

CURRICULUM VITAE

Sena Chae, PhD, RN
Assistant Professor
College of Nursing, 458 CNB
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EDUCATION

- 2020 PhD, Nursing, University of Iowa, Iowa City, IA
PhD Dissertation: Clustering and Prediction of Cancer Symptom Trajectories Using Longitudinal Nursing Documentation Data
- 2018 MS, Health Informatics, University of Iowa, Iowa City, IA
- 2013 MSN, Nursing, Yonsei University, Seoul, South Korea
- 2006 BSN, Nursing, CHA University, Pocheon, South Korea

LICENSURE

- 2016–present RN, Iowa Board of Nursing #143173
- 2009–2018 RN, New York Board of Nursing #622859
- 2006–present Health Teacher’s License, South Korea
- 2006–present Nurse’s License, South Korea #2171

CERTIFICATIONS

- 2020–present Biostatistics Certificate, University of Iowa

PROFESSIONAL EXPERIENCE

Academic Appointments

- 08/2022–present Assistant Professor, University of Iowa, College of Nursing, Iowa City, IA
- 10/2020–08/2022 Associate Faculty, University of Iowa, College of Nursing, Iowa City, IA
- 09/2015–12/2019 Research Assistant, University of Iowa, College of Nursing, Iowa City, IA

Clinical Appointments

- 2022–present Adjunct position of Assistant Professor, Department of Nursing Services and Patient Care, University of Iowa Health Care
- 2006–2015 Staff Nurse, Samsung Medical Center, Operating Room, Seoul, South Korea

HONORS AND AWARDS

- 2025 Investment in Strategic Priorities, Office of the Executive Vice President and Provost
- 2023 Teaching Development Summer Grant, University of Iowa College of Nursing
- 2022 Teaching Development Summer Grant, University of Iowa College of Nursing
- 2020 Ballard and Seashore Fellowship, University of Iowa Graduate College
- 2019 The Myrtle Aydelotte Doctoral Education Fund in Nursing, University of Iowa College of Nursing
- 2019 Digital Scholarship and Publishing Studio Fellowship, University of Iowa Graduate

January 17, 2025

College

- 2018 Graduate College Summer Fellowship, University of Iowa Graduate College
- 2018 Sigma Theta Tau International Honor Society for Nursing Induction
- 2017 Frontier Co-op–Tippie Impact Competition, Second place, University of Iowa College of Business
- 2017 Travel Funds Award, University of Iowa, Graduate & Professional Student Government
- 2017 Travel Funds Award, University of Iowa, Graduate Student Senate
- 2006 Honor Student Award, Korean Association of College of Nursing, South Korea

SCHOLARSHIP

Publications [KEY: * = data-based; bold = my authorship; underline = student/mentee, [†] = lead author, IF=Impact Factor]

N=26 publications, 21 data-based, 9 first authored, 4 second authored

Google scholar citation as of 01/17/2025 = 312, h-index = 11, i10-index = 11

Scopus citations as of 01/17/2025 = 196, h-index = 9

Peer Reviewed Papers

1. Tark, A., Bressler, T., Song, H., Song, J., **Chae, S.**, Kamalumpundi, V. (2025). Leveraging Artificial Intelligence/ Machine Learning Model to Identify Potential Palliative Care Beneficiaries: A Systematic Review. *Journal of Gerontological Nursing Special Issue: Technology Innovations* [\[link\]](#) (IF: 1.4)
2. *Topaz, M., Davoudi, A., Evans, L., Sridharan, S., Song, J., **Chae, S.**, Barrón, Y., Hobensack, M., Scharp, D., Cato, K., Collins, S. R., Kapela, P., Xu, Z., Gupta, P., Zhang, Z., McDonald, M., & Bowles, K. (2025). Building a time-series model to predict hospitalization risks in home healthcare: Insights into development, accuracy, and fairness. *Journal of the American Medical Directors Association* [\[link\]](#) (IF: 4.2)
3. ***Chae, S.**, Davoudi A., Song, J., Evans. L., Bowles, K. H., McDonald, M. V., Barrón, Y., Min, S., Oh, S., Sharp, D., Xu, Z., & Topaz, M. (2024). Developing a clinical decision support framework for integrating predictive models into routine nursing practices in home health care for patients with heart failure. *Journal of Nursing Scholarship Special Issue: Transformative Role of Artificial Intelligence in Nursing* [\[link\]](#) (IF: 3.93)
4. *Xu, Z., Evans, L., Song, J., **Chae, S.**, Davoudi A., Bowles, K. H., McDonald, M. V., & Topaz, M. (2024). Exploring Home Healthcare Clinicians' Needs for Using Clinical Decision Support Systems for Early Risk Warning. *Journal of the American Medical Informatics Association*. [\[link\]](#) (IF: 7.94)
5. **Chae, S.**, Bae, J., Youn, N., Dunn Lopez, K., Sutamtewagul, G., & Rakel, B., (2024). Agreement between patient-reported and clinically documented symptoms of acute myeloid leukemia: study protocol, *Journal of Advanced Nursing*, 00, 1–9. [\[link\]](#) (IF:3.19)
6. *Davoudi, A., **Chae, S.**, Evans, L., Sridharan, S., Song, J., Bowles, K. H., McDonald, M. V., & Topaz, M. (2024). Fairness gaps in machine learning models for hospitalization and emergency

- department visit risk prediction in home healthcare patients with heart failure. *International Journal of Medical Informatics*, 105534. [\[link\]](#) (IF:4.05)
7. *Joseph, L., Williams, M., Reinke, K., Bair, H., **Chae, S.**, Hanrahan, K., St. Marie. B., Jenkins. P., ... Perkhounkova. Y. (2024). Development and testing of the relational and structural components of innovativeness across academia and practice for healthcare progress scale. *The Journal of Nursing Administration*. [\[link\]](#) (IF: 1.81)
 8. ***Chae, S.**, Street, W. N., Ramaraju, N. & Gilbertson-White, S. (2024). Prediction of cancer symptom trajectories using longitudinal EHR data and long short-term memory-based algorithm. *JCO Clinical Cancer Informatics*, 8, e2300039. [\[link\]](#) (IF: 4.2)
 9. ***Chae, S.**[†], Davoudi, A.[†], Song, J., Evans, L., Hobensack, M., Bowles, K. H., McDonald, M. V., Barrón, Y., Rossetti S., Cato K., Sridharan, S., & Topaz, M. (2023). Predicting emergency department visits and hospitalizations for patients with heart failure in home healthcare using a time series risk model. *Journal of the American Medical Informatics Association*. [\[link\]](#) (IF: 7.94) [†]these authors contributed equally to this work.
 10. *Min, S., Song, J., Evans, L., Bowles, K. H., McDonald, M. V., **Chae, S.**, Topaz, M. (2023). Home healthcare patients with distinct psychological, cognitive, and behavioral symptom profiles and at-risk subgroup for hospitalization and emergency department visits using latent class analysis. *Clinical Nursing Research*. [\[link\]](#) (IF: 1.72)
 11. *Song, J., Min, S. H., **Chae, S.**, Bowles, K. H., McDonald, M. V., Hobensack, M., Barron, Y., Sridharan, S., Davoudi, A., Oh, S., Evans, L., & Topaz, M. (2023). Uncovering hidden trends: Identifying time trajectories in risk factors documented in clinical notes and predicting hospitalizations and emergency department visits during home health care. *Journal of the American Medical Informatics Association*. [\[link\]](#) (IF: 7.94)
 12. *Oh, H., Moorhead, S., & **Chae, S.**, (2023). Validation of the knowledge and self-management outcomes for adults with cardiac disease. *CIN: Computers, Informatics, Nursing*, 41(9), 655-664. [\[link\]](#) (IF: 2.14)
 13. **Chae, S.**, Oh, H., Da Costa Ferreira Oberfrank, N., Schulman-Green, D., Moorhead, S., & Swanson, E. A. (2023). Linking nursing outcomes classification to the self- and family management framework. *Journal of Advanced Nursing*. 79, 832– 849. [\[link\]](#) (IF:3.19)
 14. *Song, J., **Chae, S.**, Bowles, K. H., McDonald, M. V., Barrón, Y., Cato, K., Rossetti, S. C., Hobensack, M., Sridharan, S., Evans, L., Davoudi, A., & Topaz, M. (2022). The identification of clusters of risk factors and their association with hospitalization or emergency department visits in home health care. *Journal of Advanced Nursing*. 79, 593– 604. [\[link\]](#) (IF:3.19)
 15. **Chae, S.**, Cherwin, C. H., Street, W. N., Moorhead, S., Brown, G., & Gilbertson-White, S. (2022). Longitudinal subgrouping of patients with cancer based on symptom experiences: An integrative review. *Oncology Nursing Forum*. 49(4), E17–E30. [\[link\]](#) (IF:2.17)

16. ***Chae, S.**, Song, J., Ojo, M., Bowles, K. H., McDonald, M. V., Barrón, Y., Hobensack, M., Kennedy, E., Sridharan, S., Evans, L., & Topaz, M. (2022). Factors associated with poor self-management documented in home health care narrative notes for patients with heart failure. *Heart & Lung*, 55, 148-154. [\[link\]](#) (IF: 2.86)
17. *Song, J., Hobensack, M., Bowles, K. H., McDonald, M. V., Cato, K., Rossetti, S. C., **Chae, S.**, Kennedy, E., Barrón, Y., Sridharan, S., & Topaz, M. (2022). Clinical notes: An untapped opportunity for improving risk prediction for hospitalization and emergency department visit during home health care. *Journal of Biomedical Informatics*, 128, 104039. [\[link\]](#) (IF: 8).
18. *Hobensack, M., Ojo, M., Barrón, Y., Bowles, K. H., Cato, K., **Chae, S.**, Kennedy, E., McDonald, M. V., Song, J., Sridharan, S., & Topaz, M. (2022). Documentation of hospitalization risk factors in EHRs: A qualitative study with home healthcare clinicians. *Journal of the American Medical Informatics Association*, 29(5), 805-812. [\[link\]](#) (IF: 7.94) Harriet H. Werley Award at AMIA
19. *Song, J., Ojo, M., Bowles, K., McDonald, M., Cato, K., Rossetti, S. C., Adams, V., **Chae, S.**, Hobensack, M., Kennedy, E., Tark, A., Kang, M. J., Woo, K., Barrón, Y., Sridharan, S., & Topaz, M. (2021). Detecting language associated with home healthcare patient's risk for hospitalization and emergency department visit: A natural language processing study. *Nursing Research*, 71(4), 285-294. [\[link\]](#) (IF: 2.36)
20. *Tark, A., Kamalumpundi, V., Song, J., **Chae, S.**, Stone, P. W., Gilbertson-White, S., & Buck, H. (2021). A review of web-based covid-19 resources for palliative care clinicians, patients, and their caregivers. *Journal of Hospice and Palliative Nursing*, 23(4), 316-322. [\[link\]](#) (IF: 2.13)
21. *Dunn Lopez, K., **Chae, S.**, Girgis, M., Fraczkowski, D., Habibi, P., Chattopadhyay, D., & Donevant, S. (2021). Improved readability and functions needed for MHealth targeting patients with heart failure: An app store review. *Research in Nursing and Health*, 44(1), 71-80. [\[link\]](#) (IF: 2.24) Top Cited Article 2021-2022 in Research in Nursing & Health
22. *Tark, A., Song, J., Parajuli, J., **Chae, S.**, & Stone, P. W. (2021). Are we getting what we really want? A systematic review of concordance between Physician Orders for Life-Sustaining Treatment (POLST) documentation and subsequent care delivered at end-of-life. *American Journal of Hospice and Palliative Medicine*, 38(9), 1142-1158. [\[link\]](#) (IF: 2.09)
23. **Chae, S.**, Oh, H., & Moorhead, S. (2020). Effectiveness of nursing interventions based on nursing outcomes using standardized nursing terminologies: An integrative review. *Western Journal of Nursing Research*. 42(11), [\[link\]](#) (IF: 1.77)
24. *Steelman, V. M., **Chae, S.**, Duff, J., Anderson, M. J., & Zaidi, A. (2018). Warming of irrigation fluids for prevention of perioperative hypothermia during arthroscopy: A systematic review and meta-analysis. *Arthroscopy: The Journal of Arthroscopic & Related Surgery*, 34(3). [\[link\]](#) (IF: 4.43)

25. *Downing, N. R., Goodnight, S., **Chae, S.**, Perlmutter, J. S., McCormack, M., Hahn, E., Barton, S. K., & Carlozzi, N. E. (2018). Factors associated with end-of-life planning in Huntington disease. *American Journal of Hospice and Palliative Care*, 35(3), 440-447. [\[link\]](#) (IF: 2.09)
26. ***Chae, S.**, Ko, I. S., Kim, I. S., & Yoon, K. S. (2015). Effect of perception of career ladder system on job satisfaction, intention to leave among perioperative nurses. *Journal of Korean Academy of Nursing Administration*, 21(3), 233. [\[link\]](#) (IF: 1.28)

Manuscripts Under Review

27. *Min S., Song J, Evans L, Bowles KH, McDonald MV, **Chae S.**, Sridharan, S., Barrón, Y., Topaz M. (First revision under review). Non-linear relationship between vital signs and hospitalization/emergency department visits among older home healthcare patients and critical vital sign cut-off for adverse outcomes: Application of generalized additive model. *Clinical Nursing Research*.
28. ***Chae, S.**, Bae, J., Youn, N., Pham, H., Dunn Lopez, K., Sutamtewagul, G., & Rakel, B. (in review). Concordance and Discordance between Patient-reported and Clinically Documented Symptoms in Acute Myeloid Leukemia, *Advances in Hematology*.
29. Song, J., Hobensack, M., Sequeira, L., Shin, D., Davies, S., Peltonen, L. M., Alhuwail, D., Alnomasy, N., Block, L., **Chae, S.**, Cho, H., Von Gerich, H., Lee, J., Mitchell, J., Ozbay, I., Lozada-Perezmitre, E., Ronquillo. C. E, You, S. B., & Topaz, M. (in review). Social determinants of health in digital health policies: An international environmental scan. (Manuscript under review for publication at International Medical Informatics Association (IMIA) 2024 YEARBOOK)
30. ***Chae, S.**, Bae, J., Maitra, P., Dunn Lopez, K., Sutamtewagul, G., Topaz, M., & Rakel, B., (in preparation). Leveraging Natural Language Processing for Symptom Identification in Acute Myeloid Leukemia using Clinical Notes from Electronic Health Records, *JCO Clinical Cancer Informatics*.

Peer-reviewed Conference Proceedings

1. *Hobensack, M., Song, J., **Chae, S.**, Kennedy, E. E., Zolnoori, M., Bowles, K. H, McDonald, M. V., Evans, L., & Topaz, M. (2022). Capturing concerns about patient deterioration in narrative documentation in home healthcare. *Annual Symposium Proceedings. AMIA Symposium, 2022*, 552–559. [\[link\]](#) (IF: 0/92)
2. ***Chae, S.**, Song, J., Ojo, M., & Topaz, M. (2021). Identifying heart failure symptoms and poor self-management in home healthcare: A natural language processing study. *Studies in Health Technology and Informatics*, 284, 15-19. [\[link\]](#) (IF: 0.28)

Published Abstracts

1. Jeon, B., & **Chae, S.** (2024). 0906 Free-text documentation of sleep disturbance in Acute Myeloid Leukemia: A natural language processing study. *Sleep*, 47(Supplement_1), A389-A389. [[link](#)]
2. Gilbertson-White, S., Srivastava, S., Li, Y., Laures, E., Saeidzadeh, S., Yeung, C., & **Chae, S.** (2020). Multimorbidity and cancer: Using electronic health record (EHR) data to cluster patients in multimorbidity phenotypes (gp735). *Journal of Pain and Symptom Management*, 60(1), 266. [[link](#)]
3. Gilbertson-White, S., Srivastava, S., Li, Y., Laures, E., Saeidzadeh, S., Yeung, C., & **Chae, S.** (2019). Multimorbidity, cancer, and symptoms: Using electronic health record data to cluster patients in multimorbidity phenotypes. *Journal of Clinical Oncology*, 37(31_suppl), 130-130. [[link](#)]

Books/Book Chapters

1. Moorhead, S., **Chae, S.**, & Oh, H. (2020). Impact of the nursing process and clinical decision-making models on research focused on the linkages between nursing diagnoses, outcomes and interventions. In Echevarría, P. P., Giménez, F. M., Giró, F. M. D., & Romero, S. J. M. *Investigación en metodología y lenguajes enfermeros*, Chapter 23, second edition, Elsevier España, Barcelona. 2020.

Scientific and Educational Research Grants

Intramural Research Grants

1. 01/2023-01/2025 Symptoms and multiple chronic conditions associated with post-induction unplanned readmissions in patients with acute myeloid leukemia, Seeding Excellence Initiative-Office of the Vice President for Research Early Career Scholars, **PI: Chae**, University of Iowa Office of the Vice President for Research, \$30,000
2. 02/2022-01/2024 Advancing symptom science using hidden symptoms and chronic conditions in patients with acute myeloid leukemia, Lila M Johnson Internal Grant, **PI: Chae**, University of Iowa, College of Nursing, \$10,000
3. 2019 Prediction of cancer symptom trajectories using longitudinal EHR data and long short-term memory-based algorithm, Alma Miller Ware Nursing Endowment, **PI: Chae**, University of Iowa, College of Nursing, \$3,000
4. 2019 Comparison of Groups with Different Patterns of Symptom Cluster Intensity across the Cancer Treatment Trajectory, **PI: Chae**, University of Iowa Institute for Clinical and Translational Science, \$1,440

Extramural Research Grants

1. 02/2022-05/2024 Advancing symptom science using hidden symptoms and chronic conditions in patients with acute myeloid leukemia, Center for Advancing Multimorbidity Science: Profiling risk and symptom expression to develop customized therapies

for adults with multiple chronic conditions (CAMS) NIH / NINR P20 NR018081-01(MPI: Gardner & Rakel), Pilot Grants, **PI: Chae**, University of Iowa, College of Nursing, \$63,000

2. 09/2020-2024 Homecare-CONCERN: Building risk models for preventable hospitalization and emergency department visits in homecare, Agency for Healthcare Research and Quality, R01HS027742, (PI: Topaz), Visiting Nursing Service of New York, Columbia University, **Collaborator** (role: building natural language processing algorithms), \$369,427.
3. 2018 Warming of irrigation fluids for prevention of perioperative hypothermia during arthroscopy: A systematic review and meta-analysis, PI: Steelman, **Research team member**, Sigma Theta Tau/Association of Perioperative Registered Nurses, \$5,000

Research and Clinical Presentations [KEY: * = data-based; bold = my authorship; underline = student/mentee]

International

1. 2023 ***Chae, S.**, Davoudi A., Song, J., Evans. L., Hobensack, M., Bowles, K. H., McDonald, M. V., Barrón, Y., Sharp, D., Oh, S., Min, S., & Topaz, M. (2023). A framework for developing clinical decision support tools in home health care patients with heart failure based on time-series risk models. Podium presentation at AMIA 2023 Annual Symposium, New Orleans, LA
2. 2023 *Davoudi A., **Chae, S.**, Evans. L., Sridharan, S., Barrón, Y., Song, J., Hobensack, M., Bowles, K. H., McDonald, M. V., Min, S., Oh, S., & Topaz, M. (2023). Fairness analysis in the prediction of hospitalization or emergency department visits in home healthcare patients with heart failure. Podium presentation at AMIA 2023 Annual Symposium, New Orleans, LA
3. 2023 *Song, J., Min, S. H., **Chae, S.**, Bowles, K. H., McDonald, M. V., Hobensack, M., Barron, Y., Sridharan, S., Davoudi, A., Oh, S., Evans, L., & Topaz, M. (2023). Identifying time trajectories in risk factors documented in clinical notes and predicting hospitalizations and emergency department visits during home health care. Podium presentation at AMIA 2023 Annual Symposium, New Orleans, LA
4. 2023 *Dunn Lopez, K., **Chae, S.**, Litwiller, D., Wagner, C., Moorhead, S., & Swanson, E. (March 2023). Searching for nurse generated interventions from medical-surgical nurses' documentation of care provided to patients with covid-19 in large vendor's electronic health record's flowsheets. Paper presentation at ACENDIO Conference. Rome, Italy.
5. 2022 ***Chae, S.**, Song, J., Barrón, Y., Bowles, K. H, McDonald, M. V., Rossetti S., Cato K., Hobensack, M., Evans. L., & Topaz, M. (2022). Heart failure patient characteristics and symptoms documented in home health care clinical notes associated with emergency department visits and hospitalizations. Podium presentation at AMIA 2022 Annual Symposium, Washington, DC.

6. 2022 ***Chae, S.**, Dunn Lopez, K., & Rakel, B. (2022). A first step to uncovering hidden symptoms and in patients with acute myeloid leukemia using natural language processing. Poster presentation at AMIA 2022 Annual Symposium, Washington, DC.
7. 2021 *Hobensack, M., Song, J., Zolnoori, M., Ojo, M., Bowles, K. H., **Chae, S.**, Kennedy, McDonald, M. V., & Topaz, M. (2021). Identifying narrative documentation of clinician concern about patient deterioration in home healthcare: A text mining study. Poster presentation at AMIA 2021 Annual Symposium, San Diego, CA.
8. 2021 *Song, J., Ojo, M., McDonald, M.V., Cato, K., Rossetti S., Barrón, Y., Sridharan, S., **Chae S.**, Hobensack, M., Bowles, K. H., & Topaz, M. (2021). Developing a natural language processing algorithm to detect terms representing risk of hospitalization or emergency department visits during home health care. Poster presentation at AMIA 2021 Annual Symposium, San Diego, CA.
9. 2021 *Dunn Lopez, K., Swanson, E., **Chae, S.**, Litwiller, D., Moorhead, S., Wagner, C., & Abe, N. (2021). Unearthing nursing documentation within electronic health record data to determine the impact of nursing care for hospitalized patients with COVID-19, Work in Progress. Poster presentation at Health Information Management System and Society. Global Health Conference, Nursing Informatics Symposium. Las Vegas, NV.
10. 2021 *Song, J., McDonald, M., Barrón, Y., Cato, K, Rossetti, S. C., Sridharan, S., **Chae S.**, Tark A., Adams, V., Woo, K., Kang, M. J., Hobensack, M., Ojo, M., Bowles, K., & Topaz, M. (2021). Identifying factors associated with patient’s risk for hospitalization or emergency department visits in home health care. Conference presentation abstract at AMIA Clinical Informatics Conference, Virtual.
11. 2020 Gilbertson-White, S., Srivastava, S. Li, Y., Laures, E., Saeidzadeh, S., Yeung, C., **Chae, S.** (2020) Data mining and the electronic health record: Identify multimorbidity phenotypes to advanced cancer symptom science. The ONS 45th Annual Congress. San Antonio, TX. (CANCELED d/t Covid).
12. 2020 Gilbertson-White, S., Srivastava, S., Li, Y., Laures, E., Saeidzadeh, S., Yeung, C., **Chae, S.** (2020) Multimorbidity and cancer: Using electronic health record (EHR) data to cluster patients in multimorbidity phenotypes. The 2020 Annual Assembly of Hospice and Palliative Care. San Diego, CA (CANCELED d/t Covid).
13. 2020 Gilbertson-White, S., Srivastava, S. Li, Y., Laures, E., Saeidzadeh, S., Yeung, C., **Chae, S.** (2020) Multimorbidity and cancer: Using electronic health record (EHR) data to cluster patients in multimorbidity phenotypes. The Inaugural State of the Science in Hospice and Palliative Care Meeting. San Diego, CA (CANCELED d/t Covid).
14. 2018 **Chae, S.**, Oh, H. K., & Moorhead, S. (2018). Effectiveness of nursing interventions using standardized nursing languages: An integrative review. American Medical Informatics Association Symposium 2018, San Francisco, CA. Peer reviewed poster.
15. 2017 ***Chae, S.**, Steelman, V. M., & Chung, S. J. (2017). Simulation-based education in the

operating room. Association of perioperative Registered Nurses Global Surgical Conference & Expo 2017. Boston, MA. Peer reviewed poster.

16. 2016 *Downing, N. R., **Chae, S.**, Goodnight, S., & Carlozzi, N. E. (2016). Factors associated with end-of life planning in Huntington disease. International Society of Nurses in Genetics. Dublin, Ireland. Podium Presentation.
17. 2014 ***Chae, S.**, Ko, I. S., & Kim, I. S. (2014). Relation between perception of the Career Ladder System, job satisfaction, and intention to leave among perioperative nurses. Sigma Theta Tau. International 25th International Nursing Research Congress, Hong Kong. Peer reviewed poster.

National

1. 2020 **Chae, S.**, Preparing for Graduate Nursing School in the US, International Nursing Leaders Association. Guest lecturer. Seoul, South Korea. Oral presentation.
2. 2014 ***Chae, S.**, Ko, I. S., & Kim, I. S. Relation between perception of the Career Ladder System, job satisfaction, and intention to leave among perioperative nurses. Korea Association of Operation Room Nurses. KwangJu, South Korea. Oral presentation.

State/Regional

1. 2025 *Kuyoro, A., Dunn Lopez, K., & **Chae, S.** (2025). From Clinical Notes to Predictive Models for Acute Myeloid Leukemia Readmissions: A Pre-Machine Learning Analysis. Midwestern Nursing Research Society's 49th Annual Research Conference, Indianapolis, IN. Peer-reviewed poster.
2. 2025 Delaney, C., Wieben, A., Wolfe, I., & **Chae, S.** (2025). Examination of Education, Clinical, Ethics, and Research Implications of AI Transformation. Special Session. Midwestern Nursing Research Society's 49th Annual Research Conference, Indianapolis, IN.
3. 2025 ***Chae, S.**, Bae, J., Maitra, P., Dunn Lopez, K., & Rakel, B. (2025). Uncovering Hidden Symptom Clusters in Patients with Acute Myeloid Leukemia using Natural Language Processing. Guaranteed Symposium Session. Midwestern Nursing Research Society's 49th Annual Research Conference, Indianapolis, IN.
4. 2023 ***Chae, S.**, Bae, J., & Rakel, B., (2023). Agreement between patient-report and electronic health record on symptoms of acute myeloid leukemia. Poster presentation. Midwestern Nursing Research Society's 47th Annual Research Conference, Des Moines, IA.
5. 2022 *Song, J., **Chae, S.**, Bowles, K. H., McDonald, M.V., Barron, Y., Cato, K., Rossetti, S., Hobensack, M., Sridharan, S., Evans, L., Davoudi, A., & Topaz, M. (2022). The identification of clusters of risk factors and their association with hospitalizations or emergency department visits in home health care. Poster presentation at the 1st annual PhD and Post-Doctoral Fellow Scholars' Day, Columbia University School of Nursing, NY.

6. 2020 *Dunn Lopez, K., **Chae, S.**, Girgis, M., Fraczkowski, D., Habibi, P., Chattopadhyay, D., & Donevant, S. B. (2020). Improved readability and functions needed for mHealth targeting patients with heart failure: An app store review. A Distinguished Abstract. Midwest Nursing Research Society's 44th Annual Research Conference, Chicago, IL. Peer reviewed postcard.
7. 2020 ***Chae, S.**, Gilbertson-White, S., Street, W. N., & Ramaraju, N. (2020). Prediction of cancer symptom trajectories using longitudinal EHR data and long short-term memory-based algorithm. Student Poster Competition. Midwestern Nursing Research Society's 44th Annual Research Conference, Chicago, IL. Peer reviewed poster.
8. 2019 ***Chae, S.**, Gilbertson-White, S., Street, W. N., Moorhead, S., & Wang, S. Comparison of groups with different patterns of symptom cluster intensity across the Cancer Treatment Trajectory. Student Poster Competition. Midwestern Nursing Research Society's 43rd Annual Research Conference. Kansas City, MO. Peer reviewed poster.
9. 2018 ***Chae, S.**, Steelman, V. M., Duff, J., Anderson, M. J., & Zaidi, A. (2018). Warming of irrigation fluids for prevention of perioperative hypothermia during arthroscopy: A systematic review and meta-analysis. Student Poster Competition. Midwestern Nursing Research Society's 42nd Annual Research Conference, Cleveland, OH. Peer reviewed poster.
10. 2017 **Chae, S.**, Moorhead, S., & Oh, H. K. The use of Nursing Interventions and Outcomes Classifications focused on effectiveness: An integrative review. Midwestern Nursing Research Society's 41st Annual Research Conference, Minneapolis, MN. Peer reviewed poster.

Local

1. 2022 **Chae, S.** Conceptual models in the "informatics" based research, theory and model development, PhD program, University of Iowa, College of Nursing, Invited Speaker.
2. 2020 **Chae, S.** A spotlight on CON PhD student research, Research Forum, University of Iowa, College of Nursing, Invited Speaker.
3. 2019 **Chae, S.** Data Science, Research Design, PhD program, University of Iowa, College of Nursing, Invited Speaker.
4. 2019 **Chae, S.** Discussion using EHR data, CAMS Research Seminar, University of Iowa, College of Nursing, Invited Speaker.
5. 2019 **Chae, S.** Discussion on scholarly writing, PhD Student Orientation, University of Iowa, College of Nursing, Invited Speaker.
6. 2019 ***Chae, S.**, Comparison of groups with different patterns of symptom cluster intensity across the Cancer Treatment Trajectory. Spring Reception of the Center for Advancement Board of Directors, Iowa City, IA. University of Iowa, College of Nursing. Poster.

7. 2019 ***Chae, S.**, Prediction of cancer symptom trajectories using longitudinal EHR data and long short-term memory-based algorithm. Data Mining Iowa Group, University of Iowa Tippie College of Business. Invited Speaker.
8. 2018 **Chae, S.**, Using NANDA-I, NIC and NOC, Samsung Medical Center, Health Informatics Department, Seoul, South Korea. Invited Speaker.
9. 2018 ***Chae, S.**, & Steelman, V. M. Warming of irrigation fluids for prevention of perioperative hypothermia during arthroscopy: A systematic review and meta-analysis. Research Forum. University of Iowa, College of Nursing, Iowa City, IA, Invited Speaker.

SERVICE

Editorial and Peer Review Service

Peer review of scholarly products

- 2016-present Center for Nursing Classification and Clinical Effectiveness (CNC), Nursing Outcomes Classifications (NOC), Peer Reviewer and Outcome Developer
- 2018-present American Medical Informatics Association, Annual Symposium, Abstract Reviewer
- 2021 American Journal of Hospice and Palliative Medicine, Manuscript Reviewer
- 2021 Birth, Manuscript Reviewer
- 2022 Journal of the American Heart Association, Manuscript Reviewer
- 2022 International Journal of Nursing Knowledge, Manuscript Reviewer
- 2022 International Journal of Nursing Studies, Manuscript Reviewer

Mock Reviewer

- 2023 National Institute on Minority Health and Health Disparities Parent R01 award application (PI: Lee, University of Pittsburgh School of Nursing), Invited as External Reviewer

Section Editor

- 2025-2027 Nurse Leader, Innovativeness for Progress, Section Editor

Professional Service

Society/Association membership, participation, and leadership

- 2016-present Midwest Nursing Research Society (MNRS), member
- Health Systems, Policy, & Informatics Research Interest Group, member (2019-present)
- Symptom Science Research Interest Group, member (2019-present)
- 2024-2026 Chair, Health Systems, Policy, & Informatics Research Interest Group (elected 3 year term)
- 2023-present International Medical Informatics Association (IMIA): The Students and Emerging Professionals Special Interest Group Nursing Informatics (SEP SIG NI), Member
- 2019 Global Korean Nursing Foundation (GKNF)-USA, Student member
- 2018-present American Medical Informatics Association, member
- Nursing Informatics Working Group (2021-present)

2018 Sigma Theta Tau International Honor Society for Nursing, Gamma Chapter, member
 2017 Association of Perioperative Registered Nurses, Student member
 Poster Judge, Global Surgical Conference & Expo 2016 (2016)
 2008-2015 Korean Academy of Nursing Administration, member
 2006-2015 Korean Association of Operating Room Nurses, member
 2006-2015 Korean Nurses Association, member

University of Iowa

2024 Fall Interprofessional Education Program, Facilitator
 2022-present Informatics Journal Club at The University of Iowa, Member
 2020-present Tech committee, member
 2017-present Data Mining in Iowa Group (DMIG) at The University of Iowa, Tippie College of Business, Member
 2022-present Holden Comprehensive Cancer Center at The University of Iowa, Associate Member
 2022 Spring Undergraduate Research Festival (SURF) Judge

University of Iowa Collegiate Service

2024 CON Faculty Awards Committee
 2021-present Pain and Associated Symptoms: Nurse Research Training (T32NR011147), junior faculty

CHA University

CHA University of Iowa Collegiate Service

2017 CHA Global Health Program, CHA University, College of Nursing, South Korea, Interpreter
 2024 Preparing for Graduate Nursing School in the US, CHA University, College of Nursing, South Korea, Guest lecturer

TEACHING

Instructional Activities

Course Instruction

NURS:5010 Clinical Data Management and Evaluation. Graduate.

2025 Spring (enrollment = 39), Primary instructor
 2024 Fall (enrollment = 28), Primary instructor
 2023 Fall (enrollment = 29), Primary instructor
 2022 Fall (enrollment = 38), Primary instructor
 2022 Spring (enrollment = 19), Team-teacher
 2021 Fall (enrollment = 20), Team-teacher
 2021 Spring (enrollment = 46), Team-teacher
 2020 Fall (enrollment =45), Team-teacher

NURS:6828 Doctor of Nursing Practice Project III. Graduate.

2024 Fall (enrollment = 76), Team-teacher

NURS:3151 Intro to Clinical Concepts for Nursing. Nursing MSN Entry into Practice Program.
2025 Spring (enrollment = 6), Team-teacher

Guest Lectures

NURS:3438 Nursing and Pharmacological Intervention, Perioperative Nursing. Undergraduate
2018 Spring – 2021 Fall [total number of semesters: 8]

*CS 4980:000 Computational Epidemiology, An Untapped Opportunity for Bringing EHRs and
Advanced Data Analytics to Nursing Science.* Undergraduate & graduate
2023 Spring

Mentoring and Advisement

Mentoring

Undergraduate students

2022 Fall–2023 Fall Claire Brown, BSN student, member of research team
2022 Spring–present Marisa K Muetterthies, BSN student, member of research team
2021 Fall Kelly Bush, BSN student, member of research team
2019 Summer Prisca Anugom, Pre-nursing student, member of research team, Longitudinal
subgrouping of cancer patients with similar symptom experiences: an
integrated review

Graduate students

Spring 2025 Alaa Harb, Nursing PhD student, Grad RA
Fall 2023– Spring 2024 Adeola Kuyoro, Nursing PhD student, Grad RA
2023 Nayung Youn, Nursing PhD student, Grad RA
Fall 2022–Spring 2023 Jaewon Bae, Nursing PhD student, Grad RA
Fall 2022–Spring 2023 Pratik Maitra, Masters' student in Computer Science, Grad RA

Advisement

DNP project Committee

Fall 2024 –present Andrea Damon, Chair

Independent Study

2023 Fall Jaewon Bae (Training in natural language processing)

PhD Dissertation Committee

Fall 2023 –present Lynette Ramlogan, Molloy University. Exploring the socioeconomic impact of
SDOH on heart failure patients: a secondary data analysis, in process, Member