

Weisi Chen

Health Data Scientist
Kensington, NSW 2033

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Profile

I am a highly disciplined and hard-working professional with a strong passion for technology, programming, data analysis, data visualization, and statistical modeling. Leveraging a unique blend of training in pharmacy and health data science, I specialize in deriving actionable insights from complex health datasets.

I am proficient in statistical software such as R and SAS, and have extensive experience using these tools for data analysis, visualization, and statistical modelling. I am deeply committed to continuous learning and professional development, always eager to explore new packages, techniques, or skills that can enhance my ability to analyze data effectively and deliver meaningful insights.

My current interest lies in population-level analysis using linked health data to drive impactful health decisions and inform evidence-based strategies. I thrive on tackling challenging problems with analytical precision and creativity, always striving to deliver impactful results in every project I undertake.

Education

Sept 2021 - March 2023 The University of New South Wales M.S. Health Data Science

WAM: 88% (Dissertation: 91%)

Dissertation: Changes in atherosclerotic cardiovascular disease risk over time among people living with HIV

March 2015 - March 2019 The University of Sydney B.S. Pharmacy

Employment History

Research-focused Positions

July 2023 - Present The University of New South Wales, Sydney, NSW
Data Scientist, School of Population Health

I contributed to three projects in this role:

- 1) ACCESS: Aboriginal Community Controlled Ear Health Support System:
Developing, embedding, and evaluating best practice models of care.
- 2) Evaluation of Sustaining NSW Families, NSW Health.
- 3) Building the NSW Child E-Cohort Project data platform linkage 2, linking:
 - Perinatal Data Collection
 - Birth Registrations
 - Hospital Separations
 - Emergency Department Presentations
 - Australian Early Development Census

- Public School Enrolments
- NAPLAN
- Child Protection Reports
- Out-of-Home Care Placements
- Justice Data (youth and adult corrections)
- Public Housing Data
- Death Registrations/Cause of Death

My role included:

- Critically reviewing the literature on epidemiological and statistical methods to inform the development of analysis plans.
- Drafting data management and data analysis plans, with input from the research team.
- Implementing the data management plan to prepare analysis-ready datasets from linked datasets, including data cleaning and manipulation, using R and SAS software.
- Executing statistical analysis of linked data (e.g., logistic regression and inverse probability of treatment weighting) relevant to the project, using statistical packages R and SAS.
- Drafting scientific papers, protocols, and conference abstracts.
- Contributing to the project management of research projects to the highest scientific and ethical standards.
- Drafting applications and contributing to ongoing reporting to the relevant ethics committees and data custodians for research projects.
- Maintaining regular communication with project investigators and Aboriginal community organizations to ensure the program is delivered in a culturally appropriate manner.

Feb 2023 - Dec 2023 The University of Sydney, Sydney, NSW
Data Scientist/Research Officer, School of Pharmacy, (FTE 0.4)

In this role, I contributed to the Multi-Agency Data Integration Project (MADIP): Investigating high-risk prescribing in Australian older adults using the linked PBS and Census data.

Key Responsibilities:

- Preparing analysis-ready datasets from large linked datasets, including data cleaning and manipulation, using R software.
- Leading, developing and implementing data analysis and statistical modeling (e.g., logistic regression) relevant to the project.
- Contributing to publications and conference abstracts.
- Assisting with ongoing data management and documentations for reproducibility.

Clinical-focused Positions

Mar 2021 - Dec 2023	Bondi Junction Pharmacy , Sydney, NSW Pharmacist in charge (FTE 0.2)
Mar 2021 - Dec 2023	Blooms the Chemsit Bondi Junction , Sydney, NSW Pharmacist on duty (FTE 0.4)
Mar 2020 - Sept 2020	Chemist Warehouse Double Bay , Sydney, NSW Registered Pharmacist
Dec 2018 - Mar 2020	Chemist Warehouse Randwick , Sydney, NSW Graduate Intern Pharmacist

Key Responsibilities:

- Dispensed medications using pharmacy dispensing software while reviewing patients' medication histories/records to ensure appropriate drug selection, dosing, contraindications, side effects, and therapeutic outcomes.
- Counseled patients on new prescription medications, OTC options, and medical devices.
- Supervised and mentored pharmacy students and technicians.
- Prepared medications in blister packs for elderly patients to optimize compliance with treatment.
- Performed blood pressure tests, provided hypertension counseling, and referred patients to other healthcare professionals when necessary.
- Collaborated with healthcare professionals to optimize patient health outcomes.
- Reported adverse drug events (ADEs) and medication errors in compliance with regulatory policies and procedures.

Research Interests

I am passionate about research using national, population-level linked data.

I have extensive experience with data analysis, visualization, and statistical modeling tools.

My goal is to contribute to public health improvement by analyzing and understanding complex and large health administrative datasets, ultimately informing safer, evidence-based healthcare practices.

Publications

[Google Scholar Profile](#)

A. Peer-reviewed Journal Articles

1. Huynh, A. L. H., Wang, Y., Ma, L., Low, Y. C. L., **Chen, W.**, Fowler, C., Tan, E. C. K., Masters, C. L., Jin, L., Pan, Y., & the AIBL Research Group. (2024) "A comparison of an Australian observational longitudinal Alzheimer's Disease cohort to Community-Based Australian data." *Journal of Alzheimer S Disease*. 1–13. DOI: [10.3233/JAD-240241](https://doi.org/10.3233/JAD-240241)
2. Lau, E. C. Y., **Chen, W.**, Lu, C. Y., Hilmer, S. N., Jeon, Y.-H., & Tan, E. C. K. (2024) "Antidementia and psychotropic drug use in older people with dementia in Australia: a national data linkage study" *Journal of the American Medical Directors Association*. 25 (11), 105237. DOI: [10.1016/j.jamda.2024.105237](https://doi.org/10.1016/j.jamda.2024.105237)
3. **Chen, W.**, Petoumenos, K., Somia, A., Edmiston, N., Chaiwarith, R., Woolley, I., Ross, J., Pujari, S., & Boettiger, D. C (2024) "Changes in atherosclerotic cardiovascular disease risk over time among people living with HIV" *Journal of Antimicrobial Chemotherapy*. 79(4), 897–902. DOI: [10.1093/jac/dkac049](https://doi.org/10.1093/jac/dkac049)

B. Working Papers

1. Falster, K., Pilkington, R., **Chen, W.**, Hanly, M., Montgomerie, A., Ahmed, T., Powell, M., Lingam, R., Cretikos, M., Newton, B., Thomson, C., Katz, I., & Lynch, J. (2024) "A sustained nurse home visiting program and child outcomes: a target trial emulation in Australia, 2018–2021" *Working paper*.

2. Falster, K., Pilkington, R., **Chen, W.**, Hanly, M., Montgomerie, A., Ahmed, T., Powell, M., Lingam, R., Cretikos, M., Newton, B., Thomson, C., Katz, I., & Lynch, J. (2024) "Characteristics of enrolment in a sustained nurse home visiting program among eligible mothers and families in Australia: a data linkage study, 2010-2021" *Working paper*.
3. Le, T. H., Lau, E. C. Y., **Chen, W.**, Lu, C. Y., Nguyen, T. A., Low, L.-F., Hilmer, S. N., Jeon, Y.-H., & Tan, E. C. K. (2024) "Prevalence and risk factors for psychotropic medication use in older adults in Australia: A nationwide, cross-sectional study." *Under review*.
4. Lau, E. C. Y., **Chen, W.**, Hilmer, S. N., Jeon, Y.-H., Lu, C. Y., Fujita, K., Wang & Tan, E. C. K. (2025) "High-risk geriatric prescribing in older people with and without dementia in Australia: a nationwide cross-sectional study" *Under review*.

C. Working Reports & Papers Under Review

1. Falster, K., **Chen, W.**, Hanly, M., Ahmed, T., Powell, M., Pilkington, R., Montgomerie, A., & Lynch, J. (2024) "Sustaining NSW Families Program Outcome evaluation technical report" *Working report prepared for NSW Health*.

D. Contributed Presentations

1. "Emulation of a target trial of the Sustaining NSW Families Program versus usual care among an eligible population born 2018-2021: An evaluation of program outcomes using linked district and whole-population data", Falster, K (Presenter), Pilkington, R., Lynch, J., **Chen, W.**, Hanly, M., Montgomerie A., Powell, M., & Ahmed T.. SNF Evaluation Advisory Committee. Sydney. Feb 13, 2025.
2. "Prevalence and risk factors for psychotropic medication dispensing in Australian older adults.", Le, T. H (Presenter), Lau, E. C. Y., **Chen, W.**, Lu, C. Y., Nguyen, T. A., Low, L.-F., Hilmer, S. N., Jeon, Y.-H., & Tan, E. C. K.. ASCEPT conference. Sydney. Dec 01, 2024.
3. "Myringotomy tube (grommet) insertion procedures in a whole-population cohort of NSW Aboriginal children (birth-years 2002-2018), followed from 0 to age 2-18 years", Falster K (Presenter), **Chen, W.**, Ahmed, T., Hanly, M., Gunasekera, H., DeLacy, J., Newman, J., Wright, D., Bailey, S., Banks, E., Craig, J., Teixeira-Pinto, A., Dickson, M., Kong, K., Howard, K., Purcell, A., Cutmore, M., Fernando P., Lingam, R., Douglas, M., Rattos, S., Woolfenden, S., & Sherwood J.. ACCESS Investigator meeting. Orange. Nov 20, 2024.
4. "Myringotomy tube (grommet) insertion procedures in a whole-population cohort of NSW Aboriginal children (birth-years 2002-2018), followed from 0 to age 2-18 years", Falster K (Presenter), **Chen, W.**, Ahmed, T., & Hanly, M.. ACCESS Investigator meeting. Sydney. Feb 28, 2024.
5. "Factors associated with antipsychotic use in people with dementia in Australia.", Lau, E. C. Y (Presenter), **Chen, W.**, Lu, C. Y., & Tan, E. C. K.. ASCEPT conference. Sydney. Nov 20, 2023.