Nurse-Led Interventions for Hypertension Management in General Practice: A Systematic Review

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Purpose:

This review seeks to critically appraise randomised controlled trials that investigate the effectiveness of nursing interventions in modifying lifestyle risk factors by a practice nurse within those with hypertension in the general practice setting.

Methods:

A systematic review was undertaken to identify published, peer-reviewed Randomised Controlled Trials of general practice nurse led interventions for prevention of cardiovascular disease. The inclusion criteria were:

- Participants: Registered Nurses working in general practice and their patients
- Study design: Studies were only included if they were a randomised controlled
- Interventions: a primarily nursing delivered intervention within a general practice or primary care setting which targeted reduction of blood pressure in patients who were hypertensive. Papers were excluded if the nurse was a nurse practitioner or a specialist cardiac

Outcomes: all outcomes relating to improvement in health status and lifestyle risk factor profile were included (e.g. blood pressure, cholesterol, smoking status, body weight).

Results:

In total 11 papers met the inclusion criteria and were included for this review. Studies originated from Australia, America, Italy, Netherlands, Turkey, Germany, Norway, Sweden, and Finland. Six studies included patients with hypertension at baseline whilst the other five included participants who had a previous diagnosis of hypertension regardless of whether their blood pressure was currently under control. Sample sizes ranged from 51 to 1492 patients. One study measured outcomes at 26 weeks, five studies measured outcomes at one year, whilst the other studies measured outcomes at 3, 6, 18 and 24 months.

Conclusion:

Nurse-led interventions to optimise hypertension management in general practice are globally heterogeneous. Variation within this evidence base makes definitive conclusion elusive however, nurse interventions in general practice show significant potential to improve BP control and support individuals to achieve enhanced health outcomes. Before the model can be effectively embedded within the general practice landscape, further investigation into the professional, economic and health implications of reorganising care is required.
Title:
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Keywords:
Nursing intervention, Hypertension and Lifestyle risk factors

References:
6. Australian College of Nursing, Nursing in General Practice: A guide for the general practice team. 2015, Australian College of Nursing: Canberra, ACT.


Abstract Summary:
Due to the increased demand for chronic disease management and lifestyle risk factor reduction the nursing workforce in primary care has grown significantly. This review synthesizes the international evidence on the impact of nurse interventions for lifestyle risk factor reduction in those with hypertension presenting to general practice.

Content Outline:
There has been a well-recognised shift in health care into the primary care setting for chronic and complex diseases including cardiovascular disease. General practice is a large source of primary care and provides an opportunity to modify patient’s lifestyle risk factors to produce better health outcomes. Nursing in general practice is increasing and provides multiple interactions and familiarity with patients in addition to contact with patients prior to an acute crisis. It is postulated that practice nurses in primary care are in optimal positions to make a significant impact in patient lifestyle modifications and cardiovascular disease management. However there are limited attempts to explore the impact of these practice nurse interventions in terms of patient outcomes.

To review international evidence on the impact of general practice nurse interventions for lifestyle risk factor reduction in those with hypertension presenting to general practice.

Systematic review.
A systematic search of relevant databases was used to identified published peer-reviewed Randomised Controlled Trials of general practice nurse led interventions for prevention of cardiovascular disease. Given the heterogeneity of included studies, a narrative synthesis was undertaken to synthesise the literature.

A total of 11 papers were identified which met the inclusion criteria. While intervention components varied greatly and targeted risk factors singularly (weight) or in combination (diet and physical activity) all utilised some form of nurse counselling. Outcomes varied from no measurable impact to statistically significant improvements in other trials.

Nurse-led interventions to optimise hypertension management in general practice are globally heterogeneous. Variation within this evidence base makes definitive conclusion elusive however, nurse interventions in general practice show significant potential to improve BP control and support individuals to achieve enhanced health outcomes. Before the model can be effectively embedded within the general practice landscape, further investigation into the professional, economic and health implications of reorganising care is required.

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Professional Experience: RN in General Practice and PhD Candidate focusing on the nurses role in managing hypertension in Primary Care. Publications to date include 2 published peer reviewed papers and a co-authored textbook chapter.
Author Summary: Ever questioning, ever learning RN and PhD student seeking to unravel the existing and potential contribution of General Practice Nurses in the management of chronic conditions.

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Professional Experience: 2013- Professor of Primary Health Care Nursing (Permanent Full-time) School of Nursing, University of Wollongong 2011-2013 Associate Professor University of Western Sydney 2007-2011 Senior Lecturer, School of Nursing & Midwifery, College of Health & Science, University of Western Sydney Author or coauthor of 113 peer reviewed papers and 107 conference presentations mostly related to primary care nursing.

Author Summary: Professor Elizabeth Halcomb is Professor of Primary Health Care Nursing at University of Wollongong. She is an experienced academic nurse leader who is an active supervisor of research students and teaches into postgraduate coursework. Professor Halcomb leads a strong research program in primary care nursing, with particular emphasis on nursing in general practice, chronic disease and nursing workforce issues. She also undertakes research around learning and teaching in nursing, academic workforce development and research methodology.

Third Author

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Author Summary: Susan McInnes recently completed her PhD exploring collaboration between general practitioners and registered nurses working in general practice. As an active researcher, Susan has 14 peer-reviewed publications in high impact national and international journals and has co-authored one book chapter. Each publication has reported research in primary care and in particular to exploring workforce issues and the role of nurses working in general practice.

Fourth Author

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Professional Experience: Nick has substantial research experience in the areas of chronic disease care, smoking cessation in primary care, quality use of medicines, travel medicine and educational program evaluation. He has developed a national and international reputation in health services research on prevention and management of chronic illness with a focus on respiratory and cardiovascular diseases. He has considerable experience in evaluation of complex interventions involving practice nurses. The design of these interventions is informed by the Chronic Care Model. Professor Zwar and colleagues were awarded a 2009 NHMRC project grant to test the role of practice nurses in supporting smoking cessation in partnership with GPs and the Quitline. This project has involved over 100 general practices and recruited more than 2300 participants.

Author Summary: Prof Nick Zwar is the Dean of the Graduate School Medicine, UOW. He had previously been Professor of General Practice and Head of Medical and Undergraduate Education in the School of Public Health and Community Medicine at the University of New South Wales since 2008. Prior to that Nick was Professor of General Practice and Director of the General Practice Unit, Fairfield Hospital.