

Justinian Wurtzel

Iowa Department of Health and Human Services
Division of Public Health | Bureau of HIV, STI, and Hepatitis
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SUMMARY

A compassionate scientist with six years of public health experience at local, tribal, and state service levels with a decade of professional scientific work in chemistry, research, and epidemiology. An analytically and evidentially driven epidemiologist providing coordination and consultation over state-level initiatives to improve health, passionate about incorporating health equity in modern public health praxis.

APPOINTMENTS AND EMPLOYMENT

Viral Hepatitis Surveillance Coordinator | Epidemiologist Aug 2021 – Present
Iowa Department of Health and Human Services
Bureau of HIV, STI, and Hepatitis
Des Moines, IA, United States

Data Analysis and Reporting:

- Analyzes population data and prepares annual surveillance epidemiological reports with yearly trends, incidence, prevalence, and risk factor measures of viral hepatitis.
- Reviews external data sources and primary research to support contextualizing and interpreting state trends identified in Bureau data.

Epidemiology and Outbreak Response:

- Leads cluster detection teamwork in a bi-weekly analysis of potential state clusters. Reviewing high count chronic counties and all acutes identified.
- Collaborates with STI, HIV, and Hepatitis Epidemiologists to develop new cluster detection reporting tools and authored state cluster detection and response manual.
- Developed tabletop guide and exercise for stakeholder engagement and training.

Collaboration and Support:

- Collaborates with HIV and STI teams to assess morbidity for annual surveillance reports.
- Actively works with local public health on disease follow-up investigations and federal CDC partners in ongoing grant deliverables and activities.

Data Quality and Governance:

- Maintains data integrity by reviewing and updating data collected via investigations.

Public Health Epidemiologist | Epidemiologist Senior
Sioux Lookout First Nation Health Authority
Health Analytics Department
Sioux Lookout, ON, Canada

July 2019 – Aug 2021

Data Analysis and Reporting:

- Led patient immunization data collection with a team of data clerks, using data extracted from the Public Health Agency of Canada to estimate community vaccination levels.
- Analyzed clinical diabetes data, hospitalizations, emergency department visits, and nursing station administration logs to develop the region's first adult health status report.
- Analyzed worker capacity for community nursing stations, creating a novel staffing and PPE matrix for logistics, administration, and finance to implement. Securing over 30 million dollars in federal funding to the region. The Matrix was later used by the Nishnawbe Aski Nation, one of Canada's largest First Nations political action groups, to support other First Nations communities across the country.

Epidemiology and Outbreak Response:

- Actively participated in multi-community tuberculosis outbreaks, connecting with nursing station staff to test patients and follow up with contacts. Preparing a daily line list with relevant patient information.
- Data and epidemiology lead for the planning section of IMS during the COVID-19 pandemic. Prepared daily analytical briefs to leadership monitoring surveillance activities for all nursing stations, airports, and contractors entering the region, grounding all flights with Public Health Physician when in-community transmission was first seen in Ontario.

Collaboration and Support:

- Collaborate with Chiefs and Tribal Councils to develop health indicators and annual priorities, emphasizing community engagement and empowerment.
- Presented progress on the previous year's health priorities during the Annual General Meeting of the Chief and Council.
- Worked with nursing station staff to keep track of and report on COVID-19 vaccination efforts during the initial vaccine roll-out in Ontario, Canada.

Data Quality and Governance:

- Mentored and evaluated the quality of Data Clerk activities in EMR.
- Worked with the Public Health Agency of Canada to extract all First Nations immunization data from the federal system to an Indigenous-made health system.

Data Clerk

Sept 2018 – July 2019

Wellington Dufferin Guelph Public Health
Health Analytics Department
Guelph, ON Canada

- Data entry of client data, updating information on new and pre-existing clients.
- Maintain the various databases per current guidelines to ensure data accuracy.

Laboratory Manager

Aug 2014 – Jan 2018

Northland Technical Laboratories

Toronto, ON, Canada

- Collaborated with a team of scientists to perform quantitative instrument analysis.
- Developed SOPs to improve data accuracy and strengthen the reliability of results.

Associate Scientist

Aug 2012 – May 2014

Northland Products Company

Waterloo, IA, United States

- Streamlined sample preparation via new work instructions, increasing output by 15%.
- Consulted on critical issues with a new client, securing a two-year contract for \$500,000.

Research Assistant

Sept 2017 – Aug 2019

Department of Population Medicine

University of Guelph

Guelph, ON Canada

“Investigating factors that impact sense of community and the association with mental health status at a southwestern Ontario university: A cross-sectional study.”

Research Assistant

Aug 2012 – May 2014

Department of Biological Sciences

University of Northern Iowa

Cedar Falls, IA United States

“Bioinformatic and molecular investigation of clotting factors and blood proteins in R. Catesbeiana during estivation.”

Research Assistant

May 2012 – August 2012

Denver Botanic Gardens

Denver, CO, United States

- Biodiversity Project, *“Exploration of inter simple sequence repeats to assess genetic diversity among Phacelia Formosula on western Colorado slope.”*
- Horticulture Project, *“Novel propagation method for indoor growing of Stachys Lavandulifolia.”*

Research Assistant

Aug 2011 – May 2014

Department of Biochemistry & Chemistry

University of Northern Iowa

Cedar Falls, IA United States

“Novel solvolysis technique for encapsulation of sodium azide compound in nitrated lignin derivative.”

EDUCATION

MPH , Public Health Administration and Policy College of Health Sciences Des Moines University Des Moines, IA, United States <i>3.96/4.00 GPA, Summa Cum Laude</i>	2024 – 2025
MSc , Epidemiology Department of Population Medicine University of Guelph Guelph, ON, Canada	2017 – 2019
BA , Biochemistry Department of Chemistry University of Northern Iowa Cedar Falls, IA, United States	2010 – 2014
<i>Continuing education, no degree conferred</i> PhD, Community and Behavioral Health College of Public Health University of Iowa Iowa City, IA, United States 12 Credit Hours Completed, 3.7/4.0 GPA	2022 – 2023

AWARDS AND HONOURS

Outstanding Student Chapter Award, 2014, American Chemical Society
Research Grant, 2013, University of Northern Iowa, College of Arts & Science
Best College LGBT Group Award, 2013, Iowa Pride Network
ACS Travel Award, 2011, American Chemical Society
Student Opportunities for Academic Research Grant, 2010, University of Northern Iowa
Entrance Scholarship, 2010, University of Northern Iowa
Undergraduate Research Scholarship, 2010, University of Northern Iowa

EXTRACURRICULAR AND COMMUNITY SERVICE

Member, Young Professionals Connection, August 2023 – Present
Wellness Center Staff, YMCA Feb 2024 – August 2024
Wellness Coach – Strength and Conditioning, YMCA March 2024 – 2024
UNI Proud LGBT*, Director of Fundraising • University of Northern Iowa 2010 – 2014
UNI Fencing Club, President • University of Northern Iowa 2011 – 2012
American Chemical Society, Student Affiliates • University of Northern Iowa 2011 – 2012

CERTIFICATES

Practical Machine Learning Certificate, Johns Hopkins University, 2024
R Programming Certificate, Johns Hopkins University, 2024
Data Science Certificate, Johns Hopkins University, 2018
Certificate in Project Management: Healthcare Project Management Institute, 2018
Certificate in Cloud Computing: Cloud Security, CompTIA, 2018
CPR/AED for Professional Rescuers, American Red Cross, 2024 – 2026
First Aid, American Red Cross, 2024 – 2026
IS-200.C: Basic Incident Command System for Initial Response, FEMA, Sept 2023
IS-100.C: Introduction to Incident Command System, FEMA, Sept 2023
Group 1 – Biomedical – IRB – 01, CITI Program, August 2022
Social and Behavioral Responsible Conduct of Research, August 2022-2026
Certificate in Case Interviewing, Public Health Agency of Canada, Sept 2021
Incidence Management System 101, June 2020
CPR certification, Heart & Stroke Canada 2020-2023
Standard First Aid Basic Life Support Provider, Heart & Stroke Canada 2020-2023
Certificate in Canada Good Clinical Practices, Citi Program 2019
Certificate of Completion, Anishinaabe Cultural Training, SLMHC, 2019
Academic Research Integrity License, Ontario Consortium Graduate Skills, 2017

CONFERENCE ACTIVITY

Panel Presentations (Moderator or Discussant)

Hepatitis A Outbreak Response Plan Overview, Pennsylvania Department of Health, Lauren Orkis. NASTAD Outbreak Working Group, June 2025.

Viral Hepatitis Technical Assistance, Peer-to-Peer Activity. Health Facility and Laboratory Assessment Methodology. National Alliance of State and Territorial AIDS Directors. Viral Hepatitis Learning Collaborative. May 2025.

Local Public Health, Epidemiology and Hepatitis Update. The Center for Acute Disease Epidemiology (CADE) and Bureau of HIV, STI, and Hepatitis Webinar. January 2022. Des Moines, Iowa.

National Presentation

Viral Hepatitis Cluster Detection and Response Planning with Community Planning Group. Iowa Department of Health and Human Services. NASTAD Outbreak Working Group, April 2025.

State of Iowa, Viral Hepatitis Outbreak and Response Activities, Community Planning Group Project. National Alliance of State and Territorial AIDS Directors. Viral Hepatitis Learning Collaborative. April 2025.

Departmental and State Presentations

Viral Hepatitis Cluster Detection and Response Planning: Tabletop Activity. Bureau of HIV, STI, and Hepatitis Community Planning Group, February 2025.

Equity Primer: Health Equity, Difference and Disparity. Bureau of HIV, STI, and Hepatitis. Data & Epidemiology Community of Practice. March 2024. Des Moines, Iowa

Laboratory Findings and Serology of Hepatitis B and C in Iowa. Bureau of HIV, STI, and Hepatitis. February 2022. Des Moines, Iowa

Overview of Hepatitis B and C in Iowa. Bureau of HIV, STI, and Hepatitis. October 20, 2021. Des Moines, Iowa

Sioux Lookout Catchment Zone, Adult Health Status Report Presentation. Sioux Lookout First Nations Health Authority. August 12, 2019. Sioux Lookout, Ontario Canada

Conference Presentations (* presenting author)

Wurtzel J., Development of a Web-Based Viral Hepatitis Classification Tool Using R-Shiny Package for Clinician Support. Global Hepatitis Summit, International Symposium on Viral Hepatitis and Liver Disease. Poster Presentation. March 2025, Los Angeles, California United States.

Wurtzel J, Soweid L, Holdefer PJ, Maharjan G, Greteman B, Nash S, Charlton M, Gilbert PA*, COVID-19 Pandemic Experiences and Alcohol Use: Findings of Higher and Lower Risk in a Midwestern State. Oral presentation at American Public Health Association annual meeting. Atlanta GA: November 12-15, 2023.

Wurtzel J*, Bocking N, Frempong T, Niayesh H. Independent First Nations Alliance (IFNA) Health Summit. Community Adult Health Status Reports, Hospitalizations and Emergency Department Visits. February 13, 2020. Thunder Bay, Ontario Canada.

Wurtzel J*, Bocking N. Independent First Nations Alliance (IFNA) Health Summit. Morbidity and Mortality Analysis. February 12, 2020. Thunder Bay, Ontario Canada.

Wurtzel J*, Huang Ku E. 7th Annual Indigenous Health Research Symposium. Diabetes Prevalence, Incidence and Complication Rates in Remote Communities in the Sioux Lookout Area. January 23rd and 24th, 2020. University of Manitoba. Winnipeg, Manitoba Canada.

Wurtzel J*, Bocking N. Health Director Summit. Sioux Lookout First Nations Health Authority. Community Adult Health Status Reports. December 10, 2019. Sioux Lookout, Ontario Canada.

Wurtzel J*, Bocking N, Indigenous Health and Research Conference. "Anishininiw Nanadowi'kikendamowin, Health Outcomes of Our People. The Sioux Lookout Area First Nations' Adult Health Status Report" Plenary Session, McMaster University. February 2020. Hamilton, Ontario Canada.

Frempong T, **Wurtzel J***. Indigenous Health and Research Conference. "A public health model for 31 communities in the Sioux Lookout First Nations, McMaster University. February 2020. Hamilton, Ontario Canada.

Edwards C*, Wurtzel J. Indigenous Health and Research Conference. "Transfer of historical immunization database stewardship from Canada's First Nations and Inuit Health Branch to Sioux Lookout First Nations Health Authority" Poster Presentation. McMaster University. February 2020. Hamilton, Ontario Canada.

Wurtzel J*, Ellioff M. "Novel solvolysis technique for encapsulation of sodium azide compound in nitrated lignin derivative." Poster Presentation. American Chemical Society, March 2011. Anaheim California.

TEACHING EXPERIENCE

University of Northern Iowa

1. Teaching Assistant, Anatomy & Physiology II, 2012 – 2013
2. Teaching Assistant, Anatomy & Physiology I, 2011 – 2012
3. Teaching Assistant, General Chemistry II, 2011 – 2012
4. Teaching Assistant, General Chemistry I, 2010 – 2011

PROFESSIONAL SERVICE

Data & Viral Hepatitis Consultant, November 2024 – Present
National Alliance of State & Territorial AIDS Directors, NASTAD
Supporting development, implementation, and sustainability of Viral Hepatitis initiatives as subject matter expert

Contact Tracer – Highly Pathogenic Avian Influenza (HPAI)
Center for Acute Disease Epidemiology, June 2024 – Present
Incident Command Structure, Iowa Department of Health and Human Service

Surveillance Liaison, January 2024 – Present
Pulse Check Cohort, Equity in the Center

Data & Epidemiology Liaison, August 2023 – Present
Learning Leaders Cohort, Health Equity Program

Iowa Department of Health and Human Services

Ad Hoc Reviewer, February 2023

LGBT Health Journal

Mary Ann Liebert

Iowa Liaison, February 2022 – Present

Multi-Jurisdictional Hepatitis B Care Continuum Working Group

Member, October 2021 – Present

Social Determinants of Health Working Group, Iowa Division of Public Health

Data and surveillance lead, February 2020 – March 2021

SLFNHA Incidence Management System, COVID-19 pandemic, Sioux Lookout Ontario Canada

Chairperson, October 2019 – March 2021

SLFNHA Mental Health and Addiction Steering Committee, Sioux Lookout Ontario, Canada

Member, November 2019 – February 2021

SLFNHA Diabetes Steering Committee, Sioux Lookout Ontario, Canada

Chairperson, December 2019 – January 2021

SLFNHA Injuries and Complications Steering Committee, Sioux Lookout Ontario, Canada

PUBLICATIONS

Reports

1. **Wurtzel J**, “State of Iowa Viral Hepatitis Cluster Detection and Response Manual” Bureau of HIV, STI, and Hepatitis. Iowa Department of Health and Human Services 2025
2. **Wurtzel J**, “State of Iowa Viral Hepatitis B, 2024 End-of-Year Report” Bureau of HIV, STI, and Hepatitis. Iowa Department of Health and Human Services May 2025
3. **Wurtzel J**, “State of Iowa Viral Hepatitis B, 2023 End-of-Year Report” Bureau of HIV, STI, and Hepatitis. Iowa Department of Health and Human Services May 2024
4. **Wurtzel J**, “State of Iowa Viral Hepatitis B, 2022 End-of-Year Report” Bureau of HIV, STI, and Hepatitis. Iowa Department of Health and Human Services May 2023
5. **Wurtzel J**, “State of Iowa Viral Hepatitis B, 2021 End-of-Year Report” Bureau of HIV, STI, and Hepatitis. Iowa Department of Health and Human Services May 2022
6. **Wurtzel J**, “State of Iowa Viral Hepatitis B Surveillance Manual” Bureau of HIV, STD, and Hepatitis. Iowa Department of Public Health February 2022

7. **Wurtzel J**, Bocking N "Anishininiw Nanadowi'kikendamowin, Health Outcomes of Our People. The Sioux Lookout Area First Nations' Adult Health Status Report." September 2019

Manuscripts

1. **Wurtzel J**, Soweid L, Maharjan G, Greteman B, Nash S, Charlton M, Gilbert PA, "COVID-19 Pandemic Experiences and Alcohol Use: Findings of Higher and Lower Risk in a Midwestern State." (In Review at International Journal of Environmental Research and Public Health)

Abstracts

1. **Gilbert PA***, Wurtzel J, Soweid L, Holdefer PJ, Maharjan G, Greteman B, Nash S, Charlton M. "COVID-19 Pandemic Experiences and Alcohol Use: Findings of Higher and Lower Risk in a Midwestern State." American Public Health Association annual meeting. Atlanta GA: November 12-15, 2023.
2. Edwards C, **Wurtzel J**. Indigenous Health, and Research Conference. "Transfer of historical immunization database stewardship from Canada's First Nations and Inuit Health Branch to Sioux Lookout First Nations Health Authority" Poster Presentation. McMaster University. February 2020. Hamilton, Ontario, Canada.
3. **Wurtzel J**, McWhirter J, Papadopoulos A "Investigating factors that impact sense of community and the association with mental health status at a southwestern Ontario university: A cross-sectional study." (Seeking publication)
4. **Wurtzel J**. "Bioinformatic and molecular investigation of clotting factors and blood proteins in *R. Catesbeiana* during estivation."
5. **Wurtzel J**. "Exploration of inter simple sequence repeats to assess genetic diversity among *Phacelia Formosula* on western Colorado slope."
6. **Wurtzel J**. "Novel propagation method for indoor growing of *Stachys Lavandulifolia*."
7. **Wurtzel J**. "Novel solvolysis technique for encapsulating sodium azide compound in nitrated lignin derivative."

INTELLECTUAL PROPERTY, PROJECTS AND TOOLS

Syndromic Surveillance Dashboard for Outbreak Detection

July 2024 – Present

Role: Developer and Epidemiologist

- Developed an interactive Shiny app to monitor syndromic indicators and detect potential outbreaks.
- Implemented features to visualize real-time data and provide actionable insights for public health officials.
- Enhanced user experience by integrating spatial data and interactive filters for tailored data analysis.
- Relevant Tool:

- <https://wurtzite.shinyapps.io/SyndromicSurveillance/>

Public Health Classification Tools for Bloodborne Pathogens

July 2024 – Present

Role: Developer and Epidemiologist

- Developed two Shiny web applications in R for Syphilis, Hepatitis B and Hepatitis C classification based on clinical and laboratory criteria, with real-time results and recommendations.
- I implemented a user-friendly interface featuring light/dark mode for enhanced accessibility and reactive programming for dynamic user input response.
- Ensured data validation and error handling to enhance accuracy and reliability.
- Added AST/ALT ratio calculations with a built-in reference table and customized recommendations.
- Relevant Tools:
 - <https://wurtzite.shinyapps.io/HBCV2024/>, complete
 - <https://wurtzite.shinyapps.io/syphilisclassification/>, in-progress

TECHNICAL SOFTWARE SKILLS

- Statistical Software: R, STATA, Python, Excel
- Application Development: Shiny, Visual Studio Code
- Web Development: GitHub, HTML, CSS
- Data Visualization: Tableau, PowerBI
- Computational Notebooks: Jupyter