Christopher Oldmeadow

B, Mathematics(Hons), PhD.

Dr Oldmeadow is the Director of the Clinical Research Design, IT and Statistical Support (CReDITSS) Unit at the Hunter Medical Research Institute (NSW, Australia). He is an applied statistician with over 10 years experience designing health related research studies and coordinating the analytical plans across the spectrum of discovery, clinical, and public health research projects. He oversees statistical consultancy projects from various fields of research, including Cancer, Stroke, Cardiology, Respiratory, Mental Health, Public Health, and Health Services.

Dr Oldmeadow’s methodological expertise spans a broad range of experimental settings such as single arm trials, parallel group, cross-over, stepped-wedge; biomarker and diagnostic studies; as well as observational studies, registries and linked administrative data sets. He is also actively researching statistical methodologies in biostatistics in the areas of causal modelling, missing data, and Bayesian statistics.

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# ***Education***

2009 **PhD. (Statistics)** Queensland University of Technology

Thesis title: Latent Variable Models in Statistical Genetics;

Overview: Developed and generalised methodologies for the analysis of genetic data with latent structure. Results from the analysis of DNA sequences from animal genomes provide a new paradigm for identifying novel functional genetic elements.

2005 **Bachelor of Mathematics (Honors),** University of Newcastle

Thesis: Short DNA sequence signal recognition

Overview: My thesis investigated current methodologies for detecting signals in short DNA sequences, such as variable length Markov models for capturing dependencies of varying order that are known to exist in such sequences.

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# ***Work Experience***

2018-present **Director:**  Clinical Research Design, IT and Statistical Services, Hunter Medical Research Institute.

2013-2018 **Senior Statistician.** Clinical Research Design, IT and Statistical Services, School of Medicine and Public Health, Hunter Medical Research Institute.

2009-2013 **HMRI Postdoctoral Research Fellow.** School of Medicine and Public Health, University of Newcastle.

Overview: Statistical consultancy and research in genetic epidemiology

2011-2014 **Casual Lecturer** (School of Medicine and Public Health)

Overview: Teaching post-graduate level biostatistics courses

2008-2009 **Research Associate** (School of Mathematical Sciences, Monash)

Overview: Developing statistical models for the detection of novel functional DNA.

2005-2009 **PhD scholar** (School of Mathematical Sciences, QUT)

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***Supervision and Mentoring***

Dr Oldmeadow supervises a team of 9 biostatisticians, 2 bioinformaticians, 3 data managers, and is a co-supervisor for 2 PhD students. His role at CReDITSS also provides ongoing consultative support for numerous PhD students and research fellows/assistants.

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***Contribution to Research Community***

Dr Oldmeadow has reviewed articles for journals such as PLoS One, British Journal of Surgery and Bioinformatics.

2017-2018 Associate Editor of the Biomed Central Journal “Pilot and feasibility studies”

2015-present Hunter New England Research Ethics Committee (Clinical Trials Sub-Committee)

2014-present Flagship steering Committee member for the Hunter Cancer Research Alliance (Implementation Stream)

2013-2014 NHMRC advisory panel for Biostatistics Early Career Research Fellowships

2013-2014 NHMRC advisory panel for Bioinformatics Early Career Research Fellowships

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***Collaboration***

His role as a statistician through CReDITSS has placed him in collaborations with local research groups from the Hunter Medical Research Institute, Hunter New England Population Health, and John Hunter Hospital (JHH); as well as groups from outside the hunter region including the National Drug and Alcohol Research Centre; Cancer Council NSW; NSW Ministry of Health (Evidence and Evaluation Unit); and the Department of Family and Community Services (NSW Government). During 2011-2018 these collaborations have resulted in a number of projects relating to health service development, and having beneficial outcomes to the health services. Many of the projects are from ARC or NHMRC funded grants and tenders assessing the implementation of large state-wide interventions.

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# ***Journal Articles***

Being part of a consultation unit means not all of Dr Oldmeadow’ s work results in publication, however Dr Oldmeadow haspublished **3 book chapters** over **260 journal articles,** in peer reviewed journal**s** including a number in leading journals (e.g. Nature**,** Lancet**,** Lancet Oncology and Science). He has a H-index of 24 and an i10-index of 50,with ~4000 citations since 2014. The topics of his papers reflect the variety of projects Dr Oldmeadow is involved in.

**Top 5 Publications in the last 5 years**

1. Kepreotes E., Whitehead B, Attia J, **Oldmeadow C**, Collison A, Searles A, Goddard B, Hilton J, Lee M, Mattes J. High-flow warm humidified oxygen versus standard low-flow nasal cannula oxygen for moderate bronchiolitis (HFWHO RCT): an open, phase 4, randomised controlled trial. The Lancet.

2. Denham, J.W., Joseph, D., Lamb, D., Spry, N., Duchesne, G., Matthews, J., Atkinson, C., Tai, K., Christie, D., Kenny, L., Turner, S., Gogna, N., Diamond, T., Delahunt, B., **Oldmeadow, C**., Attia, J, Steigler, A. Short-term androgen suppression and radiotherapy versus intermediate-term androgen suppression and radiotherapy, with or without zoledronic acid, in men with locally advanced prostate cancer (TROG 03.04 RADAR): an open-label, randomised, phase 3 factorial trial. The Lancet Oncology, 2014. 15(10): p. 1076-1089. This paper presents the primary outcome analysis of a large multi-centred RCT where Dr Oldmeadow was part of the analysis team that found evidence for a novel qualitative interaction.

3. Sutherland RL, Campbell EM, Lubans DR, Morgan PJ, Nathan NK, Wolfenden L, Okely AD, Gillham KE, Hollis JL, **Oldmeadow CJ**, et al. The Physical Activity 4 Everyone Cluster Randomized Trial: 2-Year Outcomes of a School Physical Activity Intervention Among Adolescents. Am J Prev Med 2016. This paper presents the results of a cluster RCT investigating the effect of a physical activity intervention. Dr Oldmeadow advised and supervised the analysis for this trial.

4. Rietveld, C.A., et al., GWAS of 126,559 individuals identifies genetic variants associated with educational attainment. Science, 2013. 340(6139): p. 1467-1471. Published in the high profile journal Science, Dr Oldmeadow contributed data investigating the role of genetics in educational attainment.

5. Wolfenden, Luke, et al. "Multi-strategic intervention to enhance implementation of healthy canteen policy: a randomised controlled trial." *Implementation Science* 12.1 (2017): 6..

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***Grants and Tenders***

Dr Oldmeadow is a chief investigator on grants totalling **~$12 million** listed below (with funding sources including NHMRC project, partnership and centre for research excellence). He is also an associate investigator on six NHMRC grants (project, partnership and targeted calls **~$4.1M**), one Cancer Council partnership **(~$1.1M**) and four NSW Ministry of Health grants (Translational Research Grant / Alcohol and Other Drugs **~$4M**).

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| Year | Scheme | Title | Amount |
| 2019 | NSW Ministry of Health, Cardiovascular Disease (CVD) Clinician Scientist Grants | Cardioprotective effects of the pneumococcal polysaccharide vaccine | $600,000 |
| NHMRC Target Call Research into Healthy Ageing of Aboriginal and Torres Strait Islander Peoples | Improving implementation of Health Assessments for Aboriginal and Torres Strait Islander clients in mainstream general practice: a cluster randomised controlled trial | $745,057 |
| NHMRC Project grant | A trial of vaporised nicotine products for smoking cessation following discharge from drug and alcohol residential withdrawal services | $1,833,513 |
| ARC Discovery project | Taking action: Increasing Advance Personal Planning by older adults | $542,000 |
| 2018 | NHMRC  Targeted Call for Research - Dementia in Indigenous Australians | Addressing health and care needs of Aboriginal and Torres Strait Islander people living with dementia and their communities: A cluster RCT | $3,095,009 |
| Australian Rotary Health | Pilot randomised controlled trial of a telephone delivered intervention for hazardous alcohol use among young people living with severe mental ill-health | $86,747 |
| 2017 | NHMRC Global Alliance for Chronic Diseases | 'Indigenous Counselling and Nicotine (ICAN) QUIT in Pregnancy' - a cluster randomised trial to implement culturally competent evidence-based smoking cessation for pregnant Aboriginal and Torres Strait | $2,318,652 |
| NHMRC project grant | Healthy living after stroke: An online intervention for improving stroke survivor health behaviours and quality of life | $599,124 |
| Dementia and Aged Care Services Research and Innovation Funding Round (DACS) | Does a targeted intervention improve medication safety after discharge and improve outcomes for people with dementia and their carers | $544,096 |
| NHMRC CRE | Aboriginal child and adolescent health improvement through Aboriginal leadership and collaborative research teams | $2,499,588 |
| NSW Ministry of Health AOD Innovation Grants | Routine Outcome Monitoring (ROM) plus feedback in SMART Recovery Australia: A feasibility study examining SMART ROM | $358,913 |
| NSW Ministry of Health AOD Innovation Grants | A randomised controlled trial of a continuing care telephone intervention following residential substance abuse treatment’ | $517,874 |
| 2016 | NHMRC Partnership | A randomised controlled trial of the effectiveness of ‘Enable Me’: an e-health innovation for stroke survivors and support persons. | $253,264 |
| National Stroke Foundation | A randomised controlled trial of the effectiveness of ‘Enable Me’: an e-health innovation for stroke survivors and support persons | $29,444 |
| NSW Ministry of Health | Phase 1 and 2 of the Indigenous Counselling and Nicotine (ICAN) QUIT in Pregnancy | $136,275 |
| Victorian Responsible Gambling Foundation (TENDER) | The susceptibility, prevalence, type and burden of adolescent gambling: an opportunity for an ongoing monitoring tool | $174,967 |
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| 2015 | NSW Ministry of Health (TENDER) | Evaluating the Quit for New Life | $270,908 |
| Australian Rotary Health | Improving uptake of colorectal screening among primary care attendees. | $17,000 |
| Australian Rotary Health | Delivery of care, are we doing enough? An investigation in to the treatment provided for depression in Australian alcohol treatment centers. | $17,000 |
| 2014 | Hunter Medical Research Institute | Improving uptake of colorectal cancer screening among primary care attendees. | $37,500 |
| 2013 | Cancer Institute NSW | Providing tailored web-based information to support colorectal cancer patients in their preparation for and recovery from surgery: A feasibility study. | $48,656 |