# Mingyue Zheng

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As an early-career researcher and data scientist, I have dedicated myself to chronic disease prevention and management for nearly 10 years. I published **17 academic papers** of quantitative and qualitative research in peer-reviewed journals and international conferences. I attracted over \$ **115,000 grant funding** from Australia, UK, and China. My PhD project **used a national general practice database (MedicineInsight)** with data from 650+ general practices, of 2.5 M+ patients with 13M+ clinical encounters in their electronic health records (EHR).

## **EDUCATION**

## PhD in Medicine Candidate, University of Adelaide, Australia

2019 - 2023

• Full PhD scholarship, Konrad Jamrozik Student Scholarship, Adelaide Medical School HDR Research Support Awards (three times), Australasian Diabetes Congress Registration Grant, Adelaide Graduate Award

# MSc Nutrition, Physical Activity and Public Health, University of Bristol, UK

2016 - 2018

• Graduated with Merit, Bristol Plus Award (Top 5%) & Sports Leadership Award

## BSc Biological Science, Chengdu, University of Traditional Chinese Medicine (TCM), China

2011 - 2015

GPA: 3.65, Outstanding Student Representative, Outstanding Social Worker

#### **EXPERIENCE**

## Academic Committee Adviser (Part-time, remote work)

2019 - 2022

Sichuan Shishihoupu Health Management Co., Ltd, Sichuan, China

- Managed large clinical databases including big data extraction, analyses, and interpenetration
- Conducted monitoring and evaluation of hospital-based diabetes and weight management research projects

Research Assistant 2017 – 2019

School of Health and Rehabilitation&Advanced Education Research and Quality Evaluation Center, Chengdu University of TCM, Sichuan, China

- Conducted epidemiology studies (e.g., literature searching, data extraction, synthesis, and critical appraisal)
- Applied local and international grants of disease management using multiple digital devices
- Prepared and assisted workshops, seminars, experiments for post-graduate and undergraduate students

### SELECTED PROJECTS

#### MedicineInsight database - four national projects (Stata, Tableau)

- Identified high risk of diabetes group in Australian general practice using EHRs of 1.5M patients, and results was reported in Newsletter (Medical Xpress medical research advances and health news)
- Investigated the different national profile between newly diagnosed diabetes and prevalent diabetes from 2.5M patients' EHR, found less than 20% of patients had blood glucose, blood pressure and cholesterol under control.
- Evaluated the effectiveness of Metformin use for prediabetes therapy by using an contractual approach; the used comprehensive syntax and models can be used for other national medical databases
- Compared glucose changes between early or delay use of anti- diabetic medication from 10M+ issued prescriptions and provided evidence to stakeholders, which had potential impact on pharmacologic policy changes

### **Self-built TCM Prescription Database (R, Ms Excel)**

- Processed and tested the dosage of Danggui and Chuanxiong and selected the optimal copula function (Link)
- Evaluated the dosage relationship between Panax ginseng and AMK by t-copula function for diabetes mellitus, diarrhea, and insomnia treatment (Link)

# Continuous glucose monitoring qualitative data collection and analysis (Revman, Nvivo, SPSS, Visio)

• Evaluated the effects of CGM and self-blood glucose monitoring or usual care on blood glucose levels, weight, blood pressure, and user satisfaction in 1,311 adult patients with type 2 diabetes (<u>Link</u>).

#### **SKILLS**

- Programming & Tools: Stata, Python, SQL, Winbugs, Tableau, R, Revman, Nvivo, Ms Excel, Ms Visio
- Modeling & Data analysis: A/B test, Bayesian statistics, causal inference, Machine Learning (classification, Regressions, Random Forest, Decision Tree), Time series analysis, Survival analysis, Free-text analysis, Big data extraction and analysis, Experimental Design and relational analysis techniques

#### **COMMUNITY CONTRIBUTIONS**

### Mackillop Ward (Rehabilitation), Calvary Adelaide Hospital, Australia

Oct/2019-April/2022

• Worked with patients, health carers, and stakeholders to deliver customize quality service International charity project organizer, **Sue Ryder**, **UK** 

June/2016-June/2017

• Advocated innovative management ideas and initiated worldwide influential campaign programs

## Volunteer Teacher, Sing Buri Primary School, Thailand

Aug-Sept/2014

Provided professional advice to nutrition and workshops with multicultural competence