Personal details

Name: Assoc. Prof. Cameron Paul Hurst
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Areas of research interest and expertise

1. Clinical epidemiology and biostatistics. Especially, clinical trials, modelling data from observational longitudinal cohort and prognostic/diagnostic studies
2. Reproductive epidemiology
3. Analysis of large routinely collected datasets
4. Epidemiology of chronic diseases (esp. Diabetes, Chronic Kidney Disease and Hypertension, and their complications)
5. Epidemiology of infectious disease (esp. vector-borne and parasitic diseases)
6. Statistical programming and numerically-intensive statistical techniques
7. Multivariate statistical and machine-learning methods in health
8. Development and validation of psychometric and clinimetric instruments

Key skills

1. Highly experienced educator in the area of clinical research methods
2. Accomplished health research methods consultant and research biostatistician with a strong background in statistical modelling, protocol development and study design
3. Highly productive health researcher who has worked across many diseases and populations. Comprehensive experience in the management of research projects, and the management of many research projects at any one time (at any one time, I oversee or collaborate in 10-20 research projects, while providing input into many others)
4. Excellent communicator, both oral and written
5. Strong in both individual and collaborative research
6. Team player with excellent interpersonal skills
7. Proven administrative skills

Educational background

2006   Doctor of Philosophy (Applied Statistics)
Griffith University
Thesis Title: *Factors effecting the power and validity of Permutation-based Multivariate Tests for Difference among Ecological Assemblages*

1996   Bachelor of Science with Honours (First class) in Applied Mathematics and Statistics, Faculty of Science, Griffith University
Honours Dissertation: *An Application of Ordination and Discriminant Function Techniques in Forensic Osteology*

1995   Bachelor of Science in Environmental Sciences,
        Faculty of Environmental Sciences, Griffith University
        Major: *Quantitative modeling and statistics*

Research

Refereed publications

At this time, I have over 200 research articles published in international peer-reviewed journals (Citations: ~4000; h-index: 35; i-index: 91). I am leading or senior author (first, corresponding/last author) on over 60 publications. Listed below are my articles published **in the last 3 years** (2021-2024). For a full list of my publications, please see my Google scholar page:
https://scholar.google.co.th/citations?hl=en&user=gajquzUAAAAJ&view_op=list_works&sortby=pubdate

Kapadia, VS, Kawakami, MD, Strand, ML **Hurst, CP**, Spencer, A, Schmölzer, GM, Rabi, Y, Wyllie, J, Weiner, G, Liley, HG, Wyckoff, MH on behalf of the International Liaison Committee on Resuscitation Neonatal Life Support Task Force (2024) Fast and accurate newborn heart rate monitoring at birth: A systematic review, *Resuscitation Plus*, **19** https://doi.org/10.1016/j.resplu.2024.100668

Blake, JA, Thomas, HJ, **Hurst, CP**, Pelecanos, AM, McGee, TR, Najman, JM, Scott, JG (2024) A two-generation study of attachment in mothers and their young adult offspring: Latent classes of attachment and associations with anxiety and depression. *Journal of Affective Disorders*, **358**, 361-8

Wannigama DL, **Hurst C** , Phattharapornjaroen P, Hongsing, P. Sirichumroowit, N., Chanpiwat, K *et al.*(2024) Early treatment with fluvoxamine, bromhexine, cyproheptadine, and niclosamide to prevent clinical deterioration in patients with symptomatic COVID-19: a randomized clinical trial. *EClinical*, **70**: 102517 https://doi.org/10.1016/j.eclinm.2024.102517

Jahan, S., Hale, J., Malacova, E. **Hurst, C.,** Kark, A., Mallet, A. (2024) Real world evaluation of kidney failure risk equations in predicting progression from chronic kidney disease to kidney failure in an Australian cohort. *J Nephrol* **37**, 231–237. https://doi.org/10.1007/s40620-023-01680-2

Wannigama DL, Amarasiri M, Phattharapornjaroen P, **Hurst C**, Modchang C, Chadsuthi S, Anupong S, Miyanaga K, Cui L, Fernandez S, Huang AT, Ounjai P, Tacharoenmuang R, Ragupathi NKD, Sano D, Furukawa T, Sei K, Leelahavanichkul A, Kanjanabuch T, Higgins PG, Nanbo A, Kicic A, Singer AC, Chatsuwan T, Trowsdale S, Khatib A, Shibuya K, Abe S, Ishikawa H, Hongsing P. (2024) Increased fecal shedding in SARS-CoV-2 new variants

BA.2.86 and offspring JN.1 compared to other omicron variants. *The Lancet Infectious Diseases* https://doi.org/10.1016/S1473-3099(24)00155-5

Lee, N, Allen, J, Jenkinson, B, **Hurst, C**, Gao, Y, Kildea, S (2024) A pre-post implementation study of a care bundle to reduce perineal trauma in unassisted births conducted by midwives. *Women and Birth*, https://doi.org/10.1016/j.wombi.2023.08.003

Wannigama DL, Amarasiri M, Phattharapornjaroen P, **Hurst C**, Modchang C, Chadsuthi S, Anupong S, Miyanaga K, Cui L, Werawatte WKCP, Ali Hosseini Rad SM, Fernandez S, Huang AT, Vatanaprasan P, Saethang T, Luk-In S, Storer RJ, Ounjai P, Tacharoenmuang R, Ragupathi NKD, Kanthawee P, Cynthia B, Besa JJV, Leelahavanichkul A, Kanjanabuch T, Higgins PG, Nanbo A, Kicic A, Singer AC, Chatsuwan T, Trowsdale S, Furukawa T, Sei K, Sano D, Ishikawa H, Shibuya K, Khatib A, Abe S, Hongsing P. (2024) Wastewater-based epidemiological surveillance of SARS-CoV-2 new variants BA.2.86 and offspring JN.1 in south and Southeast *Asia. J Travel Med*. 2024 doi: 10.1093/jtm/taae040 PMID: 38438141.

Hailu, S., **Hurst, C.**, Cyphers, G., Thottunkal, S., and Harley, D., Viney, K., Irwin, A, Dean, J., and Nourse, C. (2024) Prevalence of extra-pulmonary tuberculosis in Africa: A systematic review and meta-analysis. *Tropical Medicine & International Health,* doi.org/10.1111/tmi.13970

Anupong, S., Chadsuthi, S., Hongsing, P., **Hurst, C.,** Phattharapornjaroen, P., Hosseini, RSM Ali., Fernandez, S., Huang, AT., Vatanaprasan, P., Saethang, T., *et al.* (2024) Exploring indoor and outdoor dust as a potential tool for detection and monitoring of COVID-19 transmission., *iScience.* doi.org/10.1016/j.isci.2024.109043

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Qian, W., Viennet, E., Glass, K., Harley, D., **Hurst, C.** (2023) Prediction of Ross River Virus Incidence Using Mosquito Data in Three Cities of Queensland, Australia., *Biology* **12(11):** 1429

Shein, AMS, Wannigama, DL, **Hurst, C.,** Monk, PN, Amarasiri, M., Badavath, VN, Phattharapornjaroen, P, Ditcham, WGF, Ounjai, P. Saethang, T., *et al.* (2023) Novel intranasal phage-CaEDTA-ceftazidime/avibactam triple combination therapy demonstrates remarkable efficacy in treating Pseudomonas aeruginosa lung infection. *Biomedicine & Pharmacotherapy* **186,** 115793

Delaforce A, Farmer S, Duff J, Munday J, Miller K, Glover L, Corney C, Ansell G, Gutta N, Tuffaha H, Hardy J, **Hurst C.** (2023) Results from a type two hybrid-effectiveness study to implement a preoperative anemia and iron

deficiency screening, evaluation, and management pathway. *Transfusion*, doi: 10.1111/trf.17287. PMID: 36807584.

Schreiber, V, **Hurst, C**, da Silva Costa, F, Stoke, R;,Turner, J, Kumar, S. (2023) Definitions matter: detection rates and perinatal outcome for infants classified prenatally as having late fetal growth restriction using SMFM biometric vs ISUOG/Delphi consensus criteria. *Ultrasound in Obstetrics & Gynecology*, **61(3)**, 377-385

Blake, J., Thomas, H., **Hurst, C.,** Pelecanos, A., McGee, T., Najman, J., Scott, J. (2023) Psychometric properties and latent classes of the Attachment Style Questionnaire in mothers and their offspring.

Wannigama, DL., **Hurst, C**., Monk, P., Abe, S., Stick, S., Kicic, A., Chatsuwan, T. (2023) Fluvoxamine with bromhexine combination to prevent clinical deterioration in SARS-CoV-2. *Respirology,* **28***,* 108

Jahan, S, Hale, J, Malacova, E, **Hurst, C**., Kark, A, Mallett, A (2023) Real world evaluation of kidney failure risk equations in predicting progression from chronic kidney disease to kidney failure in an Australian cohort. *Journal of Nephrology, https://doi.org/10.1007/s40620-023-01680-2*

Wannigama, DL., Mohan, A., Phatthranit, P., **Hurst, C**., Modchang, C.; Chadsuthi, S. Anupong, S., et al. (2023) Tracing the transmission of Mpox through wastewater surveillance in Southeast Asia. *Journal of Travel Medicine.* taad096

Robinson, JL, Gatford, KL, **Hurst, CP**, Clifton, VL, Morrison, JL, Stark, MJ (2023) Do improvements in clinical practice guidelines alter pregnancy outcomes in asthmatic women? A single-center retrospective cohort study *Journal of Asthma*, doi: 10.1080/02770903.2023.2200824.

Wannigama, DL., Shein, AMS., **Hurst, C**., Monk, PN; Hongsing, P., Phattharapornjaroen, P., Ditcham, W., Fox, G. et al. (2023) Ca-EDTA restores the activity of ceftazidime-avibactam or aztreonam against carbapenemase-producing Klebsiella pneumoniae infections. *Iscience*, **26(7),** 107215

Yu, D., Malacova, E; **Hurst, C**., Ng, MSY; Mallett, AJ, (2023) Association of Primary Kidney Disease Type and Donor Relatedness With Live Donor Kidney Transplant Outcomes: An Analysis of ANZDATA. *American Journal of Kidney Disease*, https://doi.org/10.1053/j.ajkd.2023.04.004

Ralph, M., **Hurst, C**., Guyatt, S., Goldsmith, K., Laakso, EL. (2023) In post-natal women with nipple pain, does photobiomodulation therapy (PBMT) at 660 nm compared with sham PBMT reduce pain on breastfeeding? A case series during COVID-19 *Laser Therapy*, *30(1)*

Allen, J, Gao, Y, Germain, J, O'Connor, M, **Hurst, C**, Kildea, S. (2023) Impact of the Thompson method on breastfeeding exclusivity and duration: Multi-method design. *International Journal of Nursing Studies.* **141**, 104474

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Robertson, N; Okano, S; **Hurst, C**; Kumar, S,(2022) Maternal sleep disordered breathing assessed by Epworth Sleepiness Scale and abnormal feto-placental Dopplers, *The Journal of Maternal-Fetal & Neonatal Medicine,***35(6)**,1141–1147

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O'Connor, K; **Hurst, C**; Llewellyn, S; Davies, M, (2022) Factors associated with successful extubation following the first course of systemic dexamethasone in ventilator-dependent preterm infants with or at risk of developing bronchopulmonary dysplasia, *Pediatric Pulmonology,***57(4)**,1031–1041

Suratannon, N; Tantithummawong, P; **Hurst, CP**; Chongpison, Y; Wongpiyabovorn, J; van Hagen, P Martin; Dik, Willem A; Chatchatee, P, (2022) Pediatric Prediction Model for Low Immunoglobulin G Level Based on Serum Globulin and Illness Status*, Frontiers in Immunology,*13

Hurst, C; Rakkapao, N; Malacova, E; M, Sirima; Pongsachareonnont, P; Rangsin, R; Promsiripaiboon, Y; Hartel, G,(2022) Psychometric properties of the general self-efficacy scale among Thais with type 2 diabetes: a multicenter study, *PeerJ,***10**,,e13398

Clifton, VL; Kumar, S; Borg, D; Rae, KM; Boyd, RN; Whittingham, K; Moritz, KM; Carter, HE; McPhail, SM; Gannon, B; Ware R, Barnaby JW Dixson, Bora S, **Hurst C**. (2022) Associations between COVID-19 lockdown and post-lockdown on the mental health of pregnant women, postpartum women and their partners from the Queensland family cohort prospective study, *BMC Pregnancy and Childbirth,***22(1)**,1–12

Srisakul, S; Wannigama, DL; Higgins, PG; **Hurst, C**; Abe, Shuichi; Hongsing, Parichart; Saethang, Thammakorn; Luk-In, Sirirat; Liao, Tingting; Kueakulpattana, Naris; others, (2022) Overcoming addition of phosphoethanolamine to lipid A mediated colistin resistance in Acinetobacter

baumannii clinical isolates with colistin–sulbactam combination therapy, *Scientific Reports*,**12(1)**,1–13

Wei, CJ; Phairoh, K; Kuang, B; Kongart, C; Thanavachirasin, P; Taniguchi, R; Liao, T; Badavath, VN; **Hurst, C**; Abe, S, (2022) Effectiveness of Chinese herbal medicine Zhi Shi Xiao Pi Wan on adult diabetic gastroparesis: a systematic review and meta-analysis, *F1000Research*,**11(86)**, 861

Shein, AMS; Wannigama, DL; Higgins, PG; **Hurst, C**; Abe, S; Hongsing, P; Chantaravisoot, N; Saethang, T; Luk-In, S; Liao, T (2022) High prevalence of mgrB-mediated colistin resistance among carbapenem-resistant Klebsiella pneumoniae is associated with biofilm formation, and can be overcome by colistin-EDTA combination therapy, *Scientific Reports*,**12(1)**,13–19

Qian, W; Harley, D; Glass, K; Viennet, E; **Hurst, C**, (2022) Prediction of Ross River virus incidence in Queensland, Australia: building and comparing models, *PeerJ*, **10,** e14213

Ng MS, Malacova E, **Hurst C**, Johnson DW, Mallett AJ. (2021) Clinical Outcomes of People With Fabry Disease—ANZDATA Registry Study. *Kidney international reports*.;**6(9):**2481–5.

Rattanachaiwong S, Panitchote A, Pisprasert V, Hongsprabhas P, Patjanasoontorn B, Phunmanee A, **Hurst C.** (2021). Intravenous Dextrose Calories in Critically Ill Patients Requiring Vasopressor Therapy. *Journal of the medical association of Thailand*. ;**104(10):**111–8.

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McKeating, DR; Clifton, VL; **Hurst, CP;** Fisher, JJ; Bennett, WW; Perkins, AV, (2021) Elemental Metabolomics for Prediction of Term Gestational Outcomes Utilising 18-Week Maternal Plasma and Urine Samples *Biological trace element research* **199(1),** 26-40

Visuthranukul, C; **Hurst, C**; Chomtho, S (2021) Effects of low-glycemic index diet on plasma adipokines in obese children. *Pediatric Research*,**7(1)**

Delaforce, A; Duff, J; Munday, J; Farmer, S; Miller, K; Glover, ; Corney, C; **Hurst, C**; Ansell, G; Gutta, N(2021) A Theoretically Informed Approach to

Support the Implementation of Pre-Operative Anemia and Iron Deficiency Screening, Evaluation, and Management Pathways: Protocol for a Type Two Hybrid-Effectiveness Study. *Journal of Multidisciplinary Healthcare*, **14,** 1037

Wannigama, DL; Amarasiri, M; **Hurst, C**; Phattharapornjaroen, P; Abe, S, Hongsing, P; Rad, SM, Ali H; Pearson, L; Saethang, T; Luk-In, S (2021) Tracking COVID-19 with wastewater to understand asymptomatic transmission. *International Journal of Infectious Diseases,* **108:** *296-9*

Books and book Chapters

FitzGerald Gerard Joseph, Shaban, Ramon Z., Arbon, Paul, Aitken, Peter, Considine, Julie, Clark, Michele J., Finucane, Julie, McCarthy, Sally M., Cloughessy, Liz, Holzhauser, Kerri, Patrick, Jennifer R., Fielding, Elaine L. and **Hurst, Cameron,** *Pandemic (H1N1) 2009 influenza outbreak in Australia : Impact on emergency departments*. Published 2010; ISBN: 9781741073225

Michael Craig Steele, Neil Smart, **Cameron Hurst**, Janet Chaseling: A comparison of the power of the discrete Kolmogorov-Smirnov and Chi-Square goodness-of-fit tests.. *Some Recent Developments in Statistical Theory and Applications*, Edited by Kumar, Chaturvedi, 01/2012; ISBN: 161233573-X

Research funding

Note: all grants represented in Australian dollars unless specified otherwise

Past and current funding

Project title: Redesigning maternal, newborn and child health services for the best start in life for First Nations families (Birthing on Country) (ID:1197110)
Funding: **NHMRC Centres for Research Excellence** (2020-2025)
Amount: $2,500,000 (AUD)
Role: Associate investigator and mentor

Project title: The impact of disease knowledge, management and management self-efficacy on disease outcomes in Thai Type 2 diabetes patients: A multi-center prospective cohort study.
Funding: **ASEAN Research Fellowship** (2019-2022)
Amount: 3,000,000 (THB)
Role: Principal investigator (Research fellow)

Project Title: AKI-SEA: The Epidemiology and Prognostic Factors for Mortality in Intensive Care Unit Patients with Acute Kidney Injury in South East Asia. *(*Joint funded grant from the **International Society of Nephrology** (ISN grant number AC-5081761023), The Kidney Foundation of Thailand and the Medical Association of Thailand: 2014-2018)
Amount: $270,000 (USD)
Role: Chief investigator

Project title: A prospective evaluation of the impact of the nurse practitioner role on emergency department service and outcomes (ID: LP110200389)
Funding: **Australian Research Council** (Linkage: 2011-2014)
Amount: $3, 000, 000 (AUD)
Role: Chief investigator (Biostatistician)

Project Title: Assessing the Effectiveness of Early Childhood Education and Care Programs in Australian Communities: E4Kids study (ID: LP0990200)
Funding: **Australian Research Council** (Linkage: 2010-2013)
Amount: $5, 200, 000 (AUD)
Role: Chief investigator (Biostatistician)

Project title: Development and validation of risk assessment tools to guide management and prevention of venous leg ulcers (Part of a larger project investigating new technology for wound healing)
Funding: **Australian Research Council** (CRC: 2010-2013)
Amount: $3, 100, 000 (AUD)
Role: Associate investigator (Biostatistician)

Project title: A randomized trial of low intensity intervention model within a university health service to improve the mental health of students.
Funding: **Australian Rotary Health** (2010-2012)
Amount: $70,000 (AUD)
Role: Chief investigator

Project title: Postoperative Enteral Nutrition in Patients with Advanced Epithelial Ovarian Cancers 631524 (2010-2012)
Funding: **Cancer Council of Australia**
Amount: $476,200 (AUD)
Role: Associate investigator and Biostatistician

Statistical consultation

1. Over the last 20 years, I have been consulted in the capacity as clinical epidemiologist and/or (bio)statistician on thousands of research projects. A large majority of these consultations have been health-related studies, although a sizeable proportion have been in fields not directly concerned with health research. In particular, in the earlier part of my career I consulted extensively in the biological and ecological sciences.

2. I have been consulted by countless students (undergraduate, postgraduate and HDR), colleagues (ranging from early career to experienced researchers) and clients outside of the university / research setting (e.g. Government and the private sector).

3. I have extensive consultation experience in research design, analytical planning and statistical modeling. I have provided advice on a large number of grant applications, especially on matters of design, analytical planning and

sample-size considerations. I have been consulted regarding the design and analysis of projects ranging from rigorously designed randomized controlled trials to large-scale retrospective cohort studies.

4. Consultations have ranged from one-off consultations, to full involvement in projects including considerable input into the design, analysis and dissemination phases of the project.

Research and higher degree supervision and assessment

Currently supervising two PhD students (UQ School of Medicine) both in infectious diseases epidemiology.

Over the course of my career I have:

- Supervised 36 PhD students (20 as principal supervisor) and eight research masters student through to successful completion. Approximately 50% of these students were supervised in my time in Australia, with the remainder being supervised while I lived abroad.
- I have supervised HDR students from 13 countries.
- Attained Principal Supervision accreditation from two of my previous Australian universities. (Federation University and Queensland University of Technology)
- Been consulted by thousands of HDR students regarding study design, analytical planning, (bio)statistics and other research methods advice.
- Have examined many PhD and Research Master theses, and been on many HDR confirmations and thesis defence panels

Academic history

2022-   Associate Professor (Epidemiology and Biostatistics), Molly Wardaguga Research Centre, Charles Darwin University, Brisbane, Queensland, Australia

2018-2022   Senior Biostatistician, Statistics Unit, QIMR Berghofer Medical Research Institute, Brisbane, Queensland, Australia

2021-2022   Associate Professor (Adjunct), School of Public Health, Faculty of Medicine, Faculty of Health, University of Queensland

2016-2018   Associate Professor (Clinical Epidemiology and Biostatistics), Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

2012-2015   Associate Professor (Biostatistics), Data Management and Statistical Analysis Center (DAMASAC), Faculty of Public Health, Khon Kaen University (0.6FTE), Thailand

2012-2015	Principal Clinical Biostatistician (Associate Professor), Clinical Epidemiology Unit, Faculty of Medicine, Khon Kaen University (Srinagarind Hospital) (0.4FTE), Thailand
2009-2012	Senior Lecturer (Biostatistics), School of Public Health, Faculty of Health, Queensland University of Technology
2007-2008	Institute Biostatistician (Level B), Institute of Health and Biomedical Innovation, Queensland University of Technology
2005-2007	Lecturer (Applied Statistics), School of Information Technology and Mathematical Sciences, University of Ballarat (now Federation University)
2002-2004	Associate Lecturer (Applied Mathematics and Statistics). School of Information Technology and Mathematical Sciences, University of Ballarat (now Federation University)
2000-2002	Sessional Lecturer, Applied Mathematics and Statistics (Griffith University)
2000-2002	PhD scholarship-Australian Postgraduate Award with Stipend (Griffith University)

Teaching

Traditional format university teaching

Below is a list of subjects for which I have **coordinated**, lectured and/or *tutored*.

1st year subjects	2nd year subjects	3rd year, Honours and Masters	PhD (and post doctoral level)
Business Statistics (UB)	*Statistical Inference (GU)*	Applied Statistics (GU)	**Introduction to Epidemiology (KKU-PH)**
Mathematics for the Environment (GU)	*Experimental Design and Statistics (UB)*	Mathematical Techniques (GU)	**Introduction to Biostatistics (KKU-PH)**
Statistics and Data Management (GU)	Research Methods (GU)	**Multivariate Analysis (UB)**	**Biostatistical modeling (KKU-PH)**
Statistics for the Environment (GU)	Operations Research I (GU)	**Modeling Reality (UB)**	**Biostatistical tools for clinical research (introductory, CU)**
Introduction to Modeling (UB)	*Engineering Mathematics II (GU)*	**Adv. Multivariate Methods (UB)**	**Statistics for the clinical and biomedical sciences (CU)**
Environmental Systems Modeling(GU)	*Mathematical Methods (GU)*	**Health Statistics (Masters SPH-QUT)**	**Modeling clinical outcomes (intermediate, CU)**

Statistics I (GU)	**Applied Mathematics II (Engineers; UB)**	**Advanced Quantitative Research Methods (Masters SPH-QUT)**	**Clinical Epidemiology (CU)**
Statistics II (GU)	**Statistics for Prediction (UB)**	Statistics in Biomedical research (QUT)	**Preparing your manuscript for submission (CU)**
Sampling and Survey Design (UB)	**Profit, Loss and Gambling (UB)**	Advanced epidemiology(Masters SPH-QUT)	**Developing research protocols and proposals (CU and KKU-med)**
Statistics for Public Health (GU)	**Statistics for Public Health (SPH-QUT)**		Clinical Epidemiology (KKU-med)
Introduction to Epidemiology (SPH-QUT)	**Advanced Research Methods (SPH-QUT)**		
Statistical Methods (UB)			
Statistics for Nurses (UB)			

GU = Griffith University; UB = University of Ballarat; SPH-QUT = School of Public Health, Queensland University of Technology, KKU = Khon Kaen University (Faculty of Public Health[PH] or Faculty of Medicine[med]); CU = Chulalongkorn University (Faculty of Medicine)

Curriculum and teaching material development

Over the course of my career I have developed or substantially reworked approximately 25 statistics, biostatistics and epidemiology subjects, ranging from introductory through to advanced units. For many of these subjects, I have had to develop them from the ground up, or at the very least, perform a major rework of the subject's fundamental content and structure.

In my capacity as an academic research methodologist, and over the course of my international engagements, I have developed a large number of specialized seminars, occasional lectures, lecture series and workshops regarding the application of research methods in a population-, clinical- or laboratory-based setting. In terms of delivery, these workshops have ranged from informal to formal, and in content, from introductory to advanced.

I have also held various teaching leadership positions including PhD coordinator, Postgraduate coordinator (Masters of Public Health, Masters of Health Management) and subject-area coordinator (Epidemiology and Biostatistics). In these roles I have had the opportunity of developing curriculum, including developing, reviewing and revising MPH and PhD programs.

Teaching evaluation

Both of my previous Australian universities (QUT and UB) employed similar instruments for gauging student satisfaction of teaching. Both QUT's LEX instrument and the University of Ballarat's SET instrument employed items on a 5 point Likert scale (1 = *Very Poor/Rarely* to 5 = *Excellent/Always*)

to measure overall students satisfaction along with student satisfaction of various aspects of the teacher's performance.

For QUT, the average of the LEX satisfaction score (based on two units run on three occasions) was **4.64/5**, and for the University of Ballarat, (based on 6 units) was **4.66/5**. For all student evaluations of my teaching, I have never scored anything less than 4/5 (*Very good/Very often*).

Units on which student evaluation of teaching was performed included examples of both large core introductory service statistics units, and small specialist elective units (usually higher undergraduate or postgraduate intermediate applied statistics, biostatistics or research methods units).

Peer revision of my teaching has always been very positive and criticism received has always been constructive and restricted to superficial aspects of my teaching style.

Seminars and workshops

Over the last ten years (2011-present), I have run many international and national workshops on clinical or population health biostatistics, clinical epidemiology and clinical research methods in Thailand (Khon Kaen, Mahidol and Chulalongkorn Universities, Royal College of Opthamologists, Thai Glaucoma Group) and Vietnam (Vietnamese Epidemiology Special Interest Group, Ho Chi Min City University of Medicine and Pharmacy, Hue University of Medicine and Pharmacy and Nguyen Tri Phuong Hospital). I have also run workshops in many hospitals in Australia, Thailand and Vietnam.

These workshops have ranged from introductory through to more advanced statistics and clinical epidemiology topics and on some occasions involved presenting novel and/or state-of-the-art statistical methods (specifically for the analysis of high throughput microbiological data (e.g. genomics), and the analysis of data arising from longitudinal cohort studies). In general, attendees of the workshops have been postgraduate or post-doctoral participants, and/or biostatistical/epidemiological academics and/or health researchers. In almost all hands-on workshops there has been a strong emphasis of the open-source *R* statistical language.

I have also run many workshops and block-delivery courses on proposal workup and manuscript writing. These have predominately been delivered to public health and clinical researchers in my time at Chulalongkorn and Khon Kaen Universities in Thailand, and pitched to researchers whose first language was not English.

Workshops I have run in Australia include:

Microarray Data Analysis using R and Bioconductor (2009) A national workshop held at the Institute of Health and Biomedical, QUT. A three-day workshop solely developed and delivered by myself.

Mater Research institute (2011): Workshop on clinical research methods. A two-day workshop solely developed and delivered by myself.

Queensland health (2011): The workup of psychometric and clinimetric tools for health evaluation and diagnostics. A two-day workshop solely developed and delivered by myself.

Making friends with statistics (2018) for QIMR, Mater and Metro-north (Queensland Health) researchers and clinicians undertaking research.

Mater Research institute (2019): Modeling data from observational cohort studies. Two 1.5 workshop pitched at clinical researchers (one on continuous endpoints, and the other on categorical clinical outcomes)

Mater Research institute (2020): Lecture series (six lectures) in clinical epidemiology and biostatistics (1. Research objective, study design and biostatistical approach, 2. Modeling continuous outcomes, 3. Modeling categorical outcomes, 4. Modeling time-to-event (survival) outcomes, 5. Diagnostic test evaluation, 6. Sample size calculation)

Statistical computing

Statistical computing represents a major interest for me. I have extensive experience in a number of programming languages and statistical / mathematical analysis packages. These include:

Statistical languages and packages (in order of expertise):
(1) R; (2) SAS; (3) SPSS (including AMOS); (4) Stata; (5) Minitab; (6) M-plus; and (6) MATLAB;

Non domain specific programming languages (in order of expertise):
(1) Java; (2) C/C++; (3) Pascal; and (4) Fortran 77.

Organizational roles, memberships and other service roles

2016-2018   Director, Biostatistics Center of Excellence (Clinical Epidemiology Unit), Office of Research Affairs, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

2016-2018   Associate editor (Biostatistics), Asian Biomedicine (Journal)

2012-2015   Deputy director (Academic affairs) and PhD coordinator, Data management and Statistical Analysis Centre (DAMASAC), Faculty of Public Health, Khon Kaen University

2013- 2018	Member of the management committee - PhD (Epidemiology and Biostatistics), Faculty of Public Health, Khon Kaen University
2013-	Member of the management committee - Masters of Health Science (Clinical Epidemiology), Faculty of Medicine, Chulalongkorn University
2010-2012	Postgraduate Coordinator, School of Public Health, Faculty Health, Queensland University of Technology.
2009-2012	Subject Area Coordinator (Epidemiology and Biostatistics). School of Public Health, Faculty of Health, Queensland University of Technology.
2010-2012	Member of QUT Faculty of Health committees: Health Academic Board and the Teaching and Leaning Committee (faculty level)
2010-2012	Member of QUT School of Public Health committees: Public Health Executive Committee, and SPH Learning and Teaching Committee (school level)
2009-2012	Expert reviewer (Epidemiology and Biostatistics) on QUT internal Early Career Researcher and Mid-Career Researcher Grants
2005-2007	Staff representative on the Research and Professional Development Group committee (University of Ballarat)
1995-	Member of the Statistical Society of Australia (SSA)
2009-	Member of the Australasian Epidemiology Association (AEA)

Referees

Associate Professor Gunter Hartel (Previous position supervisor - Australia)

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Professor Helen Liley

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Senior Staff Specialist, Mater Hospital (Brisbane)

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