



**The integration of pharmacists in the
Australian general practice setting:
implementation, evaluation and
development of an evidence-based training
program.**

PhD Thesis by compilation

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Doctor of Philosophy

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CERTIFICATE OF ORIGINAL AUTHORSHIP

I Helen Shona Benson declare that this thesis is submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the Graduate School of Health at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This document has not been submitted for qualifications at any other academic institution.

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Abstract

Background

Traditionally pharmacists have predominantly worked in community and hospital pharmacy settings. A recently expanding area of pharmacist practice is the provision of services by pharmacists integrated in general practice.

General practice pharmacy is expanding worldwide with significant programs currently operating in the United Kingdom, the United States of America and Canada.

In Australia, pharmacists have been employed in the general practice setting for some time, but this has previously been on a small scale, and focused around the funded services of home medicines review.

More recently, project funding from Primary Health Networks (PHNs) has enabled the employment of larger numbers of general practice pharmacists across multiple states and regions of Australia.

One such project is the WentWest General Practice Pharmacist project, which commenced in selected general practices across Western Sydney, New South Wales in 2016.

Objectives

This thesis covers the synthesis, analysis and development of knowledge relating to the implementation of a GP pharmacist intervention in the Australian context and the development of an evidence-based education program for these pharmacists.

Methodology

Mixed methodologies were employed. A process evaluation and a further two prospective observational studies were conducted to evaluate the GP pharmacist intervention. A systematic narrative review of the literature was conducted to allow the GP pharmacist scope of practice and competency map to be defined. A Delphi validation study was used to develop an expert consensus position on GP pharmacist educational needs and finally a theoretical work was produced outlining the educational program development.

Results

Evaluation of the WentWest GP Pharmacist Project enabled identification of barriers and facilitators of the intervention. (Chapters 3-5) The lack of specific training for GP pharmacists was identified as a significant barrier to the intervention and this led to a narrowing of the research focus. The GP pharmacist scope of practice and competency map was defined. (Chapter 6) Educational needs of pharmacists wishing to practice as GP pharmacists were identified. (Chapter 7) An evidence-based educational program for GP pharmacists was developed. (Chapter 8)

Conclusion

The results from the evaluation of the WentWest GP Pharmacist Project enabled adjustment and improvements to the intervention model and have been used to inform ongoing research.

In addition, the research conducted into the GP pharmacist scope of practice and educational needs has enabled the development of the first comprehensive evidence-based education program for GP pharmacists in Australia.

Dissemination of Research

Peer Reviewed Publications

- 2018** Benson H, Sabater-Hernández D, Benrimoj S I, and Williams K A. 2018. 'Piloting the Integration of Non-Dispensing Pharmacists in the Australian General Practice Setting: A Process Evaluation', *International Journal of Integrated Care*, 18 (2). doi: 10.5334/ijic.3293
- 2018** Benson H, Lucas C, Kmet W, Benrimoj S I, and Williams K A 2018. 'Pharmacists in general practice: a focus on drug-related problems', *International Journal of Clinical Pharmacy*. 2018, Vol.40 (3), pp.566-572 doi: 10.1007/s11096-018-0617-9
- 2018** Benson H, Lucas C, Benrimoj S I, Kmet W, Williams K A 2018 'Pharmacists in general practice: recommendations resulting from team-based collaborative care.' *Australian Journal of Primary Health*, Vol.24 (6), p.448-454 doi: 10.1071/PY18022
- 2018** Benson H, Lucas C, Benrimoj S I, Williams K A 'The development of a role description and competency map for pharmacists in an interprofessional care setting.' *International Journal of Clinical Pharmacy*, under peer review
- 2018** Benson H, Lucas C, Williams K A 'Establishing the educational needs of general practice pharmacists: a Delphi validation study.' *Currents in Pharmacy Teaching and Learning*, under peer review
- 2018** Benson H, Lucas C, Williams K A 'Training for team-based care: development of a novel continuing education curriculum for general practice pharmacists in Australia.' *Medical Teacher*, under peer review

Conference Presentations

- 2016** Benson H, Williams K A, Sabater Hernandez D, Benrimoj S I
'The WentWest Non-Dispensing Pharmacist Project: Integrating pharmacists in general practice.'
Poster Item 406 in Abstracts in Australasian Pharmaceutical Society Conference 2-6 December 2016 accessed at
<http://apsaonline.org/files/2016ConferenceProceedings.pdf>
- 2017** Benson H, Williams K A, Lucas C, Benrimoj S I 'Integrating Pharmacists in General Practice: Drug-Related Problems in the Patient Centred Medical Home.' Oral Presentation. Pharmaceutical Society of Australia 2017 Conference 28-30 July 2017:
- 2017** Benson H, 'Inter-professional collaboration in general practice and primary care teams.'
Oral Presentation: Accredited Pharmacist Special Interest Group Pharmaceutical Society of Australia 2017 Conference 28-30 July
- 2018** Benson H, Williams K A, Lucas C, Benrimoj S I 'Developing an educational program for General Practice (GP) pharmacists.' FIP World Congress Glasgow 2-6 September 2018
Oral Presentation

Invited Presentations

- 2016** Benson H 'Allied Health in the Patient Centred Medical Home' WentWest PCMH Showcase Rosehill Racecourse 29th November 2016
- 2018** Benson H 'Pharmacists in General Practice' Pharmacists in General Practice National Primary Health Network meeting 21st May 2018
- 2018** Benson H 'Community Pharmacists in General Practice' Oral Presentation to Murrumbidgee PHN CEO and Primary Care Program Director
- 2018** Benson H 'Pharmacists in General Practice' Oral Presentation to Western PHN CEO and Primary Care Program Director Dubbo NSW 22nd August 2018

- 2018** Benson H, Williams K A, Lucas C 'Developing an education program for GP Pharmacists' WentWest GP Pharmacist Education Program Advisory Committee Presentation 18th September 2018
- 2018** Benson H 'Pharmacists in General Practice' Oral Presentation to Western PHN Clinical Council 18th October 2018
- 2018** Benson H 'Pharmacists in General Practice' Oral Presentation to Far-Western PHN Clinical Council November 7th 2018

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To my family and especially to my wonderful husband Jon, thank you for your support and unwavering confidence in me. I can't wait to move on to the next chapter.

To the staff and pharmacists from WentWest, thank you for supporting the research, hopefully we can make a real difference.

Preface

This thesis is presented in fulfilment of doctoral degree (Doctor of Philosophy) requirements, under the graduate research school at the University of Technology Sydney.

The thesis is structured as a PhD thesis by compilation comprising a combination of chapters and published/publishable works.

This basis for this research originally stemmed from my passion for helping patients, and my belief that pharmacists are capable of contributing to patient care in a larger and more meaningful way. By training the pharmacists of the future to perform clinical roles, we are paving the way for the advancement of the profession.

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Abbreviations

CPPE Centre for Pharmacy Postgraduate Education

DRP Drug-related problem

FIP Federation Internationale Pharmaceutique (International Pharmaceutical Federation)

GbCF Global Competency Framework

GP General Practice

HEE Health Education England

NCSFPA National Competency Standards Framework for Pharmacists in Australia

NHS National Health Service

NSW New South Wales

PCMH Patient Centred Medical Home

PHN Primary Health Network

PSA Pharmaceutical Society of Australia

RACGP Royal Australian College of General Practitioners

RPS Royal Pharmaceutical Society

UTS University of Technology Sydney

USA United States of America

UK United Kingdom

WentWest Western Sydney Primary Health Network