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Nutrition advice provided by General Practice registrars: An investigation using patient scenarios

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Abstract

Background

Nutrition is recognised as one of the strongest factors influencing the health outcomes of patients with chronic disease. General Practitioners (GPs) require nutrition knowledge and skills to support patients to have healthy dietary behaviours.

Objective:

To investigate New Zealand GP registrars' provision of nutrition advice using patient scenarios.

Study design. A cross-sectional study design targeted GP registrars to investigate the nutrition care they provided to patients

Method

47 GP registrars completed a survey at a training event. The survey included patient scenarios. Respondents were asked to provide nutrition advice for each scenario, in line with best practice guidelines. Responses to each scenario were scored based on a panel of nutrition experts. Regression analysis was used to compare the scores to participants' previously reported confidence to provide nutrition care.

Results

Seventeen male (36.2%) and thirty female (63.8%) GP registrars completed the survey, giving a response rate of 92.2%. GP registrars scored a mean of 7.9 ± 0.2 out of 15 for recall of dietary strategies with the scenarios. There was no association between GP registrars' scenario scores and their confidence to provide nutrition care.

Conclusions

An evidence-practice gap exists for New Zealand GP registrars' confidence to provide nutrition care, and their knowledge of evidence-based nutritional guidelines to support

patients to have healthy dietary behaviours. A better understanding of the determinants of this disparity is required in order to support optimal nutrition care by GPs.

Key words

General Practitioner registrar; nutrition knowledge; nutrition care

Introduction

Nutrition is recognised as one of the strongest factors influencing the health outcomes of patients with chronic disease.¹ Chronic diseases include type 2 diabetes, cardiovascular disease, hypertension and obesity.¹ General Practitioners (GPs) are often patients' initial point of contact with the health care system and in some isolated geographical locations, the only point of contact.² This position makes GPs ideally placed to support patients to have healthy dietary behaviours.² In this context, nutrition care refers to any practice conducted by a GP that aims to improve the dietary behaviours and subsequent health outcomes of a patient.³ Internationally, patients expect GPs to provide nutrition care, have a high level of trust in their GPs regarding nutrition and GPs are patients' main sources of information about nutrition.⁴⁻⁶

New Zealand (NZ) GPs, as medical practitioners, require appropriate nutrition knowledge and skills to provide nutrition care to patients with chronic disease.⁷ The GP training curriculum includes a nutrition syllabus which specifies areas in which GPs are expected to develop competencies in nutrition.⁸ These competencies are provided in Table 1. To become a GP in NZ, approximately five years of training is required following graduation from medicine, two years in hospitals and three years in the general practice education programme, and completed with assessment for Fellowship of the Royal College of General Practice.⁹ The specialist training in general practice received by NZ medical practitioners is similar to that of a US "family physician".

The Australian Medical Council, the regulatory body for accreditation and standards in Australia and NZ, recognises that competence in medical practice is built upon the accumulation of codified and tacit knowledge, and that competence progresses with

experience and practical application.⁷ To assist GPs to provide nutrition care to patients, medical organisations, such as the New Zealand Guidelines Group¹⁰ and support organisations such as the Heart Foundation and the Ministry of Health¹² provide clinical practice guidelines to support GPs to provide nutrition care. These guidelines include dietary recommendations to prevent and manage lifestyle chronic diseases consistent with those of the New Zealand Ministry of Health's dietary guidelines and lifestyle recommendations which include: consume a healthy diet, exercise regularly, maintain a desired body weight, avoid smoking and drink in moderation.¹³ While these organisations may provide the platform to deliver education and resources, this does not necessarily mean that the GPs feel confident or able to provide nutrition care. Notwithstanding, there is evidence that GPs are capable of facilitating changes in behaviour by providing brief nutrition care.⁴

Despite a previous focus on the nutrition knowledge and skills of GPs providing nutrition care¹⁴⁻¹⁶ there is limited understanding of how GP registrars, as future GPs, perceive their knowledge, skills and confidence in this area. Additionally, it is known that GPs face barriers to providing nutrition care in practice which include perceived lack of time¹⁷⁻²⁰, patient non-adherence and lack of nutrition education^{19, 21}, lack of nutrition knowledge^{17, 18, 21, 22} and low confidence.¹⁸ Australian GP registrars have previously reported to be aware of most key dietary recommendations for reducing cardiovascular risk, yet express variable levels of confidence in providing nutritional advice.²³ In a recent New Zealand study that investigated medical students, GP registrars and GPs attitudes to nutrition care and confidence in skills to provide nutrition care it was reported that all groups have positive attitudes towards nutrition care, but only moderate confidence to provide nutrition care.¹⁵

Given the current emphasis on prevention and management of chronic disease in primary care¹⁷, it is important to gain insight into GP registrars' perceptions of their confidence to provide nutrition care and ability to interpret best practice guidelines to provide nutrition care. This use of patients scenarios This may provide evidence for how prepared they are for this role and inform their ideal scope of practice. The use of survey to assess confidence to provide nutrition care and open ended responses to scenarios based on cases seen frequently during practice provide the means to compare self-perceived confidence to provide nutrition care with scenario responses. This paper describes a targeted study that used patient scenarios to investigate the nutrition care provided by GP registrars. Specifically, patient scenarios were used to investigate whether there is an association between the confidence of GP registrars to provide nutrition care and their ability to provide nutrition advice in line with best practice guidelines.

Methods

This study utilised a cross-sectional survey to investigate the nutrition care provided by GP registrars. Ethical clearance was obtained from The University of Auckland Human Participants Ethics Committee (Ref. 7786).

GP registrars attending a professional training day in Auckland in February, 2014 completed a survey prior to receiving a nutrition education session.⁸ Section A of the survey assessed participants' attitude, and confidence to provide nutrition care. This contained 30 questions which investigated attitudes towards incorporating nutrition care in practice and 30 questions which investigated self-perceived skills in providing nutrition care. Items were scored using a 5-point Likert scale. The results have been reported separately.²⁴ Section B contained five patient scenarios, likely to be seen frequently during practice and is the focus of this paper. Participants were asked to provide nutrition advice to give to patients using open-ended responses. The scenarios are summarised in Table 3.

First, appropriate nutrition responses were compiled by a panel of three nutrition experts based on relevant practice guidelines.^{10, 12, 25-27} The nutrition experts included two practicing dietitians and a registered nutritionist and relevant practice guidelines included the New Zealand Primary Care Handbook¹⁰, Heart Foundation recommendations¹¹ and Ministry of Health guidelines for weight management¹², pregnancy advice²⁷ and vegetarians.²⁶ A GP approved the survey. Participants' responses to each scenario were scored based on the number of correct statements provided. Data analysis was conducted using SPSS version 22. Regression analysis was conducted with section A of the survey (reported elsewhere²⁴), to determine if GP registrars who felt more confident to provide nutrition care were more likely

provide nutrition advice in line with best practice guidelines. Statistical significance was set at $p \leq 0.05$.

Results

Fifty one GP registrars attended the training day and 47 completed the survey. This resulted in a response rate of 92.2%. The demographic characteristics of the participants are presented in Table 2.

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Participants' nutrition advice provided for the five scenarios are presented in Table 3. Some statements of nutrition advice were provided by a majority of participants. For example in scenario 1, nearly all participants recommended increasing dietary calcium intake (n=44, 93.6%). Similarly, the majority of participants (n=43, 91.5%) recommended increasing dietary iron intake and general healthy eating in scenario 2 and 5 respectively. However in some scenarios, fewer participants provided evidence-based nutrition advice. For example, in scenarios 3 and 4, decreasing saturated fat intake was advised by approximately half of the participants (n=24, 52.1% and n=23, 49.0% respectively). There were some nutrition factors that were identified by only a minority of participants. For example, in scenario 5, few participants (n=5, 10.6%) advised commencing recommended dietary supplements three months prior to conceiving and in scenario 4 few participants (n=7, 14.9%) advised to decrease protein portions.

With regard to GP registrars' attitudes toward incorporating nutrition care into practice and confidence in providing nutrition care are presented elsewhere.²⁴ Briefly, more GP registrars reported having positive attitudes towards incorporating nutrition care into practice, than

reporting confidence to provide nutrition care. For example, for eleven of the thirty questions that assessed attitudes toward incorporating nutrition care into practice, over seventy five percent of the GP registrars reported positive attitudes, whereas there were only six questions where over seventy five percent of the GP registrars reported confidence in providing nutrition care. A similar result was apparent for questions where fewer GP registrars reported positive attitudes toward incorporating nutrition care into practice and confidence to provide nutrition care. For example, for twenty one of the thirty questions assessing GP registrars' attitude toward incorporating nutrition care into practice, sixteen of the thirty questions were responded to positively by over fifty percent of participants, whereas only sixteen of the thirty questions assessing GP registrar confidence in providing nutrition care were responded to positively by over fifty percent of participants. Overall, these results indicate that GP registrars' reported positive attitudes toward incorporating nutrition care into practice and moderate confidence in providing nutrition care. There was no association between GP registrars' confidence to provide nutrition care, and their age and gender, and the quality of nutrition and lifestyle advice provided ($p>0.05$).

Discussion

This study investigated GP registrars' provision of nutrition advice using patient scenarios.

Overall, GP registrars provided variable nutrition advice for the patient scenarios, which was not related to their confidence to provide nutrition care. These findings are important given participants' current and future role in supporting patients to have healthy dietary behaviours. Additionally, the Ministry of Health recommends that patients with cardiovascular and metabolic health conditions be counselled in lifestyle change, which includes guidelines for nutrition care to achieve public health targets for reduced incidence of chronic disease.^{12, 28}

Participants' limited ability to provide evidence-based nutrition advice for patients may be related to gaps in their nutrition knowledge. This is supported by these GP registrars reporting only moderate confidence in providing nutrition care in the same survey.²⁴

Internationally, there is evidence that nutrition care is perceived to be important by medical students, doctors and medical educators^{17, 23, 29-31} and that medical graduates do not receive sufficient training in nutrition³²⁻³⁴. Similarly, New Zealand medical students³⁵ and GPs perceive nutrition care to be important²⁴. These views may be due to inadequate levels of nutrition education, or to the increasing focus on multidisciplinary approaches to patient care in medical and post graduate training³⁶ which impacts on medical students and GP registrars' perceived role in this area. Clearly, a continued focus on improving the competence of doctors to provide nutrition care is warranted for optimising individual and public health outcomes.

Concerns about appropriate undergraduate nutrition education have previously been raised in a recent study of nutrition knowledge, attitudes and confidence of Australian general practice registrars.²³ While the approaches used to assess GP registrars nutrition and lifestyle

knowledge differed between the two studies, the outcomes were similar. Australian GP registrars were asked to select a level of appropriateness of dietary and lifestyle strategies provided for them (“Highly appropriate”, “Somewhat appropriate”, “Not appropriate” or “Do not know”). From this selection, the majority of participants were able to identify most recommendations for conditions with long-established dietary and lifestyle evidence for practice. In the present study, participants were asked to provide dietary advice which required knowledge and understanding of the practice guidelines and was able to provide richer data. Additionally, as members of interdisciplinary teams, GPs require nutrition knowledge and skills to identify nutritional risk³⁷ and to know when to refer patients for detailed nutrition care. Clearly, this highlights the importance of mandatory nutrition training, and monitoring the implementation of evidence-based nutrition guidelines.

The GP registrars in this survey reported moderate confidence to provide nutrition care²⁴ yet demonstrated variable ability to provide evidence-based nutrition advice for the patient scenarios. Similarly, not all Australian GP registrars could provide evidence-based nutrition advice and expressed mixed levels of confidence in providing nutritional advice.²³ This suggests a disconnect between GP registrars’ confidence in providing nutrition care and the quality of care provided. This may be due to GP registrars’ lack of experience in providing nutrition care to patients²³ and lack of assessment opportunities to demonstrate competence in medical training.²³ Other factors, such as attitude towards providing nutrition care³⁸ and awareness of the practice guidelines²³ may also influence the quality of nutrition advice provided by GP registrars. Resolving this disconnect is very important given the increased prevalence of chronic disease, the associated personal and health care costs,³⁹ and the increasing expectation on GPs to provide nutrition care to patients with chronic disease.¹⁰

No association was observed between GP registrars' confidence to provide nutrition care and the quality of nutrition advice given to patients. The survey tool to assess confidence is validated and has been used in other studies.^{29, 40} However, there is no consensus method for assessing confidence to provide nutrition care and this is a limitation of the study. Another limitation of the study was the use of scenarios based on cases likely to be seen frequently during practice but not validated. The finding of the present study may be due to the small sample size and precludes generalisation to other New Zealand GP registrars. The survey tool used in scenarios likely to be seen during practice may not be the ideal tool to demonstrate such a relationship as there may be differences between survey answers and those provided in practice. The inclusion of nutrition assessment and counselling skills in objective structured clinical examinations throughout medical training would ensure that medical graduates develop the confidence and skills need for this aspect of patient care. Nevertheless, the results from this study provide baseline evidence for how prepared New Zealand GP registrars are for their role to support patients to improve their dietary behaviours. This has important implications for patients' health outcomes that ultimately impact on population morbidity and mortality.

Conclusions

There is an evidence-practice gap between New Zealand GP registrars' confidence to provide nutrition care, and their knowledge of evidence-based nutritional guidelines to support patients to have healthy dietary behaviours. A better understanding of the determinants of this disparity is required in order to support optimal nutrition care by GPs.

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