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Improving blood pressure control in primary care: feasibility and impact of the ImPress intervention

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Abstract

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Improving blood pressure control in primary care: feasibility and impact of the ImPress intervention

2015 PHC RESEARCH CONFERENCE: PAPER ABSTRACT

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Organisation

University of New South Wales, John Hopkins University, University of California, University of Wolloongong

Aims & rationale

Blood pressure is not treated to target in more than 50% of adults with hypertension. The benefit of blood pressure control is greatest for those at high absolute risk. This study tests the feasibility and impact of a new approach to identifying and targeting patients in primary care for improved hypertension management. The ImPress intervention is based on the Chronic Care Model and is delivered by the practice nurse in partnership with the patients and their GP.

Methods

A before/after study involving 10 general practices in Sydney. Patients were identified by Clinical Audit Tool (CAT).

Findings

From 507 patients invited 118 (23%) completed an assessment visit and 85 were confirmed as having uncontrolled hypertension. Of these 82 patients consented to be involved (mean age 63, 62% male). The mean BP at baseline was 150/86. Patients had a series of contacts with PNs and GPs to set and implement goals. To date 10 patients have completed six month follow-up. The decrease in mean systolic BP from baseline was 14mmHg. Semi-structured interviews were conducted with 8 PNs, 7 GPs and 12 patients. Both PNs and GPs found the intervention easy to understand and coherent with their respective roles.

Relevance to policy, research and/or practice needs

The ImPress study is an example of active practice population management using

computerised tools. Lessons from the pilot included the need to automate the CAT searches and that active follow-up of the nurses was important after the education workshops to reinforce understanding and deal with barriers.

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Presentation

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Improving blood pressure control in primary care: feasibility and impact of the **ImPress** intervention

UNSW Never Stand Still | Faculty of Medicine | School of Public Health and Community Medicine

Research team: Nick Zwar, Oshana Hermiz, Liz Halcomb, Trish Davidson, Tom Bodenheimer

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Rationale for ImPress study

- Control of blood pressure (BP) has been demonstrated to delay or improve the outcome of a range of cardiovascular diseases
- The benefit of BP control is greatest for those at high risk of cardiovascular events
- Within the Australian health care system primary care is the key setting for interventions to improve management of hypertension

What's the problem?

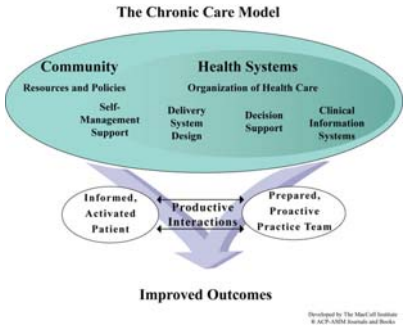
Hypertension in primary care

- **Hypertension is common** - hypertension is the most common problem managed in general practice consultations accounting at a rate of 9.1 problems per 100 encounters
- **Blood pressure control is often not optimal** - the National Institute of Clinical Studies has identified achieving optimal control of BP as a key evidence to practice gap.
- **Substantial numbers of patients are at high CVD risk** - the AusHEART study found a substantial prevalence of high CVD risk patients in general practice - 29% had established CVD and a further 22% were at high (≥ 15%) 5-year risk of a cardiovascular event.
- **Many people with hypertension have behavioural risk factors** - the AusDiab survey found that the prevalence of hypertension in the Australian population was 28.6% with 13.4% being treated with antihypertensive medicines. Of those on treatment, 60% had BP ≥ 140/90 mmHg, 20% were obese, 31% had diabetes, 29% had hyperlipidaemia, 27% were smoking, 23% had excessive alcohol intake and 28% had insufficient physical activity

Conceptual basis for ImPress Intervention

- Kaiser Pyramid
- Chronic Care Model
- Primary Care Medical Home

Kaiser Pyramid



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Rationale for ImPress intervention

- Computerised clinical information systems and audit tools now make it possible to conduct practice population management (PPM) in primary care where patients at highest risk are pro-actively identified and targeted for intervention
- Practice nurses (PN) are core members of the primary care team and have the potential to provide systematic care of long term conditions such as hypertension
- This project brings together the use of computerised PPM tools and the emerging role of the PN in organising and providing chronic disease care and applies these innovations to hypertension

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Methods

- Before after intervention study involving 10 practices in metropolitan Sydney
- Measures at baseline and six months follow-up
- One-day educational workshop for practice nurses on study rationale, study procedures, BP measurement, use of study tools and collaborative BP care.
- Two weeks after the PN workshop a webinar was held with the nurses and participating GPs to explain the aims of the project to GPs, encourage commitment to participation, agree roles and responsibilities and discuss how progress of the intervention would be monitored in the practice.

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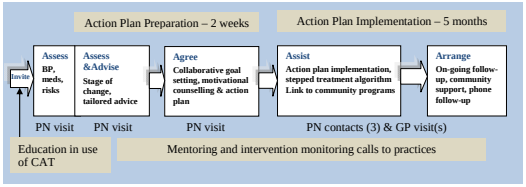
ImPress Intervention



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Outcome measures

- Systolic and diastolic blood pressure
- BMI and waist to hip ratio
- Hill-Bone Compliance to High Blood Pressure Therapy Scale
- Morisky Medication Adherence Scale.
- Health behaviours for smoking diet and physical activity assessed using questions based on the NSW Health Adult Health Survey and the ABS National Health Survey.
- Qualitative evaluation of the intervention using semi-structured interviews with PNs, GPs and patients will provide information on acceptability, perceived impact and sustainability for the intervention.

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Results

- Mean number of patients identified per practice with high CVD risk and uncontrolled BP (based on most recent BP measurement) was 125 (range 40 to 583).
- From the patients identified, a random sample of patients in each practice was invited to attend the PN for an assessment visit. The number sampled varied from 40 to 75 depending on PN capacity to provide the intervention.
- From a total of 507 patients invited 118 (23%) completed an assessment visit and 85 of these patients were confirmed as having uncontrolled hypertension.
- Of these 82 patients consented to be involved and provided baseline data.
- The mean age of patients was 63 and 62% were male.
- The mean BP at baseline was 150/86.

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Quantitative results to date

- In 52 patients who have now completed the 6 month follow-up the mean decrease in systolic BP is 14mmHg and diastolic 8mmHg.
- Blood pressure treatment and medicine adherence have improved as measured by the Hill-Bone and Morisky instruments respectively.
- Decreases have been found in mean weight (1.4 kg), waist circumference (1.9 cm) and BMI (0.5 kg/m2).

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Qualitative evaluation

- Semi-structured interviews were conducted with 8 PNs, 7 GPs and 12 patients who participated in the pilot. These interviews have been analysed through the lens of Normalisation Process Theory
- NPT identifies four factors that influence the routine incorporation of complex interventions into everyday practice: coherence; cognitive participation; collective action; and reflexive monitoring.

"*It is a very simple project and I really think it is user friendly and can be applied in any setting*" GP

"*Patients feel comfortable talking to the nurse about lots of thing, maybe more than they would to their doctor*" PN.

"*They were quite happy, and a couple of them actually told me that this was great, this was a great thing to be able to come in and talk to the nurse, and have some education, have some follow-up. The follow-up is important*" PN.

"*She keeps an eye on us and keeps jogging the memory about what I should be doing and that. I think you need that sort of constant reminder, because you do tend to forget from time to time what should be going on*" Patient

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Implications

- The ImPress study is an example of active practice population management using computerised tools.
- Lessons from the pilot included the need to automate the CAT searches and that active follow-up of the nurses was important after the education workshops to reinforce understanding and deal with barriers.

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