

# Doctors and nurses: Standing orders in primary care

## A literature review

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### ABSTRACT

#### Background

Standing orders are a useful tool to extend the work of primary health care team members and increase access to services for patients. They have been used in secondary services and in isolated rural communities since legislation was passed allowing their development in New Zealand in 2002.

Extending standing order use is one response that teams can use to deal with workforce pressure.

#### Aim

The aim of this study is to review the published literature regarding the use of standing orders in primary care to compare clinical outcomes, cost comparisons and patient satisfaction between usual care and standing order care.

#### Methods

A systematic literature review was conducted using online databases.

Papers included in the study were randomised controlled trials comparing usual GP care with care provided by nurses utilising standing orders in primary care settings. Key outcomes were identified and the results from the relevant papers collated.

#### Results

Seven papers were identified that fitted inclusion criteria.

Three papers referred to the use of protocol-driven care. These studies indicate that nurses can treat a variety of conditions using protocols developed within a practice effectively and safely.

Two papers explore the use of nurses to see patients presenting for a 'same day' consultation. They show that nurses can provide care equivalent to that of a GP, but that nurse consultations are longer and result in increased referral rates.

The remaining two papers examine the effects of a specialist asthma nurse and a secondary heart prevention clinic in primary care and show that standing order intervention can result in improved outcomes for patients.

#### Conclusion

Standing orders can be safe and efficacious in primary care settings.

The effect of standing order care on health service costs is variable.

Standing order templates and further information specific to New Zealand are both available from the author.



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### Introduction

Accessibility of services to patients in New Zealand as in many other countries is being compromised by workforce issues. There is a growing disparity between the number of active GPs and patients, resulting in ever greater pressures on the health workforce.<sup>1</sup> There is, however, a growing number of active nurses in New Zealand, many of whom are working in primary care.

If New Zealand was to reach the Australian guideline level for general practitioner workforce numbers we would need an extra 1000 GPs and rurally, to achieve a ratio of 1:1500 patients in these areas, an extra 107 GPs are required.<sup>2</sup> A number of provider groups, including midwives, dentists, and nurses, have been able to prescribe independently from medical practitioners for some years. In isolated rural settings the rural nurse specialist role has been developed and there are a growing number of nurse practitioners.

The education, supervision and legislative requirements needed to attain independent prescribing status by nurses will limit the numbers who are going to be able to adopt this scope of practice.

Laurant et al., in a systematic review of studies where nurses substitute for doctors in caring for patients,<sup>3</sup> show that *'appropriately trained nurses can produce as high quality care as primary care doctors and achieve as good health outcomes for patients.'*

It is worth noting that nurses do not necessarily value the role of 'doctor substitute',<sup>4,5</sup> and in the UK, where nurses are able to independently prescribe to a formulary, they may not do so because formulary medicines are limited in scope or not valued as part of the service<sup>6</sup> or they lack confidence. They would rather prescribe using standing orders, known as 'patient group directions' in the UK, which have the clear institutional support of medical colleagues.<sup>7</sup>

In New Zealand, we know from the survey by Lightfoot et al. of a sample of patient encounters in the Waikato taken from four weeks over the year 1991–1992<sup>8</sup> that about a quarter of patients who attend general practices also see a practice nurse. When patients see the practice nurse alone they tend to be seeing them for follow-up, asymptomatic issues, or single issues with limited diagnostic uncertainty, which may be suitable for standing order care. It is also clear that GPs are prepared to delegate responsibility within the practice team. Jenkins-Clarke et al. collected data from 10 UK practices over a two-week period including workload and delegation diaries from practices nurses, district nurses, health visitors, and GPs. They also had researchers observing 836 consultations, during which activity was recorded every 30 seconds, the GP and researcher then agreed what activity could be delegated and to whom, and ran focus group discussions exploring the issues around delegation. They determined that, of 141 GP consultations, 17% of the total could have been delegated entirely, and that around 40% of the content of the individual consultations could be delegated to others.<sup>9</sup>

Standing order legislation was initiated in New Zealand in 2002 after pressure from rural GP groups who were seeking to ensure that the use of nurse prescribing in primary care was a legitimate response to workforce pressures. Although some areas of New Zealand, notably the West Coast of the South Island, rely heavily on standing orders to allow patients access to medication through rural nurse specialists, there has not been widespread uptake in other GP settings. The New Zealand Ministry of Health process in developing the legislation did not clearly define an evidence base with respect to the safety, efficacy and cost effectiveness of standing order care.

The aim of this study was to identify what research had been done into

the use of standing orders in a primary care setting.

### Method

A standing order for the purposes of this study is defined as a written protocol agreed between a medical practitioner and another health professional that includes the provision of a medication under defined circumstances. This is based on the definition of a standing order as detailed in the New Zealand Ministry of Health guidelines.<sup>10</sup>

Papers included in the study were primary care data studies that describe randomised controlled trials in a primary care setting. Included in the review are studies based in general practices, family medical practices, rest homes and first point of contact assessment clinics including walk-in medical centres and out-of-hours general practice clinics. Studies included compare usual care from a medical practitioner with care provided by another health professional utilising written instructions that have been developed by the primary care team including a prescription of medication. Outcome measures considered include cost analysis, clinical outcomes and patient satisfaction.

Papers were excluded if they were not randomised controlled trials, if they refer solely to provision of immunisation services, or application of dressings or appliances, or if they were based in secondary care services.

A search was performed in March 2007 using the Auckland Medical Library online services, including Medline, EMBASE, CINHL, EBM reviews (CDSR, CDRCT, DARE, and ACP Journal Club), with search terms specific to each database.

Search terms and results included: 'Randomized controlled trials' 'Random allocation'; 'Primary care' 'Family practice' 'General practice'; 'Nurse' 'Nurses' 'Nurse prescribing' 'Nursing'. The intersection of the above terms revealed a total of 299 papers, 106 papers on Medline, 92

papers on CINHL, 92 papers on EMBASE, and nine papers on the combined EBM search engines.

Further papers were sought from a review of references of relevant papers and through discussion with advisors from the Royal New Zealand College of General Practitioners and other researchers working in nursing and standing order development in New Zealand and at the New Zealand Ministry of Health. This identified a further six papers.

Of the 305 papers, 235 were excluded as irrelevant to the study or duplicates on review of the titles and abstracts of papers. This left 70 papers for more detailed analysis and consideration for inclusion in the review. Four papers were unobtainable<sup>11-14</sup> but their abstracts were reviewed and none of them were felt relevant for inclusion. Papers were reviewed using a predetermined review chart to identify studies for inclusion in the study. The review chart enabled the papers to be summarised and an assessment made of the study method, participants, and intervention and outcome measures. Review of the papers identified seven studies that detailed randomised controlled interventions comparing outcomes when nurses working to protocols including prescribing medications are compared with doctors in primary care settings. These papers were critically appraised according to guidelines developed by Sackett and others<sup>15</sup> in *'Evidence Based Medicine – How to practice and teach EBM'*.

## Results

The first three papers examine the use of specific protocols of care in the treatment of low back pain,<sup>16</sup> headaches,<sup>17</sup> and dysuria, frequency and vaginal discharge<sup>18</sup> using practice nurses working in primary care with protocols developed by the researchers along with the nurses and GPs involved. Although these papers from the 1970s have methodological flaws, the patients and practitioners involved are typical of primary care

settings and these interventions are practical and easily applied in general practices today. These three papers compare outcomes in clinical care between standing order intervention and standard care, but do not include any cost analysis and only limited patient satisfaction measures.

The next two papers look at care comparisons and cost effectiveness of nurses used when patients requesting 'same day' consultations are seen by nurses or doctors.<sup>19,20</sup> These papers are set in UK primary care and involve patients typical of general practice settings, the nurses involved were well supported within the primary health care teams and results are generalisable to other primary care settings. These studies are well designed and review patient safety satisfaction, clinical outcomes and cost and are similar in reviewing patients requesting same day consultations.

The final two papers examine nurse protocol led care as one intervention in promoting secondary prevention of coronary heart disease<sup>21</sup> and asthma management outcomes comparing a nurse specialist clinic with usual care.<sup>22</sup> Both papers compare clinical outcomes between intervention and control groups including recorded evidence of standards of care and utilisation of services.

### *Patient satisfaction with standing order care*

The assessment of patient satisfaction by Greenfield et al.<sup>16,17,18</sup> is limited but shows a positive bias towards nurse protocol management. Moher<sup>21</sup> and Griffiths<sup>22</sup> do not formally assess patient satisfaction, but show no difference in standardised 'quality of life' scores in patients accessing nurse-led care in chronic disease management. Kinnersley<sup>19</sup> and Venning<sup>20</sup> both show in validated patient satisfaction questionnaires a higher level of satisfaction with nurse led care compared to normal care, even after an increased length of consultations provided in nursing intervention is taken into account. Al-

though questions have been raised about how important patient satisfaction is in measuring quality of care, since patient satisfaction does not necessarily reflect high quality care<sup>23,24</sup> these studies show that patients are equally and in some cases more satisfied with standing order care than usual care.

### *Patient benefit/harm*

All of the studies analysed showed that there was no difference in outcome measures comparing nurse-led standing order care when compared to usual care, apart from the study by Griffiths et al.<sup>22</sup> which showed fewer emergency care visits and a delay in the first episode of emergency care in patients receiving specialist asthma nurse intervention. Nurses are shown in these studies to use standing orders effectively and refer patients appropriately, and there is no difference in prescribing volumes comparing nurses using standing orders and usual care.

### *Cost effectiveness*

When nurses apply standing order care Greenfield et al.<sup>16,17,18</sup> conclude that this saves doctor time. Although they make no formal assessment of this, they estimate that nurses spend around 20 minutes longer than doctors with each patient. Venning<sup>20</sup> and Kinnersley<sup>19</sup> both show that nurses ask more patients to return for follow-up, but actual re-attendance rates within two weeks varies. Nurses in the Venning study<sup>20</sup> did order significantly more investigations than doctors, and spent longer with patients and, although overall health care costs were shown to be slightly lower in the nurse led care, this difference was not statistically significant.

## Discussion

Standing order use in primary care relies upon the development of a good relationship between staff members that allows nurses and doctors to have confidence that where standing orders are applied, they are used

appropriately. It has been the author's (J S-J) experience that the development of the process and education around the conditions to be treated enhances job satisfaction and confidence in all members of the team.

Standing orders can allow the dispensing of medication, or the production of prescriptions for counter-signing by an authorised prescriber before dispensing depending upon the clinical situation. Practices that adopt standing orders do need to develop a system that allows each individual case in which a standing order is used to be reviewed by the authorising prescriber within what the legislation describes as 'a reasonable time'.<sup>10</sup>

Using standing order care does have potential difficulties that have not been adequately explored in these studies. Staff may not comply with the protocols, as illustrated by Watkins et al.<sup>25</sup> who looked at how closely nurses and doctors kept to an agreed protocol of shared care for hypertensive patients – they found that GPs tended to keep patients who could have been supervised by nurses, and that more experienced nurses tended to retain patients under their own care rather than referring patients to the GP.

One of the hopes for shared care and extending nursing roles in primary care is that it will free up doctors to care for more complicated patients. In a randomised before and after trial, Laurant et al.<sup>25</sup> looked at the effect on general practitioner workload of introducing non prescribing nurse practitioners working with patients with chronic obstructive pulmonary disease, asthma, dementia, or cancer. There was no significant effect on perceived measures of workload in terms of available time, job satisfaction, inappropriate de-

Table 1. Summary of results

Author (Summary)	Patient Satisfaction	Patient Benefit/Harm	Costs
Greenfield (Protocols) Ref 16,17,18	Positive	No difference	Saves doctor time
Kinnersley (Same day) Ref 19	Positive	No difference	No difference
Venning (Same day) Ref 20	Positive	No difference	Improved – but not significantly
Moher (CVS) Ref 21	No difference	No difference	Not assessed
Griffiths (Asthma) Ref 22	No difference	Better outcome	Not assessed

mands of patients or perceived cost benefits, but there was an increase in patient contacts, particularly in the group of patients with respiratory disease, perhaps because of case identification and management issues raised by intervention. These nurses were not prescribing using standing orders, and it is interesting to speculate whether the outcome would have been different had they been doing so. There is a need for further studies looking at the effect of standing order care on the workload of the primary

health care team and the ability of the team to consistently apply standing order care over a prolonged period of time.

This review indicates that such standing order care is safe, effective, and acceptable

to patients. The cost-effectiveness of standing order care is compromised by the number of tests performed, recalls and the length of time nurses spend with their patients, but this also results in greater patient satisfaction scores.

As increasing pressure on workforce availability progresses internationally, standing orders provide a safe and effective method of

extending the role of practice nurses and increasing access to services for patients. The distinction between nursing practice and medical practice is a complex topic<sup>26</sup> beyond the scope of this discussion, and the attitude doctors have towards nurse prescribing can sometimes be described as defensive.<sup>27,28</sup> The title of the 2008 New Zealand College of Practice Nurses' conference '*From Maids to Masters*' illustrates keenly the response the nursing community is making to the outmoded role of 'doctor's handmaiden.'

Nurse intervention examined in these studies is not designed to substitute for medical care, but to supplement it; the challenge to general practice is to develop collaborative care using standing orders that enhances patient care and makes best use of the skills of all members of the practice team.

For those keen to accept the challenge, standing order templates and links to advice specific to using standing orders in the New Zealand context can be obtained from the author.

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## Competing interests

None declared

**As increasing pressure on workforce availability progresses internationally, standing orders provide a safe and effective method of extending the role of practice nurses and increasing access to services for patients**



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## Quality improvement activities

*'Beyond complaining about details, however, we should be thinking about the effects these programs will have on medical care as a whole. Do we really want doctors who are motivated by wall plaques announcing their score on some "quality improvement" initiative? Will our enthusiasm for getting high grades, being declared superior to our colleagues, and earning performance bonuses overcome our profession's traditional capacity for critical thought and reliance on empirical data? The reality is that whatever time I spend managing my care plans for patients with asthma or attention deficit-hyperactivity disorder or obesity and other quality-improvement initiatives is time I'm not spending taking care of my patients. At this point, the notion that any of these programs actually improves the quality of care is speculative and debatable.'*

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