

The early experience of general practitioners using Green Prescription

Barry Gribben, *Research Director*; Felicity Goodyear-Smith, *Research Fellow*; Mardelene Grobbelaar, *Research Unit Administrator*; Royal New Zealand College of General Practitioners Research Unit, Department of General Practice and Primary Health Care, University of Auckland, Auckland; Diana O'Neill, *Green Prescription National Co-ordinator*; Susan Walker, *Research and Information Manager, Hillary Commission, Wellington*.

Abstract

Aim. Sedentary lifestyle is a significant risk factor for increased morbidity and mortality in many medical conditions. A Hillary Commission initiative, Green Prescription is a written exercise prescription given by general practitioners (GPs) to sedentary patients to encourage physical activity. Our aim was to establish the extent to which GPs in the North Health region in 1997 issued with Green Prescription packages had used them, the circumstances under which they were used, and barriers to their use.

Methods. 433 GPs issued with packs were faxed a one-page questionnaire for immediate completion, with follow-up of non-responders.

Results. The response rate was 73%, with 65% of respondents having written Green Prescriptions. Their

main reasons for use were patient need for more exercise and presence of high-risk medical conditions such as hypertension, cardiovascular disease, obesity and diabetes. Reasons for non-use were: GP already giving advice about physical activity; concern that Green Prescription was patronising and simplistic; compliance issues and time restraints. Some requested a computerised version.

Conclusion. Non-responders may be non-users, hence we estimate that 48-65% of targeted GPs used Green Prescription. Barriers identified by GPs have assisted in Green Prescription development, which is now nationwide and assessed by independent researchers tri-annually.

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The Green Prescription is a written prescription given by general practitioners (GPs) to sedentary patients to encourage an increase in physical activity. A sedentary lifestyle is a significant risk factor for increased morbidity and mortality in obesity,¹ non-insulin dependent diabetes,^{2,3} coronary artery disease,⁴⁻⁷ stroke⁸ and fall-related bone fractures.⁹ Green Prescription specifies the number of minutes and number of times a week that a patient should go for a brisk walk or engage in some other physical activity to be determined by the practitioner. The Prescription also offers an 0800 (toll free) number allowing patient contact with a local Regional Sports Trust staff member to discuss their exercise programme and provide ongoing support.

The value of life-long regular moderate-intensity physical activity was emphasised in the landmark 1996 US Surgeon General's Report 'Physical Activity and Health'.¹⁰ While exercise has the capacity to improve many aspects of health, evidence indicates that the general population does not exercise sufficiently for these benefits to accrue.¹¹

The Green Prescription is a tangible reminder of an exercise plan arrived at by discussion between patient and doctor, with the expectation that it will be more effective in increasing the patient's level of exercise than verbal advice alone.

In a 1995 trial, the Green Prescription increased participants' recreational physical activity significantly more than verbal advice alone at six weeks follow-up.¹² The researchers found GPs were comfortable discussing and prescribing exercise, and they preferred giving Green Prescriptions to giving verbal advice alone.¹³ Green Prescriptions were believed to be valuable in formalising and

documenting agreed exercise goals, although time constraints were a barrier to their widespread use. Appropriate training, resource materials and patient follow-up were seen as important.

In 1997/98, GPs in the North Health district were invited to participate in the Hillary Commission Green Prescription initiative. The Hillary Commission was responsible for the development of materials and GP training (with the assistance of expertise from the National Heart Foundation), and North Health met some costs of promoting Green Prescriptions to GPs and research and evaluation of the project. GP training included information on health benefits, familiarisation with the resource material, and input from Regional Sports Trust co-ordinators regarding their services and support. The Green Prescription kits were distributed at these training meetings.

Our study aim was to establish the extent to which GPs used the Green Prescriptions, the circumstances under which they were used and barriers to their use.

Method

The RNZCGP Research Unit in the Department of General Practice at the University of Auckland conducted a survey of the 433 GPs who had been distributed Green Prescription information in the North Health (Northland and Auckland) district. Hillary Commission staff were involved in the development of the survey.

Data were collected using a fax-back questionnaire with follow-up of non-responders.

Results

Response rate was 73%. 65% of the respondents had used a Green Prescription. 94% remembered receiving

the information pack they had been posted, and 86% had read it. 67% of GPs had also attended meetings or training sessions.

87% of the GPs who wrote Green Prescriptions in the month before completing the questionnaire had written less than ten prescriptions. One had written more than 50. The main reason GPs wrote a Green Prescription was because a patient needed more exercise. Some added they wrote them for patients with particular medical conditions such as hypertension, cardiovascular disease, obesity and diabetes. Several commented they selected patients who were likely to be compliant.

The commonest reason for not writing a Green Prescription was the GP already gave advice about physical activity (83%). About half of the non-prescribers added comments about their non-use. The commonest response was they found the concept patronising and insulting to patients. Others mentioned compliance issues, and that their patients had refused the offer. A number did not have the packs for various reasons, and some identified time restraints.

Two-thirds (69%) of the surveyed GPs wrote prescriptions using a computer, but only 6% used a computer to write Green Prescriptions. A number said that a computer version would be helpful and might increase their use.

Some research has suggested that doctors who are themselves physically active are more likely to encourage their patients to be physically active. 22% of GPs rated themselves as very active, 61% as moderately active and 14% as not active. There was no significant association between personal activity level and Green Prescription prescribing use.

GPs were asked who usually gave advice about physical activity in their practice. 56% circled 'doctor' and 40% circled both the 'doctor' and 'nurse' option.

Finally, GPs were asked if they needed further help with Green Prescriptions. 43% either did not answer or wrote 'no'. More training was requested by 10% of GPs, and 5% would like someone to visit the surgery to explain Green Prescriptions to the doctor or nurse. Over a third thought more publicity about Green Prescriptions would be useful. 10% wanted to see more evidence about the benefits of physical exercise.

Discussion

The strength of this study was its simple, low-cost methodology, which yielded a high response rate. However, no data are available about non-responders. For instance,

those who failed to return the questionnaire may not be using Green Prescriptions. If all non-responders are non-users, the use rate for all GPs would be 48%.

A number of potential barriers to Green Prescription use were identified. Similar barriers to preventive medicine intervention have been identified in other fields. For example, in a study of early alcohol intervention, GPs identified lack of time and corresponding loss of revenue; perceptions of patient attitude and response; inadequate skills or training and lack of an integrated approach involving nurses and receptionists as disincentives.^{14,15}

Feedback from this research has enabled Green Prescription to be improved. This is now a nation-wide initiative, part-funded by the Ministry of Health. Seven regional co-ordinators liaise between the Hillary Commission, GPs, practice nurses, IPAs and other health professionals to deliver this new initiative.

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Correspondence. Dr FA Goodyear-Smith, Department of General Practice and Primary Health Care, University of Auckland, Private Bag 92019 Auckland. E-mail: f.goodyear-smith@auckland.ac.nz

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The earliest recorded use of animals in scientific research was in the third century BC, when the Greek physician Erasistratus did the investigational work on animals that led him to differentiate between sensory and motor nerves and describe the heart as carrying both air and blood around the body. It was not until the late 17th and early 18th centuries, however, that this type of research gained momentum, primarily in France and England. At that time, animals were literally cut up alive (hence the word *vivi-section*) without anaesthesia, as there were no anaesthetics until the 1840s.

Even if anaesthesia had been available, it probably would not have been used on animals because there was a prevailing belief – based on the writings of French philosopher René Descartes (1596-1650) – that animals could not feel pain. Any behaviour by an animal that appeared to demonstrate pain was regarded simply as a reflex, devoid of human-like emotion. Only in the 1960s did scientists begin to ask what motivated animals and investigate whether they might have feelings such as distress, fear and anxiety. This led to the study of animal behaviour (ethology) alongside the emerging science of experimental psychology, in which animals are used as models for human behaviour.

Dr David Morton, Centre for Biomedical Ethics, University of Birmingham, UK. *Odyssey* 2000; 5: 58.