## **RESUMÉ for Zhanming Liang**

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### **BIO**

Dr Liang is a leading researcher and educator in management competency and management workforce development in the health sector with expertise in healthcare quality and patient safety, project planning and evaluation, evidence-informed decision-making, and health system design and improvement. As President of the Society for Health Administration Programs in Education, Dr Liang has played a leading role in shaping the health management training and workforce capacity development in Asia Pacific.

Dr Liang was medically trained and worked as a physician, planning and evaluation consultant and senior manager before embarking her academic career and completed a PhD (health reforms and management workforce development) at Griffith University and Graduate Certificate in Safety, Quality, Informatics and Leadership at Harvard University. Dr Liang and colleagues developed and validated a novel *Management Competency Assessment Tool (MCAP Tool)* that has been used to assess the competence of middle and senior level managers and leaders working in the health sector. The assessment provides evidence to providing evidence to guide management capacity building in the system, organisation and individual levels. In the past few years, Dr Liang has been working with partners in China, Thailand and Iran to develop the capacity in health service management training, education and research in these countries.

Dr Liang has published substantially in the areas of leadership, management and health system development in journal publications, reports and books. Dr Liang has established a <u>JCU Health Management Group</u> to develop health management research capacity and offer informal training and coaching to health managers in improving their management competency and effectiveness leading to better service delivery and patient outcomes in Northern Queensland and the Pacific. The book that she co-authored entitled 'Project management in health and community services: getting good ideas to work' has been adopted as a textbook by majority of the Master of Health Administration Programs in Australia. The 4<sup>th</sup> edition is currently under development and will be published in early 2024.

As Associate Dean of Research Education, Dr Liang provides regulatory leadership to more than 120 higher degree research (HDR) students and HDRs advisors at the College of Public Health, Medical & Veterinary Science.

## **Current Position**

Position	Institution	Since when
Associate Dean, Research Education	College of Public Health, Medical & Veterinary, James Cook University	June 2021
Associate Professor,  Health Systems  Management & Policy		January 2021
President	The Society for Health Administration Program in Education (SHAPE)	July 2017
Associate Editor in Chief	Journal of Healthcare Leadership	October 2023
Adjunct Professor	ASEAN Institute for Health Development, Mahidol University	September 2021
	Shandong University, China	June 2019
	The Second Affiliated Hospital of Shandong First Medical University, China	July 2020
	The First Affiliated Hospital of Shandong First Medical University, China	January 2020
Fellow	Australasian College of Health Service Management	September 2009
Board member	National Policy Council, DRUG-ARM Foundation	July 2021
	Editorial Board, BMC Health Service Research	September 2021
	Editorial Board, Journal of Hospital Management and Health Policy (JHMHP)	August 2019
Visiting Scholar	Centre for Ageing and Health Management Research, Hong Kong Polytechnic University	Jan 2022
Reviewers	A number of health service management and human resource management related national and international journals	2006

## Previous Positions in the past ten years

- Senior Lecturer & Coordinator, Health Service Management programs, School of Psychology and Public Health, La Trobe University, 2009 2020
- Academic Integrity Advisor, Department of Public Health, La Trobe University, 2016 2020
- Adjunct Professor, Narasuan University, Thailand, 2016 2021
- Expert/Research Fellowship, Shandong University 2018
- Examiner, Fellowship for Australasian College of Health Service Management, 2015-2016
- National Secretary, the Society for Health Administration Program in Education (SHAPE), 2011-2017;

- Book Review Editor, Australian Journal of Primary Health; 2012 2016;
- Director, Board of DRUG-ARM Australasia, 2005 2015;

#### **Awards Received**

- La Trobe University Chancellor's Award, 2021
- Best Research Paper Award, 6<sup>th</sup> Annual Global Healthcare Conference, Singapore, 2017
- Mary Harris Student Bursary Award from the Society for Health Administration Programs in Education (SHAPE), 2003
- Coordinator of the year award, Liverpool City Council (NSW). 2001

## **Community contributions**

Dr Liang received a La Trobe University Chancellor's Award in 2021 for her significant efforts in raising fund in Australia purchased and donated more than \$200,000 worth of medical equipment to Wuhan to support the fight of the COVID-19 outbreak in February 2020. She again fund raised and donated 60,000 surgical masks to six Primary Health Networks in four different Australian States later in the year after the outbreak in Australia in May 2020.

Invention Management Competency Assessment Tool (MCAP Tool)

#### **Education**

■ Graduate Certificate Harvard Medical School, Harvard University

Safety, Quality, Informatics and Leadership, 2020 – 2021

■ <u>PhD</u> Griffith University

PhD (Public Health) in May 2007 (with full PhD Scholarship)

Topic: Characteristics, competencies and challenges: a quantitative and qualitative study of the senior health executive workforce in New South Wales, 1990-1999.

- Master of Science in Mental Health University of Wollongong, Australia 1997 1998
- Bachelor of Medicine and Bachelor of Surgery,
  Medical College, Jinan University, P.R. of China, 1988 1994

**Postgraduate Teaching:** Australian Health System; Health Care Quality, and Program Planning and Development; Health Economics; Public Health Management, Leadership, Policy and Planning.

## **Current HDR Supervision**

#### Primary Advisor for current PhD topics

- 1) 'Improving Health management competencies in digital health transformation in Australia' since September 2019.
- 2) 'Developing a Competency Health Service management Workforce in Nepal what is the Training and Development direction?' from 29.03.2022

- 3) 'Developing Leadership and Management Competencies for the Veterinary Industry' commencing August 2023
- 4) 'Understanding the competency development needs of Senior and Middle Managers in Publicly Funded Hospitals in Fiji, Papua New Guinea, and the Solomon Islands' commencing August 2023
- 5) "Building leadership and management capacity in leading digital transformation in Northern Queensland" commencing in September 2023.

### Primary Advisor for current Master of Philosophy topic

6) 'Digital Health and the Australian Medical and Allied Health Workforce Readiness (from a Change Management/Digital Transformation Perspective)' since 07.12.2021

#### Secondary advisor for current PhD topics

- 7) 'The Relationship Between Workplace Incivility and Perceptions of Patient Safety in Australian Hospitals: Mechanisms Underlying the Relationship and Intervention' since 21.08.2021
- 8) 'Forced separation between people and their pet dogs: impact on both species' from 01.02.2022
- 9) 'Leadership competency in the health service', Molde University College, Norway.
- 10) 'Leadership competency development amongst nursing directors', University of Canterbury, New Zealand.

## **HDR Completion**

As primary advisor: two PhDs, one professional doctorate, two Bachelor Honours and one Master Honours;

As secondary advisor: one PhD and one professional doctorate

#### **Presentation, Seminar and Guest Lectures**

Provided many presentations as invited speaker at international and national conferences.

Provided seminars and guest lectures at many overseas Universities such as Beijing University and Shandong University (China), Naresuan University and Mahidol University (Thailand), Hong Kong Polytechnic University, University of Macao, Taiwan Medical University, University of Hong Kong, Sun Yat-sen University etc.

Provided more than 60 invited conference presentation in the past ten years.

#### **Publications**

#### **Books**

- 1. Dwyer J, *Liang Z* and Thiessen V. 2019. Project management in health and community services: getting good ideas to work. 3<sup>rd</sup> edition. Allen & Unwin: Sydney.
- 2. Dwyer J, *Liang Z*, Thiessen V and Martini A. (2017). Project management in health and community services: getting good ideas to work (In Chinese Language). The People's Medical Publishing House, China. Translated by Shen Y.
- 3. Dwyer J, *Liang Z*, Thiessen V and Martini A. (2013). Project management in health and community services: getting good ideas to work. 2<sup>nd</sup> edition. Allen & Unwin: Sydney.

- 4. Howard P, *Liang Z* and Fitzgerald L. (2009). Evidence-based decision making in health service management: the knowledge and practice amongst middle to senior level health service managers in Victoria, Australia. VDM: Saarbuecken.
- 5. *Liang* **Z** (2008). Health reforms and Australian senior health executive workforce: characteristics, competencies and challenges. VDM: Saarbuecken.

#### **Book Chapters**

- 1. Ng F, Brommeyer M and Liang Z. (2023). Chapter 19: Digital Health and Technology Adoption'. In Fong B and Wong W (Eds.) Gaps and Actions in Health Improvement: Health for All, All for Health. Springer.
- 2. West D, *Liang Z* and Krcmery V.2019. Chapter 6: 'Principle of Effective Leadership'. In Counte M, West D, Ramirez B & Aronson B (Eds.) The Global Healthcare: Competencies, concepts, and skills. 2018. Health Administration Press: Chicago, IL.
- 3. Soresen R. *Liang Z.* and Cooper H. (2018). "Qualitative Research Method". In *Health Management Research* E-book. SHAPE.
- 4. *Liang Z.* Project Management. In G. Day & S. Leggat (Eds.), (2015) *Leading and Managing Health Services: An Australasian Perspective*, Cambridge University Press.

#### Special issue

Special issue in Frontiers in Public Health (IF 6.461). <u>'Innovations in Older Adult Care and Health Service Management: A Focus on the Asia-Pacific Region'.</u> Editors: Madhan Balasubramanian, Angie Shafei and Zhanming Liang. 2022-2023.

# Peer reviewed journal publications in the past five years 2023

- 1. Brommeyer M, Whittaker M, Mackay, M and **Liang Z**. 'Developing Health Management Competency for Digital Health Transformation Protocol for a Qualitative Study' JMIR Research Protocols Journal. (accepted for publication 13.10.2023)
- 2. Montgomery J, **Liang Z** and Lloyd J 'A scoping review of forced separation between people and their companion animals. Anthrozoös (accepted for publication 03.10.2023)
- 3. Han S, Xu M, Jiahui Lao J, and **Liang Z**. (2023) Collecting patient feedback as a mean of monitoring patient experience and hospital service quality- learning from a government-led initiative. Patient Preference and Adherence, 17:385-400
- 4. Kakemam E and **Liang Z**. (2023) Developing management competency framework in different healthcare context: a scoping review. BMC Health Service Research, 23:421.

#### 2022

- 5. Brommeyer M and *Liang Z*. A systematic approach in developing management workforce readiness for digital health transformation in healthcare. International Journal of Environmental Research and Public Health 19(21): 13843. <a href="https://doi.org/10.3390/ijerph192113843">https://doi.org/10.3390/ijerph192113843</a>. Invited feature article for the special issue 'The State of the Art of Health Data Science: Precision Medicine, Predictive Models and Clinical Decision Support Systems'. (Accepted for publication 22 October 2022)
- 6. Brommery M, Whittaker M, Mackay M and *Liang Z*. Building health service management workforce capacity in the era of health informatics and digital health a scoping review. International Journal of Medical Informatics (Accepted for publication 27 October 2022).

- 7. Khalil H, Liu G, Karimi L, Ferrier A, *Liang Z*, Leggat S. General wellbeing and work impacts amongst community pharmacists during crisis management. Australian Journal of Primary Health. (accepted 26 September 2022)
- 8. Khalil H, Liu G, Karimi L, Ferrier A, *Liang Z*, Leggat S. Evaluation of a health administration program and future consideration. The Journal of Health Administration Education. (accepted 20 May 2022)
- 9. *Liang* **Z**. Xu M, Liu G, Zhou Y and Howard P. (2022) 'Patient-centred care and patient autonomy: doctors' views' BMC Medical Ethics. 23(38):1-12.
- 10. Liu C, Wu Q, *Liang Z*, Karimi H, Ferrier A, Sheats J, Khalil H. (2022). Adaptation Strategies in Transnational Education: a case study of an Australian Master of Health Administration Course Offered to Chinese Managers. BMC Medical Education. 22(52) 1-14.
- 11. Bastani P, Bahmaei J, Kharazinejad E, Samadbeik M, *Liang Z*, Schneider CH. (2022) How COVID-19 affects the use of evidence informed policymaking among Iranian health policymakers and managers. Archives of Public Health. 80(16) 1-9.

#### 2021

- 12. Sandhu M and *Liang Z*. (2021) 'Competency Assessment of Project Managers of a National NGO in India'. Journal of Health Management. 23(3) 558–574.
- 13. Brommeyer M, Mackay M, *Liang Z*, and Balan P. (2021) Protocol for automated content analysis of corpus to determine informatics competencies amongst health service managers. Asia Pacific Journal of Health Management. 16(3):i785.
- 14. Brommeyer M, Mackay M, *Liang Z*, Schaper L and Balan P. 2021. A proposed approach to investigate whether postgraduate health care management education in Australian universities facilitates the development of informatics competencies. Studies in Health Technology and Informatics. 2021 Dec 15;284:93-97. doi: 10.3233/SHTI210677. PMID: 34920482.
- 15. Kakemam, E., Janati, A., Mohaghegh, B., Gholizadeh, M. and *Liang*, *Z*. (2021), "Developing competent public hospital managers: a qualitative study from Iran", International Journal of Workplace Health Management, 14(2):149 163.

#### 2020

- 16. *Liang Z*. Xu M, Liu G, Zhou Y and Howard P. (2020) 'Doctors in Chinese public hospitals: quality of their professional identities' BMC Medical Education. 20:501.
- 17. *Liang Z*. Blackstock F, Howard P, Leggat G, Hughes A, Maddern J, Briggs D, Isouard G, North N, Leggat S 'A health management competency framework for Australia', Australian Health Review, 2020, 44(6):958-964
- 18. *Liang Z*. Howard, PF. Wang J, Xu M. 'A call for leadership and management development for Directors of Medical Services evidence from the Chinese public hospital system'. International Journal of Environmental Research and Public Health. 2020, 17, 6913. Invited feature article to special issue "The future health workforce: integrated solutions and models of care".
- 19. *Liang Z*, Blackstock, F, Howard P, Liu G, Geoffrey L and Bartram T. Managers in the publicly funded health services in China Characteristics and responsibilities. BMC Health Service Research 2020, 20:721.

- 20. *Liang Z*, Howard P, Wang J, Xu M, Zhao M. 'Developing senior hospital managers: does 'one size fit all'? evidence from the evolving Chinese Health System', BMC Health Service Research 2020, 20:281.
- 21. Khalil, H., *Liang*, Z., Karimi, L., Ferrier, J.A. and Leggat, S.G. (2020) Guidance to implementing evidence-based initiatives to manage pandemics in healthcare services: a discussion paper. JBI Evidence Implementation, 18(4): 401-407.
- 22. Kakeman E; *Liang Z*; Janati A; Arab-Zozani M; Mohaghegh B; 2020. Gholizadeh M. Management and leadership competence for hospital managers: a systematic review and best fit framework synthesis. Journal of Healthcare Leadership. 12:59-68.
- 23. Leggat, S, *Liang Z* & Howard P. 2020. Differentiating between average and high performing public healthcare managers: implications for public sector talent management. Australian Health Review. 44, 434-442. https://doi.org/10.1071/AH19087

#### 2018

- 24. *Liang Z*, Howard P, Leggat S &Bartram T. Development and Validation of Health Service Management Competencies. Journal of Health Organisation and Management, 2018, 32(2):157-175.
- 25. Howard P, *Liang Z*, Leggat S & Karimi L. Validation of a management competency assessment tool for health service managers. Journal of Health Organisation and Management, 2018, 32(1):113-134.
- 26. *Liang* **Z**, Leggat S, Howard, P & Koh L. What makes a hospital manager competent at the middle and senior levels. Australian Health Review, 2013, 37(5):566-573.
- 27. *Liang*, **Z**, Howard P, Koh L & Leggat S. Competency requirements for middle and senior managers in community health services. Australian Journal of Primary Health 2013, 19(3), 256-263.
- 28. *Liang* **Z**, Blackstock F, Howard P, Briggs D, Leggat S, Wollersheim D, Edvardsson D & Rahman A. An evidence-based approach to understanding the competency development needs of the health service management workforce in Australia. BMC Health Services Research, 2018, 18:976.

#### 2017

- 29. *Liang* **Z**, Howard P & Wollersheim D. Assessing the competence of evidence-informed decision-making amongst health service managers. Asia Pacific Journal of Health Management, 2017, 12(3):6-21.
- 30. *Liang Z*, Howard, P & Leggat S. 360° Management Competency Assessment: is our understanding adequate? Asia Pacific Journal of Human Resources, 2017. 55(20):213-233.
- 31. *Liang* **Z**, Howard P & Koh L. Hey boss: are you sure they are the managers you are looking for? Managerial competency requirements for level II & III managers in community health services. GSTF Journal of BioSciences, 2013, 2(1): 86-91.

#### Selected publications prior to 2017

32. Ayeleke R, North N, Wallis K, *Liang Z* & Dunham A. Outcomes and Impact of Training and Development in Health Management and Leadership in Relation to Competence in Role: A Mixed-methods Systematic Review Protocol. **International Journal of Health Policy and Management**, 2016, 5(12):715-720.

- 33. *Liang* **Z**, Leggat S, Howard, P & Koh L. What makes a hospital manager competent at the middle and senior levels. **Australian Health Review**, 2013, 37(5):566-573.
- 34. *Liang*, **Z**, Howard P, Koh L & Leggat S. Competency requirements for middle and senior managers in community health services. **Australian Journal of Primary Health** 2013, 19(3), 256-263.
- 35. *Liang* **Z**, Howard P & Koh L. Hey boss: are you sure they are the managers you are looking for? Managerial competency requirements for level II & III managers in community health services. GSTF Journal of BioSciences, 2013, 2(1): 86-91.
- 36. *Liang* **Z**, Howard P, Leggat S & Murphy G. A framework to improve evidence-informed decision-making in health service management. **Australian Health Review** 2012, 36 (3): 284-89.
- 37. *Liang Z* & Howard P. Evidence-informed managerial decision-making what evidence counts? (Part Two) Asia Pacific Journal of Health Management 2011, 6(2):12-21.
- 38. *Liang* **Z**, Howard P & Rasa J. Evidence-Informed Managerial Decision-Making: what evidence counts? (Part One) Asia Pacific Journal of Health Management 2011, 6(1):23-29.
- 39. *Liang* **Z** and Howard, P.F. Competencies required by senior Health Executives in NSW, 1990 -1999, **Australian Health Review** 2010, 34, 52-58.
- 40. *Liang Z* and Brown, C. The twenty-first century face of senior health executives, Asia Pacific Journal of Health Management 2008, Vol 3 (2): 30-36.
- 41. *Liang* **Z** and Howard, P. Lesson learned from the introduction of performance management to the senior health executive levels in NSW in the 1990s. **Australian Health Review** 2007, 31(3): 393-400.
- 42. *Liang* **Z**. Short SD, Howard PF, and Brown CR. Centralised control and devolved responsibilities: personal experiences of top-level health executives on the implementation of area health management model in NSW 1986-99. Asia Pacific Journal of Health Management 2006, 1(2): 44-50.
- 43. *Liang Z*, Short SD, and Brown CR. Characteristics and employment status of senior health managers in the 1980s, 1990s and early 21<sup>st</sup> Century: implication for future research and education development. The International Journal of Health Administration Education Summer 2006, 23(3): 281-302.
- 44. *Liang* **Z**, Short, SD, and Lawrence B. Healthcare reform in New South Wales 1986–1999: using the literature to predict the impact on senior health executive. **Australian Health Review** 2005, 29(3): 285-91.

#### **Peer Review Paper – Under Review**

- 45. *Liang* **Z**. 'Developing a competent nursing management for Chinese Public Hospitals what do we need?' Journal of Nursing Management. (Submitted 07.03.2022)
- 46. Peivand Bastani P, Mohammadpour M, Samadbeik M, Bahrami MA, *Liang Z*. 'How to address the impact of COVID-19 on the Frontline Healthcare Workers during the Pandemic: A Scoping Review' PLOS ONE (submitted 03.03.2022).
- 47. *Liang* Z, Xu M, Howard PF, Zhou Y. 'Professionalism and patient-centred care patients' views and experience'. International Journal of Quality in Health Care (submitted 22.07.2023)

- 48. Jasmine Montgomery J, Janice Lloyd J and <u>Liang Z</u>. 'Protocol to investigate the impacts of forced separation between domestic violence victim-survivors and their companion animals. Violence Against Women (submitted Feb 2023).
- 49. Pokhrel P, Taylor J and Liang Z. 'Efforts implemented for developing Health Management Workforce in the Asia Pacific: A scoping review." to Asia Pacific Journal of Health Management. (submitted 02.07.2023)
- 50. *Liang* **Z** and Howard P. 'Professionalism and patient-centred care patients' views and experience'. International Journal for Quality in Health Care. (submitted 22.07.2023)
- 51. Han S and *Liang Z*. 'Understanding patient experiences by encouraging patient feedback'. International Journal for Quality in Health Care. (submitted July 2023)
- 52. Cui J, Xu M and *Liang Z*. 'Patient's Satisfaction in Medical Service under Chinese Public Hospital Service System' Frontiers in Public Health. (submitted July 2023).
- 53. Kakemam E and *Liang Z*. 'Senior hospital leadership and Management competency development in Iran'. (submitted July 2023)
- 54. Hompas T and *Liang Z*. 'Leadership and management development in the Vet Industry challenges and directors' (to be submitted in August 2023)
- 55. Heng N, King J and Liang Z. 'Title: Change Management for Electronic Health Record (EHR) Implementation: A Scoping Review of the Research to Date with Lessons for Adoption' (to be submitted in August 2023)
- 56. Four more articles are under development and will be submitted by the end of 2023

#### Refereed full papers conference presentation / publication

- 1. *Liang Z*, Blackstock F and Howard P. Managers in the publically funded health services in China characteristics and responsibilities, EURAM 2017: Glasgow.
- 2. *Liang Z*, Howard P, Briggs D, Leggat, S, Wollersheim, D, Isourad G, North N and Madden J. An evidence-based approach to understanding the competency development needs of the health service management workforce, EURAM 2016: Paris.
- 3. Leggat S. *Liang Z* and Howard, P. "Health care manager competence: exploring differences between type and size of organisation and management level". EURAM 2016: Paris.
- 4. *Liang* **Z** and Howard P. "Evidence-informed decision-making: the competency assessment of health service managers and requirements for improvement". EURAM 2015, Warsaw.
- 5. *Liang* Z. Howard P, Leggat S. 'Leadership Competencies of Middle and Senior Health Service Managers in Australia from the Perspective of Supervisors', 9<sup>th</sup> International Organisational Behaviour in Healthcare Conference, Denmark, 23-25 April 2014.
- 6. *Liang* Z. Howard P, Koh L. 'Hey Boss, are you sure they are the managers you are looking for? Managerial competency requirements for Level II & III managers in community health services' Global Healthcare Conference, Singapore, August 2012. (Print ISSN: 2251-3833, E-Periodical ISSN: 2251-3825).

#### **Commissioned Reports**

1. Eight organisation reports on Managerial Competency Assessment on middle and senior level managers to six Community Health Services and Two Health Services in Victoria.

- 2. Forty-one detailed reports to middle and senior managers from Victorian Community Health Services and Public Hospitals on their results from the Managerial Competency Assessment.
- 3. Howard, P, Liang Z. and Fitzgerald L. (2009). An examination of the practice of evidence-based decision making among middle level and senior healthcare managers in Victoria. ACHSE.
- 4. Liang, Z. "Drug awareness and education program for Chinese parents in the Fairfield Local Government Area Final Project Report to NSW Premiers Department". DRUG-ARM NSW, 2003

## Selected completed research projects

- 1. The impact of Doctors' characteristics and practice of doctor-patient relationship in Chinese Hospital
- 2. Reviewing and evaluating the management training programs to senior health service managers across Thailand
- 3. Identification of the perceived training requirements and support to improve the management competency among senior Health managers a parallel study in China and Thailand
- 4. Healthcare manager competencies in hospital and community health services in Australia. (MCAP Confirmation Study in NSW, QLD and SA)
- 5. MCAP Confirmation Study a Pilot in Chinese Hospitals (2015)
- 6. Developing a web-based platform for the Managerial Competency Assessment tool for Health Service Managers (2014)
- 7. Competencies for healthcare managers in Victoria: An exploratory, mixed-methods study to guide health management workforce development
- 8. Evidence-based management practice among senior healthcare managers Victoria.
- 9. Needs assessment on Chinese Community in Fairfield Local Government Area on their