

# TYLER BONNELL

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## EDUCATION

### Master of Public Health – Epidemiology

University of Washington, Seattle, Washington

June 2022

GPA 3.93/4.0

### Bachelor of Science in Public Health - Global Health (Honors) & Bachelor of Arts in Spanish

University of Washington, Seattle, Washington

June 2019

GPA: 3.82/4.0

## PROFESSIONAL EXPERIENCE

### Public Health Data Scientist/Epidemiologist II

Syndromic Surveillance Epidemiology Intern

*Washington Department of Health - Rapid Health Information Network (RHINO)*

July 2022 - Present

June 2021 – June 2022

- Lead the execution of analytic and dissemination deliverables for suicide, firearm injury, and violence-related CDC grants.
- Create interactive, quarterly reports visualizing temporal, geospatial, and demographic trends for overdose, firearm injury, and behavioral health-related emergency department visit. To date, 500+ reports have been shared with local health departments to inform public health interventions.
- Implement an automated spatiotemporal cluster detection analysis using SatScan to detect near-real time upticks in public health conditions of interest.
- Develop the RHINO R package, a suite of tools designed to promote reproducible pulling (via API), cleaning, feature extraction, visualization, and analysis of electronic health record data by public health professionals.
- Design deterministic and probabilistic linkages between electronic health record and other governmental data sources to validate electronic health record data and further contextualize related analyses.
- Conduct literature reviews, exploratory data analyses (such as text mining), and manual record reviews to develop and evaluate novel electronic health queries aimed at monitoring public health conditions of interest.

### Research Assistant – WA Notify Evaluation & School of Public Health Dean's Office

February 2021 – June 2022

*University of Washington - Department of Epidemiology*

- Developed mixed method data collection instruments such as REDCap surveys and semi-structured interview guides.
- Cultivated relationships with community-based organizations (CBOs) and coordinate meetings among key stakeholders.
- Drafted and disseminated analytical findings for key WA Notify implementation stakeholders.
- Conducted literature reviews regarding non-pharmaceutical COVID-19 interventions, COVID-19 vaccination, epidemic modeling, and the equity implications of novel eHealth & mHealth technologies.

### Program Manager I – COVID-19 Contact Tracing Lead

June 2020 - September 2020

*Public Health Seattle & King County - COVID-19 Contact Tracing Team*

- Led a team of 50+ COVID-19 contact tracers that conduct case investigations for the Seattle-King County COVID-19 response.
- Facilitated problem solving of complicated scenarios and offered guidance to contact tracers by leading daily debrief meetings and communicating thorough information about process changes to the contact tracing team.
- Mentored staff and trainees by observing case investigations calls, providing appropriate feedback, and developing educational materials and guides for continuous learning.
- Piloted and established a program for daily follow-up communications with COVID-19 cases and their close contacts throughout the remainder of their isolation and quarantine periods.

### Disease Research and Intervention Specialist – COVID-19 Contact Tracer

April 2020 – June 2020,

*Public Health Seattle & King County - COVID-19 Contact Tracing Team*

October 2020 – February 2021

- Conducted in-depth case investigations with COVID positive individuals and educated them as well as their family members on isolation, quarantine, and community support resources.
- Facilitated the testing of individuals exposed to COVID-19, their enrollment in quarantine grocery services, admission to county isolation and quarantine facilities, and engagement with community health workers and social services.
- Utilized multiple platforms simultaneously (e.g. REDCap, Mosio, Teams) to enter data, track the spread of COVID-19, and activate additional outbreak response resources for congregate living, workplace, and healthcare-related situations.

**Emergency Medical Technician (EMT)**

March 2020 – April 2020

*Northwest Ambulance Critical Care Transport*

- Conducted assessments, monitored vitals, and reviewed patient medical history to develop a clear understanding of a patient's condition to properly inform the receiving facility of the patient's needs.
- Responded to 911 emergency dispatches and medical interfacility transportation requests rapidly and safely.
- Routinely maintained and operated the ambulance, radio, and other emergency medical equipment.

**Community Outreach Contractor**

January 2020 – April 2020

*Public Health Seattle & King County - The Condom Distribution Project*

- Identified, contacted, and recruited South King County businesses and organizations as community partners to increase the availability, accessibility, and acceptability of free condoms.
- Promoted condom use to decrease the transmission of HIV and other STIs by building relationships, educating community partners, and providing logistical support to the Condom Distribution Project.

**Disease Research and Intervention Specialist***Public Health Seattle & King County - The Fentanyl Risk Assessment*

February 2020 – March 2020

- Supervised study's respondent driven sampling (RDS) efforts by educating participants on recruitment strategies and monitoring progress utilizing software such as CDC Coupon Manager.
- Conducted rapid fentanyl tests on drug samples and counsel participants on overdose prevention tips as well as how to accurately administer these tests themselves.

**Professional Ski Patroller/EMT**

October 2019 – March 2020

*Summit at Snoqualmie*

- Served as primary emergency medical response and transport responding to various trauma, medical, and environmental incidents ranging from head to long bone injuries to overdose or altered level of consciousness.
- Coordinated with team members and other mountain resources to implement safety and risk mitigation measures such as marking hazards, avalanche control and clearing the mountain for public use at opening and sweeping at close.

**Disease Research and Intervention Specialist – HIV Test Counselor**

May 2019- February 2020

*Public Health Seattle & King County - National HIV Behavioral Surveillance (HET & Trans)*

- Established rapport with individuals of diverse lived experiences and backgrounds in a brief amount of time.
- Conducted the National Behavioral HIV Surveillance (NHBS) structured, qualitative interview in Spanish and English for the Heterosexual and Trans-women cycles.
- Ran INSTI rapid HIV, Gonorrhea, and Chlamydia tests with study participants.
- Counseled individuals on HIV related issues, risk reduction strategies, and additional links to care and resources.

**Global Health Development Intern**

September 2018 – January 2019

*Malaria No More*

- Assisted the development of social media and fundraising content aimed at raising awareness about malaria and the need for continued support of anti-malaria interventions.
- Conducted and incorporated research on grant opportunities, major donors, and potential partnerships into strategic briefs for company employees.

**Migrant Health Outreach Worker**

June 2018 – September 2018

*Sea Mar Community Health Center - Migrant & Seasonal Farmworker Promotores Program*

- Established rapport with farmworkers from indigenous communities in Mexico and Guatemala by working alongside community leaders to clearly communicate the mission and services of the organization.
- Facilitated culturally and linguistically appropriate health education workshops (in English and Spanish) on subjects ranging from tobacco cessation to heart attack awareness to oral hygiene for both adults and kids.

**Student Epidemic Action Leaders (SEAL): Foodborne Illness Outbreak Intern**

June 2018 – September 2018

*University of Washington - Department of Epidemiology*

- Researched foodborne illness risks associated with food production processes as well as the public health agencies tasked with addressing foodborne illness outbreaks at the local, national, and international level.
- Developed web materials to support foodborne illness outbreak responders in their epidemiological investigations.

**Patient Care Intern**

January 2016 – August 2016

*Swedish Medical Center, Neurology & Epilepsy and Oncology units,*

- Cultivated relations with nursing staff by supporting them with patient rounds and other designated tasks.
- Reported patient requests and vitals to providers according to HIPAA standards.

## Teaching & Advising

### Graduate Mentor

September 2021 – June 2022

*University of Washington – Department of Epidemiology*

- Assisted 1 graduate and 2 undergraduate public health students in course selection, job applications (through resume review and mock interviews), and skill development (cover letter and resume drafting and R programming).

### Peace Corps Campus Ambassador

June 2018 – June 2019

*Peace Corps*

- Facilitated events for returned Peace Corps volunteers to describe their experiences and connect with students that are considering joining the Peace Corps.
- Organized a service opportunity where prospective applicants engage, learn from, and volunteer alongside returned Peace Corps volunteers while also serving the needs of our local community.
- Coordinated outreach efforts through class presentations, tabling, and social media to introduce and share the mission of Peace Corps with diverse groups of the university student body.

### Study Abroad Peer Advisor

September 2017 – June 2019

*University of Washington - Study Abroad Office*

- Advised 125+ students on topics like financial aid, course planning, cultural adjustment, and goal setting.
- Presented to different student populations during events such as freshman orientation or club meetings to raise awareness about opportunities and resources to study abroad.
- Developed resources with departments (e.g. the College of Education & First Year Programs) including websites, video tutorials, and guides to help connect students with programs that align with their goals.

### English as a Second Language Teacher

October 2016 – May 2017

*Universidad de Cádiz*

- Taught 3 different oral communication courses for 100+ Spanish university students studying tourism.
- Overhauled course curriculum with new material such as projects, presentations, and in-class exercises to promote oral communication development.

## Community Involvement

### Webmaster

February 2023 – Present

*Washington Yacht Club*

- Redesign the club's website in WordPress to drive new user engagement, provide streamlined and interactive educational content, and showcase the club's 75+ year history of teaching sailing to the University of Washington community.
- Implement and disseminate technical solutions to address operational problems such as online rating exams and comprehensive wind and weather webpage highlighting current and forecasted conditions.

### Guest Experience Volunteer

Aug 2022 - Present

*Seattle Theater Group - THING Festival*

- Support with music festival operations including setting up of music venues, facilitating class registration and check-in's, directing parking, distributing tickets, and answer guests' questions.

### Advocate for Youth Experiencing Homelessness

January 2019 – January 2020

*Teen Feed*

- Developed a better understanding of the characteristics of homeless youth and how to effectively communicate, engage with, and advocate for youth of diverse racial, gender, and sexual identities experiencing homelessness.
- Conducted literature reviews, population analyses, stakeholder interviews, resource assessments, and a public health proposal related to youth homelessness and HIV/AIDs.

## Grants

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- Centers for Disease Control and Prevention, “Overdose Data to Action in States (OD2A-S)”, \$3,750,000
- Centers for Disease Control and Prevention, “Advancing Violence Epidemiology in Real-Time (AVERT)”, \$225,000
- The Safe States Alliance, “Tier Three of a Three-Tiered Approach to Improve Boat Occupant Injury Surveillance Practices”, \$25,000
- Centers for Disease Control and Prevention, “Firearm Surveillance Through Emergency Rooms (FASTER)”, \$150,000
- Centers for Disease Control and Prevention, “Emergency Department Surveillance of Nonfatal Suicide-related Outcomes (ED-SNSRO)”, \$200,000

## Publications

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- Schlotthauer, A., **Bonnell, T.**, et al. (2024). Improving Recreational Boating Surveillance: A Manual for State Boating Law Administrators and Public Health Epidemiologists. The Safe States Alliance.
- Asa, N., Buchbinder, S. A., **Bonnell, T.**, Mills, B., & Littman, A. (2024). Engagement with preventive health behaviors and safe firearm storage practices using the 2017 Behavioral Risk Factor Surveillance System. *American Journal of Health Promotion*, 38(2), 167-176.
- Anderson, K., & Swedo, E., **Bonnell, T. (Ed.)**, et al. (2020). NSSP Adverse Childhood Experiences Dashboard: Tips, Tricks, and Best Practices. Council of State and Territorial Epidemiologists.  
[https://cdn.ymaws.com/www.cste.org/resource/resmgr/pdfs/ACES\\_Dashboard\\_Guide\\_CLEARED.pdf](https://cdn.ymaws.com/www.cste.org/resource/resmgr/pdfs/ACES_Dashboard_Guide_CLEARED.pdf)
- **Bonnell, T. J.**, Revere, D., Baseman, J., Hills, R., & Karras, B. T. (2022). Equity and Accessibility of Washington State’s COVID-19 Digital Exposure Notification Tool (WA Notify): Survey and Listening Sessions Among Community Leaders. *JMIR Formative Research*, 6(8), e38193.
- **Bonnell, T.** (2018) *Food Source Information – Protein Powder*. Colorado State University Food Source Information. <https://www.chhs.colostate.edu/fsi/food-articles/dairy-2/protein-powder/>

## Presentations

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### Oral Presentations

- “Implementing Agency Visualization Color Palettes in R”, Washington State Department of Health - Center for Data Science Seminar, speaker, Seattle, WA, 2024.
- “Using Syndromic Surveillance Data to Improve Non-Fatal Recreational Boating Injury Surveillance”, Washington State Department of Health - Rapid Health Information NetwOrk Community of Practice, speaker, Seattle, WA, 2024.
- “Using SatScan’s Prospective Spatiotemporal Clustering Algorithms to Identify Suspected Overdose, Suicide, and Firearm Injury Clusters”, National Syndromic Surveillance Program Community of Practice – Analytic Tools Subcommittee, speaker, Seattle, WA, 2023.
- “Examining the lethal means of non-fatal suicide attempts in Washington before and during the COVID-19 pandemic”, Council of State and Territorial Epidemiologists Annual Conference, speaker, Salt Lake City, UT, 2023.
- “Examining prospective health outcomes of firearm injury survivors in Washington State”, Centers for Disease Control and Prevention – Firearm Injury Surveillance Through Emergency Rooms (FASTER) grant Reverse Site Visit, speaker, Milwaukee, WI, 2023.
- All for One and One for All: Exploring Equity Impacts of a Novel Bluetooth Exposure Notification (EN) Tool”, Washington State Public Health Association Annual Conference, presenter, Seattle, WA, 2021.

### Poster Presentations

- “Usage and Perceptions of E-Cigarettes Among University of Washington Undergraduate Students”, Washington State Public Health Association Annual Conference, presenter, Wenatchee, WA, 2019.

## Honors & Awards

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| • Phi Beta Kappa, University of Washington               | 2019 |
| • Susan B. Johnson Scholarship, University of Washington | 2016 |
| • Doug McCleary Scholarship, Olympia High School         | 2015 |

## Professional Associations

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- Council of State and Territorial Epidemiologists (CSTE) Injury and Surveillance Subcommittee
- National Syndromic Surveillance Program Community of Practice – Machine Learning & AI Workgroup
- National Syndromic Surveillance Program Community of Practice – Analytic Tools Subcommittee
- National Syndromic Surveillance Program Community of Practice – R Users Subcommittee
- National Syndromic Surveillance Program Community of Practice – Syndrome Development Subcommittee
- Cascadia R Users

## Certificates

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### Data Scientist with Python

DataCamp, November 2023 - Present

### Emergency Medical Technician

National Registry of Emergency Medical Technicians, December 2019

Expires: November 2023

### Introduction to the Incident Command System (ICS-100)

FEMA Emergency Management Institute, October 2019

### Basic Incident Command System for Initial Response (ICS-200)

FEMA Emergency Management Institute, March 2021

### Introduction to the National Incident Management System (ICS-700)

FEMA Emergency Management Institute, February 2021

## Languages

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- English: Fluent
- Spanish: Proficient

## Skills

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### Hard Skills

- Programing Languages: R, Python, SQL
- Web Development: WordPress, Elementor
- Other Software: ArcGIS, SatScan, REDCap
- Healthcare Analytics (ICD-10 & clinical free-text)
- Version Control (*Git* & *GitHub*) & Reproducible Coding Practices (*Renv*, *R package creation*)
- Data Visualization (*ggplot2*, *plotly*, *leaflet*, *DT*)
- Parameterized Reporting (*Quarto*, *R Markdown*, *Flexdashboard*, *Jupyter Notebook*)

### Soft Skills

- Project Management (*Trello*)
- Adaptability
- Problem-Solving
- Communication

## References

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Available upon request.