K.**, Massarweh, N. N. (2025). Landscape of consensus-based entity-endorsed perioperative quality measures. *Annals of Surgery Open*, 6(1), e559. <https://doi.org/10.1097/AS9.0000000000000559>
4. **Nieser, K. J.**, Harris, A. H. S. (2024). Comparing methods for assessing the reliability of health care quality measures. *Statistics in Medicine*, 43(23), 4575-4594. <https://doi.org/10.1002/sim.10197>
5. Harris, A. H. S., Eddington, H., Shah, V., Shwartz, M., Gurewich, D., Rosen, A., Quinteros, B., Wilcher, B., **Nieser, K. J.**, Jones, G., Wu, J., Morris, A. M. (2024). Statistical methods to examine racial and ethnic disparities in the surgical literature: A review and recommendations for improvement. *Annals of Surgery*, 280(6), 960-965. <https://doi.org/10.1097/SLA.0000000000006440>
6. Harris, A. H. S., Liu, P., Breland, J. Y., **Nieser, K. J.**, Schmidt, E. M. (2024). Differences across race and ethnicity in the quality of antidepressant medication management. *Health Services Research*. 59(5), e14347. <https://doi.org/10.1111/1475-6773.14347>
7. Pingeton, B. C., **Nieser, K. J.**, Cochran, A., Goodman, S. H., Laurent, H., Sbrilli, M. D., Knight, B., Newport, D. J., Stowe, Z. N. (2024). Childhood maltreatment exposure is differentially associated with transdiagnostic perinatal depression symptoms. *Journal of Affective Disorders*, 358, 183-191. <https://doi.org/10.1016/j.jad.2024.05.021>
8. **Nieser, K. J.**, Harris, A. H. S. (2024). Split-sample reliability estimation in health care quality measurement: Once is not enough. *Health Services Research*, 59(4), e14310. <https://doi.org/10.1111/1475-6773.14310>
9. **Nieser, K. J.**, Cochran, A. L. (2023). Quantifying and reducing inequity in average treatment effect estimation. *BMC Medical Research Methodology*, 23(297). <https://doi.org/10.1186/s12874-023-02104-2>
10. Green, R. K., **Nieser, K. J.**, Jacobsohn, G. C., Cochran, A. L., Caprio, T. V., Cushman, J. T., Kind, A. J., Lohmeier, M., Shah, M. N. (2023). Differential effects of an emergency department-to-home care transitions intervention in an older adult population: A latent class analysis. *Medical Care*, 61(6), 400-408. <https://doi.org/10.1097/MLR.0000000000001848>
11. **Nieser, K. J.**, Stowe, Z. N., Newport, J., Coker J. L., Cochran, A. L. (2023). Detection of differential depressive symptom patterns in a cohort of perinatal women: An exploratory

factor analysis using a robust statistics approach. *eClinicalMedicine*, 57, 101830.

<https://doi.org/10.1016/j.eclinm.2023.101830>

12. **Nieser, K. J.**, & Cochran, A. L. (2023). Addressing heterogeneous populations in latent variable settings through robust estimation. *Psychological Methods*, 28(1), 39-60.

<https://doi.org/10.1037/met0000413>

13. Cochran, A. L., **Nieser, K. J.**, Forger, D. B., Zöllner, S., & McInnis, M. G. (2020). Gene-set enrichment with mathematical biology (GEMB). *GigaScience*, 9(10), giaa091.

<https://doi.org/10.1093/gigascience/giaa091>

Liquid crystals (research done as an undergraduate)

14. Collings, P. J., Goldstein, J. N., Hamilton, E. J., Mercado, B. R., **Nieser, K. J.**, & Regan, M. H. (2015). The nature of the assembly process in chromonic liquid crystals. *Liquid Crystals Reviews*, 3(1), 1-27.

<https://doi.org/10.1080/21680396.2015.1025305>

15. Mercado, B. R., **Nieser, K. J.**, & Collings, P. J. (2014). Cooperativity of the assembly process in a low concentration chromonic liquid crystal. *The Journal of Physical Chemistry. B*, 118(46), 13312–13320.

<https://doi.org/10.1021/jp510025j>

SUBMITTED TO PEER-REVIEWED JOURNALS

16. **Nieser, K. J.**, Chen, C., Harris, A. H. S., Wagner, T. H., Schmidt, E. M. Purchasing vs. providing care at the VHA: Quality differences in follow-up after psychiatric hospitalization.
17. **Nieser, K. J.**, Harris, A. H. S. Commonly used reliability estimates for health care quality measures could severely overstate the signal-to-noise ratio.

SOFTWARE PACKAGES

1. QualityMeasure: an R package to assist with analysis of health care quality measures; especially reliability calculations. https://github.com/knieser/quality_measure_reliability
2. REMLA: Robust Expectation-Maximization Estimation for Latent Variable Models. <https://CRAN.R-project.org/package=REMLA>

PRESENTATIONS AT SCIENTIFIC MEETINGS

1. **Nieser, K.**, Sox-Harris, A. (Jun. 7–10, 2025). The Unreliability of Two Publicly Reported CMS Outcome Measures When Applied to Veterans Health Administration Facilities. 2025 Academy Health Annual Research Meeting in Minneapolis, MN.
2. **Nieser, K.** (Apr. 28, 2025). Colorectal cancer screening among legal-involved Veterans. Veterans Justice Programs National Training Call Series. Veterans Health Administration.

3. Harris, A.H., Davis-Lopez, K., **Nieser, K.**, Massarweh, N. (Oct. 19–22, 2024). Surveying the Landscape of Consensus-Based Entity-endorsed Surgery-related Quality Measures. Annual Clinical Congress of the American College of Surgeons in San Francisco, CA.
4. Schmidt, E. M., Chen, C., **Nieser, K.**, Wagner, T. H., Harris, A.H.S. (Jun. 29–Jul. 2, 2024). Differences in Follow up after Psychiatric Hospitalizations for VA Purchased Versus VA Provided Care. 2024 Academy Health Annual Research Meeting in Baltimore, MD.
5. **Nieser, K.** (Jun. 25, 2024). Quality measure reliability estimates can depend on the method and the population. Veterans Health Administration, Office of Performance Measurement.
6. **Nieser, K.** (Sep. 25, 2023). Improving health care equity requires reliable quality measurement. S-SPIRE Center, Department of Surgery, Stanford University.
7. Hansmann, K., Jenkins, M., **Nieser, K.**, Svenson, E., Walts, Z. (Apr. 25, 2022). PHS Antiracism Initiative: Research Methods Toolkit. Population Health Sciences Monday Seminar, University of Wisconsin–Madison. *All presenters contributed equally.
8. **Nieser, K.** (Apr. 9, 2021). Optimizing for whom? The role of robustness in equitable algorithms. Machine Learning Day, Arizona State University.
9. **Nieser, K.** (Feb. 3, 2021). Detecting Inequity in the Analysis of Mental Health. Data Science Research Bazaar: Data Science for the Social Good, University of Wisconsin–Madison [lightning talk].
10. **Nieser, K.**, Collings, P. (Mar. 18–22, 2013). Kinetics of Assembly and Dis-assembly of Structures Forming a Chromonic Liquid Crystal at Low Concentrations. American Physical Society March Meeting in Baltimore, MD.

POSTERS AT SCIENTIFIC MEETINGS

1. **Nieser, K.**, Sox-Harris, A., Binswanger, I., Clark, S., Finlay, A. (Jun. 7–10, 2025). Disparities in Colorectal Cancer Screening Rates by Legal-Involved Status: An Analysis of Patients of the Veterans Health Administration. 2025 Academy Health Annual Research Meeting in Minneapolis, MN.
2. **Nieser, K.**, Schmidt, E., Harris, A. (Jun. 29–Jul. 2, 2024). Health Care Quality Measure Reliability Estimates Can Hinge on the Method. 2024 Academy Health Annual Research Meeting in Baltimore, MD.
3. Harris, A., Eddington, H., Shah, V., Schwartz, M., Gurewich, D., Rosen, A., Quinteros, B., Wilcher, B., **Nieser, K.**, Jones, G., Wu, J., Morris, A. (Jun. 29–Jul. 2, 2024). Statistical Methods to Examine Racial and Ethnic Disparities in the Surgical Literature: A Review and Recommendations for Improvement. 2024 Academy Health Annual Research Meeting in Baltimore, MD.
4. Harris, A., Eddington, H., Shah, V., Schwartz, M., Gurewich, D., Rosen, A., Quinteros, B.,

- Wilcher, B., **Nieser, K.**, Jones, G., Wu, J., Morris, A. (Nov. 13, 2023). Statistical Methods to Examine Racial and Ethnic Disparities in the Surgical Literature: A Review and Recommendations for Improvement. ISPOR Europe 2023 in Copenhagen, Denmark.
5. **Nieser, K.**, Cochran, A. (Jun. 14–17, 2022). Average Treatment Effects in Synthetic Samples with More Equitable Representation. Society for Epidemiologic Research Annual Meeting in Chicago, IL.
 6. **Nieser, K.** (Dec. 15–18, 2020). Bias Analysis of Depression Rate Comparisons between Racial/Ethnic Groups. Society for Epidemiologic Research Annual Meeting [online].
 7. **Nieser, K.**, Stowe, Z., Cochran, A. (Mar. 9, 2020). Addressing Heterogeneity in Mental Illnesses through Robust Estimation. Department of Population Health Sciences Annual Poster Session, University of Wisconsin–Madison.
 8. **Nieser, K.**, Stowe, Z., Cochran, A. (May 17–19, 2019). Robust estimation for factor loadings with application to postpartum depression. Biology and Medicine through Mathematics (BAMM!) in Richmond, VA.

TEACHING

Teaching Associate, Swarthmore College

Spring 2013	General Physics II
Spring 2012	General Physics II with Biomedical Applications
Fall 2011	General Physics I
Fall 2011–12	Spacetime, Quanta & Cosmology

Tutor, Swarthmore College

Spring 2013	General Physics II
Spring 2012	General Physics II with Biomedical Applications
Fall 2011–12	General Physics I

MENTORING

Stanford Science Small Groups: Mentored groups of 3-5 local community college students to each explore a scientific question of interest (10 weeks in Fall 2024 and Spring 2025).

Mentee	Years	Program
Bryan Saúl Ortiz-Torres	2023-2025	UW-Madison, PhD Industrial & Systems Engineering
Noah Tijerina	2024-	DeAnza College

SERVICE

Ad-hoc manuscript review

Journal of General Internal Medicine (2025)

Therapeutics and Clinical Risk Management (2025)

Drug Design, Development and Therapy (2025)

BMC Medical Informatics and Decision Making (2024)

Journal of Medical Internet Research (2022)

Ad-hoc grant review

University of Wisconsin Institute for Clinical and Translational Research (2023)

Ad-hoc conference abstract review

Society for Epidemiologic Research Annual Meeting (2022)