




# Lily (Zhi Lin) Zhou

BSc, RN

## CONTACT

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## EDUCATION

- MPH in Epidemiology** 2022 – 2024  
University of Toronto, ON, Canada
  - GPA: 4/4
- Honours BSc in Nursing** 2017–2021  
University of Ottawa, ON, Canada
  - GPA: 4/4

## SKILLS/LANGUAGES

- R
- SAS
- Python
- Excel
- Microsoft Office
- Google Colab
- ArcGIS

## RESEARCH EXPERIENCE

### Visting Researcher

October 2023 – December 2023

PREVENT, University of Toronto, ON, Canada

- Using python, utilized logistic regression, random forest, XGBoost, naïve bayes and neural network to develop predictive models to detect prediabetes among Canadian population.
- Currently in progress of creating manuscript for submission to IEEE conference

### Student Epidemiologist

May 2023 – August 2023

Canadian Nosocomial infection Surveillance Program, PHAC, Ottawa, ON

- Evaluated the impact of antimicrobial stewardship programs in acute-care hospitals across Canada revealing limitations to data collection methods resulting in the improvement of future questionnaires.
- Applied knowledge of epidemiologic and statistical methods to analyze hospital surveillance data to produce surveillance report highlighting variation and effectiveness of stewardship programs across Canadian hospitals.

### Geospatial Data Visualization Challenge

February 2022

Esri Canada, Toronto, ON

- Created spatial visualizations of correlations between community belonging and associated indicators within Toronto using ArcGIS Pro.
- Presented findings and recommendations for improving low community belonging utilizing ArcGIS Story Mapping.

### Quality Improvement Project: Staff Experience on Information Accessibility

September – December 2020

Emergency Response Phone Line, Ottawa Public Health (OPH), ON

- Designed survey to identify COVID-19 information barriers which revealed user interface issues with their website and wiki.
- Performed qualitative and quantitative analysis on survey data which identified platform solutions to information accessibility.
- Disseminated research findings to 200 OPH professionals in the department which resulted in positive changes on the OPH website.

### Scoping Review: Research Priorities with Children, Youth, Families

October 2018 – March 2019

Children's Hospital of Eastern Ontario Research Institute, ON

- Built the literature scoping search strategy, assessed database relevance, and analyzed data using Covidence which revealed gaps in field of study.
- Portrayed gaps research in a written report and poster presentation resulting in a co-authored manuscript published in Journal of Child Health Care.
- Developed a poster and conveyed findings to a wide range of specialities in university wide symposium.

## Research Assistant

May 2017 – August 2018

Department of Cellular and Molecular Medicine, University of Ottawa, ON

- Supervisor: Dr. Derrick Gibbins, Member of the Parkinson's Research Consortium.
- Funding: Canadian Institute of Health Research, Canadian Cancer Society, Natural Sciences and Engineering Research Council of Canada, ALS Society of Canada.
- Studied effects of protein packaging in exosomes through transfection of GFP in mice
- Performed DNA transfection, QPCR, westerns blots, mouse dissections, organ harvest, and care post-surgery.
- Demonstrated abilities in data collection, analysis and presentation through the use of statistical software and graph creation.

## PUBLICATIONS AND PRESENTATIONS

Modanloo S, et al. (2023). Identifying research priorities with children, youth, and families: A scoping review. Journal of Child Health Care. (paper)

Zhi Lin Zhou, et al. Identifying research priorities with children, youth, and families: A scoping review. Undergraduate Research Opportunity Symposium. Ottawa, Canada, March 17, 2019. (poster)

## WORK EXPERIENCE

### Junior Epidemiologist

September 2023 - Present

Canadian Nosocomial Infection Surveillance Program, PHAC, Ottawa, ON

- Developed dynamic reports in Quarto to provide consistent and up-to-date national surveillance on central line bloodstream infections and implemented interventions.
- Applied knowledge of epidemiologic and statistical methods in R to analyze hospital surveillance data on viral respiratory illnesses (ex. COVID-19, RSV) to provide timely outbreak warnings to stakeholders.
- Collaborated with hospital stakeholders by understanding their research interests and leveraging their expertise to develop pertinent research projects.
- Using R, created epidemiological models on multilevel clinical data to assess effect of ICU interventions on central line bloodstream infections.

### Public Health Nurse

January 2022 – April 2022

The Region of Waterloo, ON

- Administered COVID-19 vaccines to the public, monitored for adverse reactions, provided education on side effects, vaccine types and interchangeability. Built therapeutic relationships with vaccine hesitant populations.
- Experienced in diluting and preparing vaccines.

### Cardiac Surgery Nurse

September – December 2021

St. Mary's General Hospital

- Cared for patients pre and post cardiac surgery, providing complex wound care, telemetry interpretation, proper mobilization, chest tube care and removal, PCA monitoring, and education on incentive spirometry and discharge instructions.
- Floated to wide variety of units including ER, medicine, CVICU, and thoracics.
- Developed skills in teamwork, effective communication, conflict resolution and critical thinking.
- Utilized Cerner EMR.

### Vascular Surgery Registered Nurse

July – August 2021

The Ottawa Hospital, ON

- Worked on the vascular surgery unit providing acute care to clients after vascular, gastrointestinal and urology surgery.
- Performed surgical dressing changes, VAC changes, ostomy care, CBI maintenance, PICC care, initiation of venipuncture and administration of IV medications, blood administration, PCA and regional block maintenance to post-surgical patients.
- Developed critical thinking and time management skills during rapid changes to patient condition.
- Utilized EPIC EMR.

### **Public Health Nurse**

June – August 2021

Ottawa Public Health, ON

- Administered COVID-19 vaccines to the public, monitored for adverse reactions, provided education on side effects, vaccine types and interchangeability. Built therapeutic relationships with vaccine hesitant populations.
- Experienced in diluting and preparing vaccines.
- Utilized relaxation techniques to hesitant youths receiving vaccines and monitored for vasovagal responses post-vaccination.

### **Clinical Care Assistant**

April – June 2021

The Ottawa Hospital, ON

- Worked with RNs on the Vascular Surgery Unit by performing delegated tasks and providing care to patients.
- Delegated tasks performed included dressing changes to necrotic tissues, pressure wounds, and VACs, venipuncture, glucoscans, and vital signs.
- Developed effective communication and critical thinking skills when reporting to nurses on changes in patient status.

### **Personal Support Worker**

May – August 2019

Bayshore Home Care Solutions, Ottawa, ON

- Provided personal care and assistance with activities of daily living for over 50 clients with a variety of disabling conditions using excellent problem solving and autonomy skills.
- Services included bathing, dressing, companionship, dementia care, respite care, fall prevention and medication reminders.
- Demonstrated compassion and sensitivity to each client's situation while providing care.

### **Database Assistant**

July 2014 – August 2016

Air Force Association of Canada, Ottawa, ON

- Updated databases of over 300 members in the organization using strong planning and organizational skills.

## **EXTRACURRICULAR ACTIVITIES**

### **Infectious Disease Working Group**

September 2022 – Present

- Community Engagement Co-Chair
- Facilitated partnerships with community organizations to better understand community members' perceptions and needs.
- Maintained and updated the ReConnect Tool, a web-based platform that shares COVID-19 related resources and services in Toronto
- Oversaw collaboration with the subcommittees to organize workshops and scientific presentations for the public

### **Public Health Student Association**

September 2022 – Present

- Social Exec
- planned social, academic, and networking events for the Dalla Lana study body and assist with event promotion.
- Fostered a sense of belonging among public health graduate students by attending events and engaging with new students.

## **AWARDS AND ACHIEVEMENTS**

**Dean's Honour List**, Faculty of Science, University of Ottawa, ON

2017-2021

**Merit scholarship**, University of Ottawa, ON

2017-2020

**Undergraduate Research Opportunity Program scholarship (UROP)**, University of Ottawa, ON

2018

**International Baccalaureate Diploma**, Colonel By Secondary School, Ottawa, ON

2016

**Silver Duke of Edinburgh Award**, Ottawa ON

2016

## CERTIFICATION

CNO Registered Nurse General Class #21412311	2022
Health Promotion Foundations	2022
- Public Health Ontario, ON	
Basic Cardiac Arrhythmias Certificate	2021
Supporting Mothers and Babies: Understanding Breastfeeding and the Baby-Friendly Initiative	2021
- Best Start, Ottawa, ON	
BLS, Heart and Stroke, Ottawa, ON	2021
Bloody Easy Blood Administration, ORBCON, Ottawa, ON	2020
TCPS2 Core Certificate, Panel on Research Ethics, Ottawa, ON	2019
Non-violent Crisis Intervention Certificate, Crisis Prevention Institute, Ottawa, ON	2018
GPA in Dementia Care, AGE, Ottawa, ON	2018
DELFL B1 Certificate, Gestion centrale DELFL – DALF au Canada, Ottawa, ON	2017