

Amy Irving Ising
May 2024

I. PERSONAL INFORMATION

Name: Amy I. Ising
Address: Carolina Center for Health Informatics
Department of Emergency Medicine
University of North Carolina at Chapel Hill
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II. EDUCATION

2017 – 2021; University of North Carolina, Chapel Hill, NC. Doctor of Philosophy, Health Informatics.

2008 - 2009: University of North Carolina, Gillings School of Global Public Health, Chapel Hill, NC. Certificate in Field Epidemiology.

1999 - 2001: University of North Carolina, School of Information and Library Science, Chapel Hill, NC. Master of Science Degree in Information Science (MSIS).

September 1992 - December 1992: Institute for American Universities, Avignon, France.

1990 - 1994: University of Virginia, Charlottesville, VA, Bachelor of Arts Degree with Distinction in French and History.

III. PROFESSIONAL EXPERIENCE

Carolina Center for Health Informatics (CCHI), Department of Emergency Medicine, University of North Carolina at Chapel Hill

July 2022 – Present: Research Assistant Professor

September 2008 – Present: CCHI Associate Director

August 2006 - Present: NC DETECT Program Director.

February 2002 - August 2006: NC DETECT Technical Team Director

- Oversee day-to-day operations and technical development for NC DETECT, North Carolina's statewide syndromic surveillance system.
- Project management, systems analysis, and end user support for grant-funded public health informatics projects.
- Provide subject matter expertise on syndromic surveillance and use of emergency department data for surveillance.
- Work with end users and other stakeholders to gather requirements, develop prototypes, establish priorities for technical development, and provide training and training-related documentation.
- Participate in research and evaluation efforts related to syndromic surveillance and other public health informatics initiatives.

Department of Epidemiology, Gillings School of Global Public Health, University of North Carolina at Chapel Hill

Adjunct Instructor

September 2011- Present

Develop curriculum and teach course in public health informatics. Provide supervisory assistance for student practicums in public health informatics.

Department of Health Policy and Management, Gillings School of Global Public Health, University of North Carolina at Chapel Hill

Adjunct Instructor

2017-2019

Developed curriculum and taught public health informatics in the online Executive Master's Program in Public Health.

August 2001 - January 2002: Data Analyst.

Implemented extraction, transformation and loading processes for the North Carolina Emergency Department Database (NCEDD)

- Designed and developed NCEDD demonstration database in Access 2000
- Designed and developed NCEDD standard web reports using Active Server Pages
- Developed reports in Crystal Reports for the Pre-hospital Medical Information System (PreMIS) from a DB2 database

September 2000 - August 2001: Graduate Research Assistant.

- Acted as liaison among NCEDD project participants to gather both technical and non-technical specifications and communicated those needs to vendors and legal consultants
- Assisted in Windows NT server and database configuration and maintenance
- Designed and maintained project team web page as well as department website

IV. HONORS

- 2018: Rick Heffernan Award, International Society for Disease Surveillance.
- 2006: HIMSS Public Health Davies Award. For NC DETECT (not a personal award).
- 1994: Maas Prize for Outstanding French Paper, University of Virginia.

V. BIBLIOGRAPHY

Book Chapters:

1. Coletta MA & **Ising AI**. Syndromic Surveillance: A Practical Application of Informatics. J. A. Magnuson, B. E. Dixon (eds.), Public Health Informatics and Information Systems. New York: Springer; 2020; 269-285. 17 pages.
2. Waller, AE, Scholer, MJ, **Ising, AI** and Travers, DA. Using Emergency Department Data for Biosurveillance: The North Carolina Experience. In: Infectious Disease Informatics and Biosurveillance: Research, Systems, and Case Studies, Zeng D, et. al., editors, New York: Springer Publishing Company; 2010; 46-66. 21 pages.
3. Kaydos-Daniels, SC, Rojas-Smith, L, **Ising AI**, Barnett, C, Farris, T, Waller, AE, Wetterhall, S. Biosurveillance and Public Health Practice: A case study of North Carolina's NC DETECT System. In: Biosurveillance: Methods and Case Studies, Kass-Hout, T and Zhang, X, editors. Boca Raton, FL: CRC Press; 2010; 195-213. 19 pages.
4. Waller, AE, **Ising, AI**, Deyneka, L. North Carolina Biosurveillance System. In: Wiley Handbook of Science and Technology for Homeland Security. Voeller JG, editor. New York: John Wiley and Sons,

Inc.; 2008; 1-40. 40 pages.

Articles in refereed journals and conference proceedings:

1. Snyder NL, **Ising A**, Waller AE. EMS injury cause codes more accurate than emergency department visit ICD-10-CM codes for firearm injury intent in North Carolina. *PLoS One*. 2024 Apr 30;19(4):e0295348. doi: 10.1371/journal.pone.0295348. PMID: 38687735; PMCID: PMC11060569.
2. Radhakrishnan L, Carey K, Pell D, **Ising A**, Brathwaite D, Waller A, Gay J, Watson-Smith H, Person M, Zamore K, Brumsted T, Price C, Clark PM, Haas GA, Gracy L, Johnston S, Chen Y, Muñoz K, Henry M, Willis B, Nevels D, Asaolu I, Lee S, Wilkins NJ, Bacon S, Sheppard M, Kite-Powell A, Blau G, King M, Whittaker M, Leeb RT. Seasonal Trends in Emergency Department Visits for Mental and Behavioral Health Conditions Among Children and Adolescents Aged 5-17 Years - United States, January 2018-June 2023. *MMWR Morb Mortal Wkly Rep*. 2023 Sep 22;72(38):1032-1040. doi: 10.15585/mmwr.mm7238a3. PMID: 37733637; PMCID: PMC10519715.
3. Nazzal EM, Waller AE, Meyer ML, **Ising AI**, Jones-Vessey K, Urrutia E, Urrutia RP. Pregnancy and Emergency Department Utilization in North Carolina, 2016-2021: A Population-Based Surveillance Study. *AJPM Focus*. 2023 Aug 13;2(4):100142. doi: 10.1016/j.focus.2023.100142. PMID: 37790954; PMCID: PMC10546499.
4. **Ising A**, Waller A, Frerichs L. Evaluation of an Emergency Department Visit Data Mental Health Dashboard. *J Public Health Manag Pract*. 2023 May-Jun 01;29(3):369-376. doi: 10.1097/PHH.0000000000001727. Epub 2023 Mar 1. PMID: 36867507.
5. Harada NM, Kuzmichev A, Dembek ZF, **Ising AI**, Dean HD. Informing COVID-19 Response and Health Equity Agenda: Collection of Public Health Reports Articles on Emerging Viral Epidemics in the United States, 1878-2021. *Public Health Reports*. 2023;0(0). doi:10.1177/00333549221148782
6. Fix J, **Ising AI**, Proescholdbell SK, Falls DM, Wolff CS, Fernandez AR, Waller AE. Linking emergency medical services and emergency department data to improve overdose surveillance in North Carolina. *Public Health Reports*. 2021 Nov;136(1_suppl):54S-61S. 8 pages.
7. Brathwaite DM, Wolff CS, **Ising AI**, Proescholdbell SK, Waller AE. A mixed-methods comparison of a national and state opioid overdose surveillance definition. *Public Health Reports*. 2021 Nov;136(1_suppl):31S-39S. 9 pages.
8. Harmon KJ, Peticolas K, Redding EM, **Ising A**, Waller AE. Examining the effect of pedestrian crashes on vulnerable populations in North Carolina. *North Carolina medical journal*. 2021 Jul 1;82(4):237-43. 7 pages.
9. Conway M, Mowery D, **Ising A**, Velupillai S, Doan S, Gunn J, Donovan M, Wiedeman C, Ballester L, Soetebier K, Tong C, Burkom H. Cross Disciplinary Consultancy to Bridge Public Health Technical Needs and Analytic Developers: Negation Detection Use Case. *Online J Public Health Inform*. 2018;10(2):e209; 19 pages..
10. Harmon KJ, Hakenewerth AM, Waller AE, **Ising A**, Tintinalli JE. Begin risk assessment for falls in women at 45, not 65. *Inj Prev*. 2019 Jun;25(3):184-186. 3 pages.
11. Yoon PW, **Ising A**, Gunn J. Using Syndromic Surveillance for All-Hazards Public Health Surveillance: Successes, Challenges and the Future. *Public Health Rep*. 2017;132(Suppl 1):1-4. 4 pages.
12. **Ising A**, Proescholdbell S, Harmon KJ, Sachdeva N, Marshall SW, Waller AE. Use of syndromic surveillance data to monitor poisonings and drug overdoses in state and local public health agencies. *Injury prevention*. 2016 Apr 1;22(Suppl 1):i43-9. 7 pages.

13. Faigen Z, Deyneka L, **Ising A**, Neill D, Conway M, Fairchild G, Gunn J, Swenson D, Painter I, Johnson L, Kiley C. Cross-Disciplinary Consultancy to Bridge Public Health Technical Needs and Analytic Developers: Asyndromic Surveillance Use Case. *Online journal of public health informatics*. 2015;7(3). 12 pages.
14. Miller C, Ishikawa C, DeLeon M, Huang M, **Ising A**, Bakota E. Joint recommendations for the public health informatics infrastructure. *Journal of Public Health Management and Practice*. 2015 Sep 1;21(5):516-8. 3 pages.
15. Hakenewerth AM, Tintinalli JE, Waller AE, **Ising A**. Emergency Department Visits by Older Adults with Mental Illness in North Carolina. *Western Journal of Emergency Medicine*. 2015 Dec;16(7):1142-1145. 4 pages.
16. Rhea SK, Weber DJ, Poole C, Waller AE, **Ising AI**, Williams C. Use of statewide emergency department surveillance data to assess incidence of animal bite injuries among humans in North Carolina. *J Am Vet Med Assoc*. 2014 Mar 1;244(5):597-603. 7 pages.
17. Samoff E, Fangman MT, Hakenewerth A, **Ising A**, Waller AE. Use of Syndromic Surveillance at Local Health Departments: Movement Toward More Effective Systems. *J Public Health Manag Pract*. 2014 Jul-Aug;20(4):E25-30. 6 pages.
18. Modarai F, Mack K, Hicks P, Benoit S, Park S, Jones C, Proescholdbell S, **Ising A**, Paulozzi L. Relationship of opioid prescription sales and overdoses, North Carolina. *Drug Alcohol Depend*. 2013 Sep 1;132(1-2):81-6. 6 pages.
19. Rhea S, **Ising A**, Deyneka L, Vaughn-Batten H, Fleischauer A, Waller A. Using near real-time morbidity data to identify heat-related illness prevention strategies in North Carolina. *Journal of community health* 37:2 2012 Apr pg 495-500. 6 pages.
20. Rhea S, **Ising A**, Waller A, Haskell MG, Weber DJ. Using ICD-9-CM E-codes in addition to chief complaint keyword searches for identification of animal bite-related emergency department visits (comment). *Public Health Reports* 2012; 127(6):561-2. 2 pages.
21. Samoff E, Waller AE, Fleischauer A, **Ising A**, Davis M, Park M, Haas SW, DiBiase L, MacDonald PDM. Integration of syndromic surveillance data into public health practice at state and local levels. *Public Health Reports*, 2012; 127(3):310-317. 8 pages.
22. Rappold AG, Stone SL, Cascio WE, Neas LM, Kilaru VJ, Carraway MS, Szykman JJ, **Ising A**, Cleve WE, Meredith JT, Vaughan-Batten H, Deyneka L, Devlin RB. (2011) Peat Bog Wildfire Smoke Exposure in Rural North Carolina Is Associated with Cardio-Pulmonary Emergency Department Visits Assessed Through Syndromic Surveillance. *Environ Health Perspectives*, 2011 Oct;119(10):1415-1420. 6 pages.
23. Zhao, Y, Zeng, D, Herring, AH, **Ising, A**, Waller, AE, Richardson, D, Kosorok, MR. Detecting Disease Outbreaks Using Local Spatiotemporal Methods. *Biometrics*, 2011; 67(4):1508-1517. 10 pages.
24. Rhea S, Glickman S, Waller A, **Ising A**, Maillard J, Lund E, Glickman L. Evaluation of routinely collected veterinary and human health data for surveillance of human tick-borne diseases in North Carolina. *Vector-Borne and Zoonotic Diseases* 2011 Jan;11(1):9-14. 6 pages.
25. Waller A, Hakenewerth A, Tintinalli J, **Ising A**. Annual Report of North Carolina Emergency Department Data, January 1, 2007-December 31, 2007. *North Carolina Medical Journal*, January/February 2010, 71(1):15-25. 11 pages.
26. Hakenewerth, AM, Waller, AE, **Ising, AI**, Tintinalli, JE. NC DETECT and NHAMCS: Comparison of Emergency Department Data. *Academic Emergency Medicine* 2009 March;16(3):261-269. 9 pages.
27. **Ising A**, Li M, Waller AE. Documenting alerts within a Web-based early event detection system. *AMIA Annu Symp Proc*. 2006:964. 1 page.

28. Travers DA, Barnett C, **Ising A**, Waller AE. Timeliness of emergency department diagnoses for syndromic surveillance. AMIA Annu Symp Proc. 2006;769-73. 5 pages.

Presentations:

40+ presentations at national/state/regional conferences.

VI: TEACHING ACTIVITIES

EPID 795 Data in Public Health (Graduate 3-credit course):

- Fall 2022: 41 students
- Fall 2021: 38 students
- Summer 2021 (online): 10 students
- Spring 2021 (online): 8 students
- Fall 2020: 31 students

EPID 795 Introduction to Public Health Informatics (Graduate 1-credit course):

- Fall 2012 – Fall 2018: average of 15 students per semester

Graduate Research Assistant Supervision:

- 2022-2023: Nicole L. Snyder
- 2021-2022: Zhaopeng Xing

Practicum Supervision

- Summer 2023: Lubna Hossain & Kathleen Higgins
- Spring 2022: Krishna Dutt

VII. GRANT SUPPORT

Active Grant Support:

APHA/CDC Data Science Project: Improving Surveillance for Sexual Violence in North Carolina with Machine Learning

Role: Principal Investigator
Funded By: CDC/APHA
Dates: 4/1/2024 – 4/30/2025

Injury and Violence Surveillance Improvement Project (IVSIP) (contract)

Role: Co-PI
Funded By: North Carolina Department of Health and Human Services
Dates: 11/1/2023 - 8/31/2024

Leveraging EMS, Emergency Department Visit, and Crash Data to Inform Traffic Safety Action in North Carolina

Role: Co-Investigator
Funded By: Governor's Highway Safety Program, NC DOT
Dates: 10/1/2023 – 9/30/2024

Preparedness Planning Grant (contract)

Role: Co-Investigator
Funded By: CDC
Dates: 9/18/2023 – 9/17/2024

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) (contract)

Role: Co-PI
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2023 – 6/30/2024

Promoting Interoperability Registration of Intent Web-based Portal for NC (contract)

Role: PI
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2023 – 6/30/2024

Regionalization of Acute Stroke Care for Rural Populations: A Systems Modeling Approach

Role: Co-Investigator
Funded By: NIH
Dates: 7/1/2023 - 1/31/2028

Completed Research Support

APHA/CDC Data Science Project: Mapping Firearm Violence in North Carolina: A Place-Based Data Visualization Using Data Science Analytics

Role: Co-Investigator
Funded By: CDC/APHA
Dates: 4/1/2023 – 4/30/2024

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2022 – 6/30/2023

Meaningful Use Registration of Intent Web-based Portal for NC (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2022 - 6/30/2023

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2021 – 6/30/2022

Meaningful Use Registration of Intent Web-based Portal for NC (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2021-6/30/2022

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2020 – 6/30/2021

Meaningful Use Registration of Intent Web-based Portal for NC (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2020-6/30/2021

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2019 – 6/30/2020

Meaningful Use Registration of Intent Web-based Portal for NC (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2019-6/30/2020

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2018 – 6/30/2019

Meaningful Use Registration of Intent Web-based Portal for NC (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2018-6/30/2019

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2017 – 6/30/2018

Meaningful Use Registration of Intent Web-based Portal for NC (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2017-6/30/2018

Healthcare Associated Infection Prevention Capacity (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 4/1/2016 – 3/31/2018

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2016 – 6/30/2017

Meaningful Use Registration of Intent Web-based Portal for NC (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2016-6/30/2017

Develop and Implement a Meaningful User Registration of Intent Web-based Portal for NC (contract)

Role: Co-Investigator

Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2015 - 6/30/2016

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2015 - 6/30/2016

Develop and Implement a Meaningful Use Registration of Intent Web-based Portal for NC (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2014 - 6/30/2015

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2014 - 6/30/2015

Develop and Implement a Meaningful Use Registration of Intent Web-based Portal for NC (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 12/4/2013 - 6/30/2014

Wake County Childhood Injury Prevention Assessment Project (contract)

Role: Co-Investigator
Funded By: John Rex Endowment
Dates: 8/1/2013 – 5/31/2014

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 7/1/2013 – 6/30/2014

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 8/10/2012 – 6/30/2013

Amendment #1: 12/1/2012 – 6/30/2013, BioSense 2.0 Data Provisioning and Disaster Recovery

Preparedness and Emergency Response Research Center (PERRC) (grant)

Role: Co-Investigator Project 2 – Surveillance Systems Research
Funded By: Centers for Disease Prevention and Control
Dates: 9/30/2008 – 9/29/2012

Gillings Innovation Laboratory (grant)

Role: Co-Investigator, (first 2 years only)
Funded By: Gillings Foundation through UNC-CH School of Public Health
Dates: 8/15/2008- 8/14/2012

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) (contract)

Role: Co-Investigator

Funded By: North Carolina Department of Health and Human Services
Dates: 8/10/2011 - 8/09/2012

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 8/10/2010 - 8/09/2011

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 8/10/2009 - 4/09/2010

Amendment #1: Date Extension 4/10/2010 – 8/09/2010 – \$270,000

BioSense Evaluation (grant)

Role: Co-Investigator
Funded By: CDC (UNC sub-contract to RTI)
Dates: 10/1/2006 – 9/30/2009

Amendment #1: Date Extension 10/01/2009 – 5/31/2010

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) (contract)

Role: Co- Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 8/10/2008 - 4/09/2009

Amendment #1: Date Extension 4/10/2009 – 8/09/2009

BioSense Data Provisioning (contract)

Role: Co- Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 9/1/2007- 5/1/2008

Amendment #1: Date Extension 5/01/2008 – 8/09/2008

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 8/31/2007 - 8/09/2008

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 8/31/2006 - 8/30/2007

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services
Dates: 8/31/2005 - 8/30/2006

The North Carolina Bioterrorism and Emerging Infections Prevention System (NC BEIPS) and the North Carolina Emergency Department Database (NCEDD) (contract)

Role: Co-Investigator
Funded By: North Carolina Department of Health and Human Services

Dates: 8/31/2004 – 8/30/2005

Rapid expansion of the North Carolina Emergency Department Database and development of a controlled vocabulary for emergency department chief complaints related to possible bioterrorism (contract)

Role: Co-Investigator

Funded By: North Carolina Department of Health and Human Services

Dates: 8/31/2002 – 8/30/2004

VIII. SERVICE

International Society for Disease Surveillance (ISDS)

2013-2018 Board Member, ISDS

2015-2016 Board President, ISDS

2013-2016 ISDS Representative on the Joint Public Health Informatics Taskforce

2012 Conference Scientific Program Chair, ISDS

2010-2014 Conference Program Committee Member, ISDS

2010 Meaningful Use Workgroup Member, ISDS

2008 Conference Local Committee Co-Chair, ISDS

2006-2018 Conference abstract peer reviewer, ISDS

2004-2019 Member, ISDS

2000-2020 Member, North Carolina Health Information and Communications Alliance, Inc.
(NCHICA)

Public Health Reports

2018-present Editorial Committee