



CURRICULUM VITAE

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Synopsis

I am a Senior Lecturer at the Faculty of Medicine and Health, University of Sydney, and School of Medicine, Western Sydney University. I am completing my PhD at Westmead Applied Research Centre (University of Sydney) while practising as a part-time General Practitioner. I have been actively involved in multi-disciplinary research using digital health technologies to improve the effectiveness of the delivery of healthcare services (screening, monitoring, and therapy) to the community and larger populations. My knowledge and experience in healthcare and engineering and my communication, organisation, analysis, and innovation skills were acquired from my Medical Degree, Engineering Degree, Master of Science, and current PhD study. My experiences as an Engineering Consultant and 'Director of Prevocational Education and Training' enhanced my communication and leadership skills. With teamwork, my skills have brought many projects to fruition, including achievements in a research scholarship from Dartmouth College - an Ivy League university in the USA, a research grant from Western Sydney University, an Industrial Seed Funding from the University of Sydney, and publication of a book chapter in "Quality Improvement in Behavioral Health" by Springer International. I have a good track record of publications with a h-index of 10 in the Research Gate network, as illustrated in the Curriculum Vitae.

ACADEMIC QUALIFICATIONS

➤ **Doctor of Philosophy (PhD) candidate,** Westmead Applied Research Centre, Faculty of Medicine and Health, the University of Sydney (part-time study from 2017 – expected completion by the end of 2023); my PhD thesis is titled "Atrial Fibrillation Screening in the Community: implementation and evaluation".

Multi-disciplinary supervisory team: Professor Clara K Chow (principal supervisor, cardiologist & Professor of Medicine), Professor Tim Usherwood (cosupervisor, Professor of General Practice), Dr Tu N Nguyen (co-supervisor, geriatrician & research fellow), and Dr Cindy Kok (research fellow).

Introduction to my PhD project: Atrial fibrillation (AF) affects 59.7 million people worldwide. Early detection and treatment of AF reduce the risk of stroke. Screening AF in the community is an approach that could provide an opportunity for the at-risk population to opt for anticoagulant therapy and optimise risk factor management to reduce stroke risk. However, a pragmatic approach to implementing and evaluating community AF screening and integrating the process into the existing Australian general practice system still needs to be improved. I led the implementation and evaluation of a randomised control trial (RCT) involving patient-driven self-recording of single-lead electrocardiograms (ECG) using digital health technology with a remote clinician-supported centralised monitoring system.

Impacts of my PhD studies

The protocol of the RCT was published. https://www.researchprotocols.org/2022/2/e34778/metrics

Media publications include an introduction video and a full interview regarding the study, are available freely on the following websites:

One-minute introduction video:

"SciComm Teaser: Patient-Led Mass Screening for Atrial Fibrillation in Seniors Using Handheld ECG", JMIR, 12th April 2022. https://www.youtube.com/watch?v=13PeFOS7awE

Nine-minute interview: "Patient-Led Mass Screening for Atrial Fibrillation in the Older Population Using Handheld Electrocardiographic Devices Integrated With a Clinician-Coordinated Remote Central Monitoring System: Protocol for a Randomized Controlled Trial and Process Evaluation", JMIR, 12th April 2022. https://www.youtube.com/watch?v=KH2KR-qKv6M

The RCT was mentioned by other researchers on Linkedin: https://www.linkedin.com/posts/professoradrianrabe_read-more-largest-decentralised-study-of-activity-7044448874979061761-uyB4/

I performed a systematic review and meta-analysis on the diagnostic accuracy of handheld ECG devices. The publication is highlighted in a four-minute video: "Diagnostic accuracy of handheld electrocardiogram devices in detecting atrial fibrillation in adults", BMJ Heart, 12th May 2020.

https://www.youtube.com/watch?v=KPwi6xALxng

Conference presentations

I presented the results of my PhD project (Mass Atrial Fibrillation Screening Trial) at the following conferences:

- The Cardiac Society of Australia and New Zealand (CSANZ) on 4th-6th Aug 2023 in Adelaide, Australia.
- The European Society of Cardiology (ESC) on $25^{th} 28^{th}$ Aug 2023 in Amsterdam, the Netherlands.

Funding, grants, and scholarship

- Industrial Seed Funding awarded by the University of Sydney (2021)
 completed and published a usability study of a handheld 12-lead ECG device: Wong KC, Thiagalingam A, Kumar S, Marschner S, Kunwar R, Bailey J, Kok C, Usherwood T, Chow CK.

 User Perceptions and Experiences of a Handheld 12-Lead Electrocardiographic Device in a Clinical Setting: Usability Evaluation JMIR Cardio 2021;5(2):e21186 (https://cardio.jmir.org/2021/2/e21186/)
- Early Career Research Grant awarded by Western Sydney
 University (2013). I completed research titled "Antibiotic use for Vibrio infections: important insights from surveillance data. The project involved analysing a large surveillance dataset of 8056 patients over 21 years provided by the United States Centers for Disease Control and Prevention (CDC). The research paper was published in an international journal and cited on the USA CDC website:

 https://www.cdc.gov/vibrio/publications.html
- Research scholarship awarded by Dartmouth Medical School, Dartmouth College, United States of America (2002)
 I contributed to the research titled "Detection of exercise-induced ischemia by measurement of BNP (B-type Natriuretic Peptide).

Other academic qualifications:

- ➤ University of Oxford Effective Online Tutoring [Certificate of Completion] (2014)
- ➤ Fellow of the Royal Australian College of General Practitioners (FRACGP) (since 2011 present)

RACGP Expert Committee – Practice Technology & Management (2018-2021)

I have assisted in the following:

□ providing informed advice on digital developments, information management,
technology standards and other areas that impact the future operation of
Australian general practice

- □ providing input into position papers and RACGP responses to submissions related to digital technology in general practice, practice management and emergency response
- $\hfill\Box$ advising on business tools and resources to support general practitioners and general practice and
- \Box supporting and promoting the uptake of technology in general practice and cohosted telehealth webinars.

➤ Bachelor of Medicine and Bachelor of Surgery (MBBS)

The University of Queensland, Australia (2005)

➤ Master of Science (MSc)

National University of Singapore (1999)

➤ Bachelor of Mechanical Engineering (BE)

National University of Singapore (1992)

> Certificate of Competence in Writing
The Writers Bureau, Manchester, United Kingdom

Successful completion of the writing course with several publications (2001)

PROFESSIONAL EXPERIENCES - Clinical Experiences

- General Practitioner (GP) practice family medicine (15 years: 2008 present)
 * Current Rural General Practice: George Street Medical Practice, 115 George Street, Bathurst, NSW, Australia.
 - * Completed Australian General Practice Training Rural Pathway (Royal Australian College of General Practice): General practice experiences, including placements at Broken Hill and Dubbo, NSW, Australia.
- ➤ Hospital experiences: Medical Officer at The Canberra Hospital and Goulburn Base Hospital (Australia) (16th January 2006 21st January 2007); Westmead Hospital, Blacktown Hospital, Auburn Hospital, Bathurst Base Hospital (NSW, Australia) (22nd January 2007 20th July 2008).
- Senior Lecturer in General Practice at Bathurst Rural Clinical School, School of Medicine, Western Sydney University (2015 present); Conjoint Clinical Senior Lecturer at School of Rural Health, Sydney Medical School, the University of Sydney (2011 present)
 - Teach family medicine/ general practice/community medicine
 - Design and deliver medical curriculum

- Participated in the discussion on the curriculum for "Charles Sturt University Western Sydney University Joint Program in Medicine"
- Received an "Early Career Research Grant" from Western Sydney University in 2013. I completed research titled "Antibiotic use for Vibrio infections: important insights from surveillance data. The project involved managing and analysing a large surveillance dataset of 8056 patients over 21 years provided by the United States Centers for Disease Control and Prevention (CDC). The research paper was published in an international journal and cited on the USA CDC website: https://www.cdc.gov/vibrio/publications.html
- ➤ Director of Prevocational Education and Training (DPET) and Medical Educator, Beyond Medical Education (Regional Training Provider, NSW) (Jan 2011 to Dec 2014).
 - Established a training curriculum for doctors-in-training, i.e. The Prevocational General Practice Placements Program (PGPPP)
 - Delivered training curriculum, e.g., conducted workshops, tutorials and forums
 - Performed evaluation of the effectiveness of the training program
 - Implemented improvement on the training program
- ➤ **GP Academic Registrar in the University of Sydney** (1st Jan 2010 17th Jan 2011).
 - Designed and delivered a medical curriculum
 - I completed and published a research project titled "The Australian Type 2
 Diabetes Risk Assessment Tool (AUSDRISK) Application in General
 Practice" *
 - I completed and published an editorial paper titled "Using an Ishikawa Diagram as a tool to assist memory and retrieval of relevant medical cases from the medical literature".

http://jmedicalcasereports.biomedcentral.com/articles/10.1186/1752-1947-5-120

- > Clinical /Medical Research Associate (2004 2006), Centre for Chronic Disease, University of Queensland, Royal Brisbane Hospital, Australia
 - I completed a research project entitled 'Prevalence of diabetes mellitus of Chinese Populations in Mainland China, Hong Kong, and Taiwan'. The paper was published in the Journal of Diabetes Research and Clinical Practice*, the official journal of the International Diabetes Federation.
 - In addition, I also published a journal paper titled 'Importance of native language in a population-based health survey among ethnic Chinese in Australia' in the Australian New Zealand Journal of Public Health. *

PROFESSIONAL EXPERIENCES – Engineering and Management Experiences

- ➤ Engineering Consultant (1998-2001), Neville-Clarke (Singapore and Malaysia)
 - I managed multiple projects for multinational organisations and helped the organisations certified to ISO 9000 and ISO 14000 International Standards
 - I provided training and consultation for the Design and Process Potential Failure Mode and Effects Analysis (FMEA), Measurement System Analysis (MSA), Design of Experiments (DOE), and Statistical Process Control (SPC)
- ➤ Engineer and Section Manager (1993-1998), SGS-THOMSON Microelectronics (Singapore)
 - Process management and improvement using statistical process control (SPC) & Design of Experiment (DOE)
 - Presentations at conferences in France: Application of statistics in process control (1994 & 1996)

PROFESSIONAL DEVELOPMENT

- Dartmouth Medical School, Dartmouth College#
 Dartmouth-Hitchcock Medical Centre, New Hampshire 03756, USA.
 * Research Scholar (2002)
 - Project Title: Detection of exercise-induced ischemia by measurement of BNP (B-type Natriuretic Peptide). This research project involved cardiologists and pathologists. I contributed to the publication as one of the co-authors. *
 - Award of testimonies from Professor Jerry Yeo (Professor of Pathology) and Dr Robert S Foote (Professor of Medicine), Dartmouth Medical School, Dept of Pathology & Cardiology, Dartmouth Hitchcock Medical Centre, New Hampshire 03756, USA. (Copies of the testimonies can be provided for verification purposes.)

Note: # Dartmouth College is one of the eight Ivy League Universities. The Ivy League was initially a sports league for elite colleges. Now, it has become associated with quality academics. Ivy League Universities include Harvard University, Dartmouth College, University of Pennsylvania, Princeton University, Yale University, Brown University, Columbia University, and Cornell University.

Note: * See publication list below.

PUBLICATIONS

- I have a good track record of publications with a h-index of 10 (h-index >8) (https://www.researchgate.net/profile/Kam-Cheong-Wong)
- Associate Editor, Journal of Medical Case Report (2016-2021), https://jmedicalcasereports.biomedcentral.com/

First Author

- Wong, K. C., Trankle, S. A., Quintans, D., Nguyen, T. N., Usherwood, T., & Chow, C. K. (2023). A Systematic Approach to Improving the Transparency of Interview Refinements and Data Sufficiency in Semi-Structured Interviews: An Illustration Using the Mass Atrial Fibrillation Screening Study. *International Journal of Qualitative Methods*, 22. https://doi.org/10.1177/16094069231220773
- 2. Wong KC, Nguyen TN, Marschner S, Turnbull S, Burns MJ, Ne JYA, Gopal V, Indrawansa AB, Trankle SA, Usherwood T, Kumar S, Lindley RI, Chow CK. Patient-Led Mass Screening for Atrial Fibrillation in the Older Population Using Handheld Electrocardiographic Devices Integrated with a Clinician-Coordinated Remote Central Monitoring System: Protocol for a Randomized Controlled Trial and Process Evaluation. JMIR Res Protoc. 2022 Feb 1;11(2): e34778. https://www.researchprotocols.org/2022/2/e34778
- **3.** Wong KC, Thiagalingam A, Kumar S, Marschner S, Kunwar R, Bailey J, Kok C, Usherwood T, Chow CK. User Perceptions and Experiences of a Handheld 12-Lead Electrocardiographic Device in a Clinical Setting: Usability Evaluation. JMIR Cardio. 2021 Aug 26;5(2): e21186. https://cardio.jmir.org/2021/2/e21186/
- **4.** Wong KC, Klimis H, Lowres N, von Huben A, Marschner S, Chow CK. Diagnostic accuracy of handheld electrocardiogram devices in detecting atrial fibrillation in adults in the community versus hospital settings: a systematic review and meta-analysis. Heart. 2020 Aug;106(16):1211-1217. doi: 10.1136/heartjnl-2020-316611. https://heart.bmj.com/content/106/16/1211.long
- Wong KC, Kok C, Marschner S, Usherwood T, Chow CK. Screening for atrial fibrillation and other arrhythmias in primary care. BMC Fam Pract. 2020 May 6;21(1):79. doi: 10.1186/s12875-020-01151-8. PMID: 32375662; PMCID: PMC7201749. https://bmcfampract.biomedcentral.com/articles/10.1186/s12875-020-01151-8
- **6.** Wong KC, Woo KZ, Woo KH, 2016. Book Chapter Ishikawa Diagram. In *Quality Improvement in Behavioral Health* (pp. 119-132). Springer International Publishing. http://link.springer.com/chapter/10.1007/978-3-319-26209-3_9
- 7. Wong KC (2016). How to apply clinical cases and medical literature in the framework of a modified "failure mode and effects analysis" as a clinical reasoning tool—an illustration using the human biliary system. *Journal of Medical Case Reports*, 10(1), p.85.

- $\frac{http://jmedical case reports.biomed central.com/articles/10.1186/s13256-016-0850-6}{6}$
- 8. Wong KC (2016). Correlation between serum lactate dehydrogenase (LDH) and seizure an observation in clinical cases. *International Journal of Advances in Science, Engineering and Technology*, 4(1, Spl. Iss-2), 99-103. https://www.researchgate.net/publication/299516676 Correlation between serum lactate dehydrogenase LDH and seizure an observation in clinical cases
- 9. Wong KC, Brown AM, Luscombe GM, Wong SJ, and Mendis K (2015). Antibiotic use for *Vibrio* infections: important insights from surveillance data. BMC Inf Dis. 2015 June 11; 15:226.
- **10.** Wong KC (2012) Facial rash a case study. Australian Family Physician, 41 7: 503-504. https://www.researchgate.net/publication/228116804 Facial rash A case study
- 11. <u>Wong KC</u> (2011) Using an Ishikawa diagram as a tool to assist memory and retrieval of relevant medical cases from the medical literature. Journal of Medical Case Reports, 5 1: 120-1-120-3. http://jmedicalcasereports.biomedcentral.com/articles/10.1186/1752-1947-5-120
- **12.** <u>Wong KC</u> (2011) Just a sore throat? Australian Family Physician, 40 5: 293-294. https://www.researchgate.net/publication/51151362_Just_a_sore_throat
- **13.** Wong KC, Anthony M Brown, and Stephen CH Li (2011) AUSDRISK Application in general practice. Australian Family Physician, 40 7: 524-526. https://www.researchgate.net/publication/51481398_AUSDRISK application_in_general_practice
- **14.** Wong KC (2009) In-flight Medical Emergency: An experience with Singapore Airline. Singapore Medical Journal. 50(5): 551-552.

 https://www.researchgate.net/publication/43510627 Inflight Medical Emergency An experience with Singapore Airlines
- 15. Wong KC, Wang Z (2008) Importance of native language in a population-based health survey among ethnic Chinese in Australia. Australian New Zealand Journal of Public Health. 32(4):322-4. https://www.researchgate.net/publication/23248092 Importance of native language in a population-based health survey among ethnic Chinese in Australia
- 16. Wong KC, Wang Z (2006) Prevalence of Type 2 Diabetes Mellitus in Mainland China, Hong Kong, and Taiwan. Diabetes Research and Clinical Practice [The official journal of the International Diabetes Federation] 73(2):126-34. https://www.researchgate.net/publication/7214807 Prevalence of type 2 diabete s_mellitus of Chinese_populations_in_Mainland_China_Hong_Kong_and_Taiw an

17. Wong KC, KL Phua (2006). Statistics Made Simple for Healthcare and Social Science Professionals and Students. International Standard Book Number, ISBN 983-3455-03-4.

https://www.researchgate.net/publication/37619057_Statistics_Made_Simple_for_Healthcare_and_Social_Science_Professionals_and_Students

The book was referenced by researchers at the Massachusetts Institute of Technology (MIT) in the USA in the journal paper "Uzuner O, Sibanda TC, Luo Y, Szolovits P. A de-identifier for medical discharge summaries. Artificial Intelligence in Medicine. 2008 Jan; 42(1):13-35."

https://www.researchgate.net/publication/5793808_A_de-identifier for medical discharge summaries

Co-author

- Tan T, Chan S, Ind M, Pace G, Bailey J, Reed K, Dutton T, Osuagwu UL, Wong KC. Benefits and challenges of electronic prescribing for general practitioners and pharmacists in regional Australia. Aust J Rural Health. 2023 May 27. doi: 10.1111/ajr.12999. Epub ahead of print. PMID: 37243842.
- **2.** von Huben A, Howell M, Norris S, <u>Wong KC</u>, Tang J, Kazi S, Laranjo L, Chow CK, Howard K. Stakeholder preferences for attributes of digital health technologies to consider in health service funding. Int J Technol Assess Health Care. 2023 Feb 14;39(1): e12.
- **3.** Reath J, Tan L, Brooks M, Burges J, Lindsay N, Lo W, Shakur S, Trankle SA, Wong KC. One medical school's experience of sustaining general practice teaching during COVID-19. Aust J Gen Pract. 2020 Jul 10;49. doi: 10.31128/AJGP-COVID-29. https://www1.racgp.org.au/ajgp/coronavirus/one-medical-schools-experience-of-sustaining-gener/
- **4.** Hu J, <u>Wong KC</u>, Wang Z. Recruiting migrants for health research through social network sites: an online survey among Chinese migrants in Australia. JMIR Res Protoc. 2015 Apr 27;4(2): e46. http://www.researchprotocols.org/2015/2/e46/
- 5. KY Loh, CL Teng and Wong KC (2006). How to Analyse Your Research Data? Illustrations with Hands-On Exercises Using SPSS. Malaysian Family Physician 1(2&3):77-81.
 https://www.researchgate.net/publication/37619886 How To Analyse Your Research Data Illustrations With Hands-On Exercises Using Spss
- **6.** Kiang Teck J Yeo, Hong Kee Lee, <u>Wong KC</u>, Robert S Foote (2005). Can Exercise-Induced Changes in B-Type Natriuretic Peptides Be Used to Detect Cardiac Ischemia? Journal of Cardiac Failure 11(5 S1): S59-S64. https://www.researchgate.net/publication/7794639 Can Exercise-Induced Changes in B-Type Natriuretic Peptides Be Used to Detect Cardiac Ischemia
- **7.** Paul Chen, Lai Kah Lee, <u>Wong KC</u>, Jagmohni Kaur (2005). Factors Relating to Adolescents Suicidal Behavior: A cross-sectional Malaysian School Survey. Journal of Adolescent Health 37(4): 337.e11-337.e16.

https://www.researchgate.net/publication/7582295_Factors_relating_to_adolescent suicidal behavior A cross-sectional Malaysian school survey

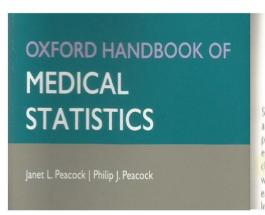
STATUS OF PROFESSIONAL AUTHORITY

Reviewer for journals, including Technology & Innovation journals (eHealth, mHealth)

https://www.webofscience.com/wos/author/record/744050

Oxford University Press

- Medical reviewer
- March 2007: I reviewed a handbook proposal titled "Oxford Handbook of Medical Statistics" and provided suggestions for writing the handbook. My contribution was acknowledged (see below):



Acknowledgements

50 many people have helped us in so many ways with the design, writing and publication of this book. Unfortunately it is inevitable that in naming people we may have missed some out, but we are incredibly grateful to everyone who has helped in any way. Our first thanks go to the OUP clinical reviewers, Tom Turmeziei, Kam Cheong Wong and Ryckie Wade, who provided invaluable feedback on the manuscript, especially in the early days, which helped us to shape the book. Our statistical colleagues, lepuny Freeman and Andrew Spith cause we warm the ward to be some the provided invaluable feedback on the manuscript, especially in the early days, which helped us to shape the book. Our statistical colleagues, lepuny Freeman and Andrew Spith cause we warm the ward to be some the provided in the control of the control

- June 2007: I reviewed the chapter "Diabetes" in the Oxford Handbook of Endocrinology and Diabetes
- July 2007: I evaluated a new book proposal titled "Oxford Handbook of Pulmonary Imaging."
- In Nov 2008, I evaluated a proposal for a new Oxford book titled "Key Cases in Endocrinology".
- I reviewed the following Oxford publications: Oxford Handbook of Practical Drug Therapy (1st edition, 2005), Oxford Handbook of General Practice (Oct 2005), and Oxford Handbook of Respiratory Medicine (1st edition, July 2005).
- > The Society of Authors, London, UK

Member (Membership number: 00046060)

> Royal Australian College of General Practitioners (RACGP)

Fellow (Membership number: 577247)

REFEREES

1. Professor Clara K Chow

Director, Westmead Applied Research Centre, University of Sydney. PhD Supervisor

http://sydney.edu.au/medicine/people/academics/profiles/clara.chow.php Email clara.chow@sydney.edu.au

2. Professor Tim Usherwood

Professor of General Practice,

Westmead Applied Research Centre, University of Sydney

PhD co-supervisor

https://www.sydney.edu.au/medicine-health/about/our-people/academic-

staff/tim-usherwood.html#collapseBio

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3. Associate Professor Georgina Luscombe

PhD, Senior Lecturer, School of Rural Health, University of Sydney.

Research Collaborator

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