

DR. MITHILESH
DRONAVALLI
MEDICAL STATISTICIAN FOR
SCIENCE & SOCIAL
INNOVATION

Social Inequities

Intervention Evaluation

Mental Health

Addiction

Public Health

CONTACT

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📍 Australia

ABOUT ME

I want to alleviate suffering in the poorest, sickest and most vulnerable members of society, including those with mental illness, addiction and disability through research.

My social research experience for vulnerable groups includes: Indigenous health, mental health, addictions, skin cancer, heart disease, smoking cessation, communicable diseases, health and well-being, sexual health, HIV, aged care and for children with disability.

For more details, check my online resume :
www.kindmind.info

INTERESTS

Life Interests

- ▶ Alleviating poverty and overcoming social inequities through research
- ▶ Discovering and evaluating interventions for social harms and disease
- ▶ Intellectual stimulation, logic, maths and technology, Table Tennis
- ▶ Philosophy, poetry, Carnatic music, singing
- ▶ Teaching, Mentoring and Inspiring

EDUCATION

Masters of Biostatistics and Ongoing Learning

Monash University

January 2007 to June 2008

Biostatistical methods: Generalised Linear Models, Survival Analysis, Longitudinal and Correlated Data (including multi-level modelling), Advanced R, Stata, Meta-regression, Study Design, Sample Size Calculation

Causal Inference: Directed Acyclic Graphs, Propensity Scores, Inverse Probability Treatment Weights, Regression Discontinuity, Differences in Differences, Instrumental Variables, Mendelian Randomisation

Machine Learning: K-Means, Longitudinal K-Means. Supported Vector Machines, k-nearest neighbours, decision trees, random forests, supervised and unsupervised statistical learning

Courses: First yr Maths/Stats | Third Yr Logic/Stats | Probability and Statistical Inference | Design of Clinical Trials | Pharmacoepidemiology | Advanced Epidemiology | Linear and Generalised Linear Models | Survival Analysis | Longitudinal Data Analysis | Data Linkage/Data Privacy | Spatio-Temporal Statistics | Variable Selection

Training in Public Health Medicine

Australian Faculty of Public Health Medicine

Since November 2014

Rotations: Rural and Indigenous Health, HIV, Pharmacoepi (TGA), Public Health Unit (Communicable Disease and Environmental Health), Childhood Disability, Addiction

Coursework: Environmental Health Risk Assessments | Framing Indigenous Health | Health Promotion | Health Policy | Epidemiology and Control of Communicable Disease | Qualitative Research Methods | Environmental Health Risk Assessments | Introduction to teaching and supervision

Conference Presentations: National Rural Health (Oral) | Asia Pacific Heart Failure (2 Posters) 2008 | RACP 2016 (Oral: Gerry Murphy Prize) | Australian Public Health 2019 (Oral)

MPhil(Epidemiology)

University of Sydney, NHMRC CTC

September 2011

MBBS BMedSc First class Honours in Biostatistics

University of Melbourne

2010

EXPERIENCE

Research Fellow (Biostatistics)

National Drug and Alcohol Research Centre (WHO Collaborating Research Centre), UNSW - Since January 2020 - Sydney

- ▶ Investigating the Criminal Trajectories of those using Drugs as the primary offence.
 - ▶ Evaluation Interventions for Children in Out of Home Care
 - ▶ Evaluation of an Aboriginal Cultural Competency Program for non-Aboriginal Drug Rehab Centre.
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Public Health Medicine Registrar

Liverpool Hospital - Since February 2019 - Sydney

- ▶ Working on Influenza, Childhood Disability research
 - ▶ Outbreak Control and Environmental Health Protection
 - ▶ Automation of repetitive data entry tasks using R and Adobe OCR for data extraction.
 - ▶ Reviewing Major Environmental Health Risk Assessments
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Psychiatry Registrar

North Shore Psychiatry Training Network - September 2016 to October 2018 - Sydney

- ▶ Worked in a high turn over Psychiatric Emergency Care Centre attached to an Emergency Department.
 - ▶ Worked in Addiction Dual Diagnosis, Old Age Psychiatry and Child Psychiatry.
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Public Health Medicine Registrar

Therapeutic Goods Administration - July 2016 to September 2016 - Canberra
Systematic Review, Meta Analysis and Safety Filter

Public Health Medicine Registrar

The Albion Centre - (WHO Collaborating Research Centre) - February 2016 to July 2016 - Sydney

- ▶ HIV research and gaining exposure to HIV medicine as well as training and enabling staff in research methods.
 - ▶ HIV Complexity - Described the increasing burden of comorbidities in patients with HIV, where care needs a multi-disciplinary team approach. Used directed acyclic graphs.
 - ▶ HIV Smoking Audit - Predicting which patients will benefit most from a smoking cessation intervention
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Research Fellow

Western Australian Centre for Rural Health, University of Western Australia - November 2014 to January 2016 - Geraldton

- ▶ Systematic Review as the first author to assess measurement tools of general health and wellbeing.
- ▶ Commissioned review of Sexual Health Services in Western Australia by the Department of Health in a team.
- ▶ Designed and Delivered Seminars: 1. Understanding and Evaluating Advanced Quantitative Methods 2. Use of Social Media for Public Health
- ▶ Co-ordinating principal investigator on a complex GP Audit of patients with Acute Coronary Syndrome after discharge from hospital
- ▶ National Finalist for Gerry Murphy Prize at RACP Congress

Psychiatry Registrar

Top End Mental Health Services - January 2014 to November 2014 - Darwin

- ▶ Worked in Psychiatry treating Aboriginal People with mental illness from remote areas.
 - ▶ Took the history and mental state of patients and liaised with the multidisciplinary team. Prescribed medication, performed on-call duties, did ECT under supervision
 - ▶ Taught Medical students about psychiatry regularly by teaching them psychiatric theory and interview skills
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Research Fellow Pharmacoepidemiology

NCEPH, ANU and TGA - July 2012 to December 2012

- ▶ Developed a Quantitative Data Analysis Plan for the 45 and Up study in the pharmacoepidemiology field.
 - ▶ Investigated a New Indication for a cholesterol-lowering agent.
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Psychiatry Registrar

Cumberland Hospital - January 2012 to June 2012

- ▶ Worked empathically under pressure, Treated quite severe mental illness
 - ▶ Caring for mentally ill patients under consultant psychiatrist supervision
 - o Elicit History and Mental State to adjust medication.
 - o Communicate with the multidisciplinary team and family+carers of the patient.
 - o Clozapine and Outpatient Clinics
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Medical Internship

Westmead Hospital - January 2011 to January 2012

SKILLS

Public Health & Research

- ▶ Advanced Biostatistics and Clinical Research Skills
 - ▶ Academic Writing and Presentations
 - ▶ Co-ordinating Epidemiological Research Projects
 - ▶ HIV s100/Hep C prescriber
 - ▶ Environmental Health Risk Assessment & Outbreak Management
 - ▶ General Medical Registration
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Clinical Psychiatry

- ▶ Eliciting a detailed history with empathy and understanding, Writing a detailed mental state
 - ▶ Prescribing psychotropic medication and carrying out ECT under supervision
 - ▶ Passed OTAC Opioid Substitution Treatment Accreditation Course
 - ▶ Experience in Inpatient/ Aboriginal/ Addiction/ Old Age/ Child Psychiatry
 - ▶ Completed 3yr Continuing Medical Education Program in Psychiatry by Brain and Mind Research Institute
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16 Publications /+300 citations :RGScore =18.24 | h-index=6

- ▶ Google Scholar: <http://scholar.google.com.au/citations?user=VRfrJpcAAAAJ&hl=en>
- ▶ Farnbach S, Economidis G, Aiken A, Dronavalli M, Shakeshaft A. A randomised stepped-wedge evaluation of the impact of a guideline-driven process for improving the cultural competence of non-Aboriginal drug and alcohol treatment services.: NDARC, UNSW; 2020. (GOVERNMENT REPORT)

- ▶ Dronavalli M, Lord H, Alexander K, Boonwaat L, Pal N, Fletcher-Lartey SM. Effectiveness of Oseltamivir Prophylaxis in Influenza Outbreaks in Residential Aged Care. *Journal of Epidemiology and Global Health*. 2020 Apr.
- ▶ Ghosh S, Dronavalli M, Raman S. Tuberculosis infection in under-2-year-old refugees: Should we be screening? A systematic review and meta-regression analysis. *J Paediatr Child Health*. 2019
- ▶ Fletcher-Lartey, S.; Dronavalli, M.; Alexander, K.; Ghosh, S.; Boonwaat, L.; Thomas, J.; Robinson, A.; Patel, Z.; Forssman, B.; Pal, N. Trends in Antimicrobial Resistance Patterns in *Neisseria Gonorrhoeae* in Australia and New Zealand: A Meta-analysis and Systematic Review. *Antibiotics* 2019, 8, 191
- ▶ Chan DJ, Furner V, Smith DE, Dronavalli M, Bopage RI, Post JJ, et al. Non-AIDS complexity amongst patients living with HIV in Sydney: risk factors and health outcomes. *AIDS Res Ther*. 2018;15(1):6.
- ▶ Dronavalli M, Bhagwat MM, Hamilton S, Gilles M, Garton-Smith J, Thompson SC. Findings from a clinical audit in regional general practice of management of patients following acute coronary syndrome. *Aust J Prim Health*. 2016.
- ▶ Bhagwat MM, Woods JA, Dronavalli M, Hamilton SJ, Thompson SC. Evidence-based interventions in primary care following acute coronary syndrome in Australia and New Zealand: a systematic scoping review. *BMC Cardiovasc Disord*. 2016;16(1):214.
- ▶ Thompson S, Lyford M, Dronavalli M. A Review of STI Clinical Services in Western Australia 2015. In: Department of Health WA, editor. Perth: University of Western Australia; 2015.
- ▶ Dronavalli M, Thompson SC. A systematic review of measurement tools of health and well-being for evaluating community-based interventions. *J Epidemiol Community Health*. 2015;69(8):805-15.
- ▶ Dronavalli M, Thompson S, Mitchell K, Kerry K, Giele C. Rates of Sexually Transmitted Infection in Aboriginal People and Regional Areas of Western Australia: plotting progress or losing the plot? 2015.
- ▶ Dronavalli M. Statistics Without Probability (SWOP)-A New Paradigm Sydney 2015 [Available from: www.statistics.sastram.com/SWOP.pdf].
- ▶ Fricke TA, d'Udekem Y, Richardson M, Thuys C, Dronavalli M, Ramsay JM, et al. Outcomes of the arterial switch operation for transposition of the great arteries: 25 years of experience. *Ann Thorac Surg*. 2012;94(1):139-45.
- ▶ Yong MS, d'Udekem Y, Robertson T, Horton S, Dronavalli M, Brizard C, et al. Outcomes of surgery for simple total anomalous pulmonary venous drainage in neonates. *Ann Thorac Surg*. 2011;91(6):1921-7.
- ▶ Vilalta A, Sahuquillo J, Merino MA, Poca MA, Garnacho A, Martinez-Valverde T, et al. Normobaric hyperoxia in traumatic brain injury: does brain metabolic state influence the response to hyperoxic challenge? *J Neurotrauma*. 2011;28(7):1139-48.
- ▶ Solana E, Poca MA, Sahuquillo J, Benejam B, Junque C, Dronavalli M. Cognitive and motor improvement after retesting in normal-pressure hydrocephalus: a real change or merely a learning effect? *J Neurosurg*. 2010;112(2):399-409.
- ▶ Sheffield LJ, Irving P, Gupta A, Byron K, Macrae FA, Phillimore H, et al. Thiopurine methyltransferase and thiopurine metabolite testing in patients with inflammatory bowel disease who are taking thiopurine drugs. *Pharmacogenomics*. 2009;10(7):1091-9.