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Australian General Practitioners' views regarding providing nutrition care: results of a national survey

Jennifer Crowley, PhD, Research Fellow, Faculty of Medical and Health Sciences, University of Auckland, New Zealand 1142

Stella O'Connell, PhD, Research Fellow, School of Exercise and Nutrition Sciences, Burwood Campus, Deakin University, Victoria 3125, Australia

Amy Kavka, PhD, Healthcare Education Director, Cirrus Media, Chatswood, NSW, Australia

Lauren Ball, PhD, NHMRC Early Career Research Fellow, Menzies Health Institute Queensland, Griffith University, Queensland 4222, Australia

Caryl A Nowson PhD, School of Exercise and Nutrition Sciences, Centre for Physical Activity and Nutrition Research, Geelong Waurn Ponds Campus, Deakin University, Victoria 3220 Australia

Corresponding author: caryl.nowson@deakin.edu.au

Abstract

Background The prevalence of chronic disease is considerable, and dietary behaviours influence the progression of many chronic diseases. Practice guidelines recommend that General Practitioners (GPs) promote healthy dietary behaviours in relevant consultations with patients in order to improve health outcomes at a population level.

Objective To describe GPs' perceived interest, confidence and barriers to support patients to have a healthy diet.

Method A 24-item online and written survey was distributed in a national weekly newsletter to GPs in Australia. Results were descriptively analysed and investigated for associations with GPs' demographic characteristics.

Results A total of 322 GPs responded to the survey. Nearly all (n=295, 91.6%) were interested in supporting patients to eat well and most (n=231, 71.7%) reported moderately high confidence for providing nutrition care for conditions with clear public health messages, such as cardiovascular disease. Many GPs (n=170, 52.8%) cited lack of time as the biggest barrier to providing nutrition care and the overwhelming majority (n=289, 89.8%) were interested in receiving additional education and training to enhance their nutrition knowledge and skills.

Discussion Many GPs are interested in nutrition and would benefit from educational programmes that improve their competence to provide nutrition care. Professional development opportunities should focus on the identification of nutritional risk and the promotion of healthy dietary behaviours within the time constraints of a standard consultation.

Key words: general practitioners, chronic disease, nutrition care

Introduction

Dietary behaviours influence the progression of many chronic diseases, including type 2 diabetes, cardiovascular disease and risk factors such as overweight and obesity, hyperlipidaemia and hypertension.¹ The prevalence of chronic disease in Australia is considerable, and expected to rise further due to an ageing population and increasing levels of risk factors.² As a result, chronic disease significantly contributes to the personal and financial health care burden in Australia.³ Over ninety three percent of Australian adults have poor dietary behaviours.² In addition to overconsumption of foods high in energy and low in nutritional value, there are a significant number of older people at nutritional risk who are consuming insufficient amounts of nutritious foods.^{4, 5} Therefore, strategies that promote healthy dietary behaviours to address both over and under nutrition are important to promote optimal public health within Australia.^{5, 6}

General Practitioners (GPs) are encouraged to promote healthy dietary behaviours with patients by providing nutrition care.⁷ Nutrition care refers to any practice that aims to improve the dietary behaviours and subsequent health outcomes of patients, and can include nutrition assessment, counselling, advice or referral.⁸ Patients prefer to receive nutrition care from GPs than other health professionals, including dietitians,⁹ and perceive GPs to be a reliable source of nutrition and health information.^{10, 11} Brief nutrition care provided by GPs can be effective at improving patients' dietary behaviours.^{12, 13} Furthermore, by identifying patients' nutrition care needs, GPs provide an important link between individual and population health.

General Practitioners do not provide nutrition care on all relevant occasions to patients with chronic disease.⁹ Despite nearly all patients potentially benefiting from nutrition care in

Australia, only three percent of consultations involve this support.¹⁷ Clearly, there is an evidence-practice gap between the optimal rate that nutrition care should be provided, and the rate that it is included in consultations. Numerous barriers prevent GPs from providing nutrition care, including a lack of time in consultations,^{8, 10, 15, 16} lack of confidence to provide nutrition care,¹⁵ and lack of nutrition knowledge.^{15, 16} Literature investigating these barriers come primarily from overseas studies in the UK, USA and New Zealand (ref?-8,10,15,16,). The similarity of these barriers has not been widely investigated in the Australian context, but could inform strategies to enhance nutrition care provided by Australian GPs.

A broad approach to better understand the nutrition care provided by Australian GPs is ideal to provide a comprehensive understanding of factors preventing nutrition care. Understanding factors such as GPs' perceived interest and confidence in providing nutrition care, barriers to providing this care, resources accessed and health professionals used for patient referral are important so that future interventions in this setting are based directly on evidence. Therefore the aims of this study were to: (i) identify GPs' interest, confidence and perceived ability to provide nutrition care to patients (ii) identify perceived barriers to providing nutrition care; (iii) identify methods used to access and resources used to provide nutritional care and (iv) identify allied health professionals used to provide nutrition care.

Methods

A cross-sectional survey design was utilised. The project was approved by Deakin University of Human Ethics Advisory Group: Project number HEAG-H 139_2014.

The potential participants consisted of all GPs currently practising in Australia. The survey was distributed within “Australian Doctor”, a widely read medical publication with circulation to over 26,000¹⁸ GPs in Australia. GPs were able to complete the survey online or by mailing a reply paid printed copy of the survey contained within one edition of “Australian Doctor” to the journal publishers. Submission of a completed survey enabled participants to enter the draw for a prize sponsored by “Australian Doctor”. There was one prize up to the value of AUD2,500.00. The survey was live between 8th September and 19th September, 2014.

The survey consisted of twenty four questions. A selection of questions were based on those previously developed for a survey conducted in 2012.¹⁹ Question topics included GPs’ interest and confidence to providing general and specific nutrition care; barriers to providing nutrition care; receiving nutrition education throughout university training and after graduation; resources used in consultations; accessing nutrition information and referrals to other health professionals. No similar validated surveys were available at the time. The questions underwent in-house pilot testing and then were reformatted for the survey and some supplementary questions added after discussion within the team. The questions required responses in dichotomous, multiple choice or Likert scale format. Additionally, GPs were asked about the appropriateness of fourteen possible nutritional recommendations based on evidence-based guidelines to reduce cardiovascular risk in two patients: (i) an overweight male, and (ii) a patient with high blood lipid levels. Inclusion of the nutrition

recommendations was informed by discussions with a dietitian working in private practice and common published guidelines for health.^{20, 21}

All analyses were conducted using the SPSS statistical software package version 19. Descriptive statistics were calculated for each survey item including frequency distribution, mean and mode responses. Gender and age were compared between survey respondents and the total potential participant pool using Fishers exact test to test for representativeness of the survey sample. The 5-pt Likert scales for interest and confidence in providing nutrition care were collapsed down to three, “Moderately” and “Somewhat confident”, and “Not confident” because of low numbers of responses in some categories. Similarly, the four options for frequency of nutritional recommendations were collapsed down to three, “Very frequently”, “Somewhat frequently” and “Infrequently”. Evidence based guidelines were used to determine optimal responses with the two patients.^{14,6} Responses were scored out of 28 to cover the 14 nutritional recommendations for the two patients. Associations between GPs’ survey responses and demographic characteristics were investigated using Pearson’s Chi-squared tests.

Results

A total of 322 (response rate 1.2%) GPs responded to the survey, with most (n=213, 65.8%) answering online. There were no significant differences between the survey respondents and the Australian GP workforce with regards to age ($p>0.05$) or gender ($p>0.05$) or geographical distribution ($p>0.05$).¹⁸ The demographic characteristics of participants are presented in Table 1.

INSERT TABLE ONE ABOUT HERE

GPs' interest and confidence to provide nutrition care to patients in a range of contexts are presented in Table 2. Nearly all GPs (n=295, 91.6%) reported a very high interest in providing nutrition care to patients, and the majority (n=231, 71.7%) felt confident in their ability to provide this care. Most GPs (n=290, 89.2%) reported being confident in providing nutrition care to prevent and manage cardiovascular disease, whereas fewer (n=180, 55.4%) reported being confident to provide nutrition care to reduce the risk of cancer. The majority of GPs (n=240, 74.8%) felt confident providing nutrition care to pregnant and breastfeeding women while fewer (n=188, 58.4%) reported confidence for overweight adults. There were no significant differences between respondents' age or gender and their responses to interest or confidence to providing nutrition care. Nearly all GPs (n=299, 92.8%) reported proactively raising the topic of nutrition with patients either "Very frequently" or "Frequently", and many GPs (n=255, 79.1%) also reported "Very frequently" or "Somewhat frequently" being approached by patients for nutrition advice.

INSERT TABLE TWO ABOUT HERE

The barriers experienced by GPs and resources used in providing nutrition care are presented in Table 3. Approximately half of the GPs (n=170, 52.8%) report that the biggest barrier to providing nutrition care is time constraints. Fewer GPs perceived themselves as lacking sufficient nutrition knowledge (n=87, 27.0%) or patients not open to receiving nutrition advice (n=56, 17.4%). The GPs used a wide variety of nutritional resources such as the National Health and Medical Research Council (NHMRC) Australian dietary guidelines (used by 58.4%); Heart Foundation (used by 51.9%) and talking to an allied health professional (used by 45.0%). The majority of GPs (n= 292, 90.7%) reported referring

patients to dietitians, (n= 258, 80.1%), diabetes educators (n= 322, 80.1%) and exercise physiologists (n=178, 55.0%) at least once over the past twelve months for further nutrition care. The majority of GPs perceived that their role in providing nutrition advice to patients was in: promotion of healthy dietary choices (n=306, 95.0%); advice on nutrition for specific diseases risk (n=300, 93.2%); assessment of nutritional risk (n=295, 91.6%); advice on the role of nutrition in health (n=98, 79.3%) while most GPs disagreed (n=184, 63.0%) that the provision of detailed nutrition counselling was part of their role. The majority of GPs (n=243, 81.0%) agreed that allied health professionals have some role in providing nutrition advice to their patients.

Fewer than half of the GPs (n=316, 45.9%) recalled receiving lifestyle education in medical training for reducing cardiovascular risk, while a majority of GPs (n=314, 66.6%) recalled receiving lifestyle education on this topic in professional development activities in the past 5 years. Nearly all GPs (n=301, 93.5%) perceived that GP training should include more information about nutrition and a similar majority (n=289, 89.8%) were interested in receiving more continuing education in nutrition. There were no significant differences between respondents' age or gender and their responses that GP training should include more information about nutrition, or interest in receiving more continuing education on nutrition subjects ($p>0.05$). Respondents perceived that in addition to the topics identified in Table 2, specific issues to be included in GP training could include: how to access appropriate nutrition information/evidence; psychological support for patients with diet and health issues, management of specific conditions, and interactions between food and medication. For continuing medical education, additional topics suggested were: Fermentable Oligosaccharides, Disaccharides, Monosaccharides And Polyols (FODMAPS), gut health and new frontiers in nutrition, including epigenetics.

Diverse nutritional recommendations were considered appropriate to reduce cardiovascular risk in two different patients. Respondents were moderately confident in identifying nutritional recommendations appropriate to reduce cardiovascular risk for an overweight patient and a patient with high cholesterol. Of a possible score of fourteen for each patient, respondents correctly identified a mean of 10.3 (2.1)(SD) best practice guidelines for an overweight patient and 9.7 (4.6) for the patient with high cholesterol.

Discussion

The purpose of this study was to investigate GPs' interest, knowledge and confidence in providing nutrition care to patients, perceived barriers to the provision of nutrition care, method of access to and nutritional resources used to provide nutrition care and allied health professionals used to provide nutrition care. The results indicate that respondents were very interested in providing nutrition care to patients, and report moderately high confidence in providing nutrition care in general. However, responding GPs were not confident in providing nutrition care to all patient groups, particularly infant and toddlers and overweight adults. The majority of respondents perceived that GP training should include more information about nutrition and were interested in receiving more continuing education in nutrition subjects. The findings are important given the potential influence of GPs on the public health of Australians by identifying nutritional risk in patients, especially those with chronic disease or undernutrition.²²

Respondents reported greater confidence in providing nutrition care in clinical contexts where strategies are long-established, such as cardiovascular disease risk reduction by decreasing saturated fat intake, rather than where nutrition care strategies are more recently established, such as irritable bowel syndrome or maintaining muscle strength in the elderly. A

similar finding was reported in a recent study of Australian GP registrars' nutrition knowledge, attitudes, and confidence.¹⁹ Respondents in the present study also reported greater confidence to provide nutrition care to different groups of patients, such as pregnant and breastfeeding women, rather than overweight adults. While the results show that over half of the respondents were confident in providing nutrition care for overweight adults, many of the topics in Table 2 were also frequently mentioned as specific issues to be included in medical training. Respondents' level of confidence to provide nutrition care to overweight adults is of concern given the current emphasis by public health agencies to address Australia's high rates of overweight and obesity²³ and acknowledgement that GPs require appropriate nutrition knowledge to prevent and manage chronic diseases.²⁴ Evidence exists that GPs target obese patients for weight loss ahead of overweight patients suggesting the use of weight loss as an intervention rather than as a preventive health care strategy.²⁵

It is of concern that GPs do not feel confident to provide nutrition care to all groups of patients and for the range of nutritional recommendations to reduce cardiovascular risk. Internationally, there is evidence that when GPs do not feel confident in providing nutrition care to patients, they do not provide it as often or as appropriately as would be ideal.²⁶⁻²⁸ This suggests that there are gaps in GPs' nutrition knowledge which influence the frequency and quality of nutrition care provided to patients. Future strategies to improve the frequency and quality of nutrition care provided by GPs is warranted given the public health priority of supporting Australians to have healthy dietary behaviours.

Respondents reported the greatest barriers to providing nutrition care were time constraints, lack of specialised nutrition knowledge and patients not being receptive to nutrition advice. Time constraints and lack of nutrition knowledge have previously been reported in Australian

GPs.⁸ Australian GPs have also demonstrated varied perceptions, attitudes, training and skills for providing nutrition care to patients with lifestyle-related chronic disease.²⁹ Similar barriers have been reported in literature from North America, Europe, the United Kingdom and New Zealand.^{8, 10, 15, 16, 27, 30} This consistency suggests that Australian GPs are likely to be experiencing barriers that prevent effective provision of nutrition care when appropriate. Given the importance of nutrition care with Australia's increasing prevalence of chronic disease, deficits in knowledge to provide nutrition care which stem from medical and postgraduate training warrant further investigation.

Current recommendations regarding the provision of nutrition care by GPs' are to provide basic advice, then refer patients requiring additional individualised assistance to an Accredited Practising Dietitian.^{31, 32} These recommendations appear to have been endorsed by respondents, as dietitians were the most frequently utilised allied health profession for patient referral. Respondents' perceptions regarding their role in providing nutrition care concurs with the use of multidisciplinary team based approaches to provision of nutrition care recognised by the Royal Australian College of General Practitioners (RACGP)³³ and aligns with the philosophy that multidisciplinary care is critical to improving primary health care services in Australia.^{33, 34} Health care professionals, including GPs, have the potential to facilitate improvements in patient dietary behaviours³⁵ related to use of a patient-centred approach to health care.³⁶ Patient centred care, improves the patient's regard for the health care received and supports them make decisions related to what best suits their specific requirements, thereby increasing adherence to lifestyle changes advocated.³⁷

The provision of patient-centred care, requires GPs to have sufficient evidence-based nutrition knowledge to make initial nutrition assessments of patients and if necessary, to refer

them to dietitians for detailed nutrition advice. Evidence exists of variance in GPs' referral rates for different medical conditions that require nutrition counselling.³⁸ Currently, dietitians are the fourth most utilised health professionals in the Australian Chronic Disease Management program and receive only seven percent of all referrals.³⁹ Within this program, multidisciplinary care is available for community-based patients with chronic disease, of six months or more duration, when referred by their GP to receive a maximum of five subsidised consultations with an allied health professional.³⁹ Of note, group weight loss programs, other allied health professionals and commercial programs can successfully provide nutrition care to individuals for lifestyle related chronic disease.⁴⁰ Further research is required regarding the factors that influence GPs to referral, as this evidence-based and theoretically effective resource, is not well used.⁴¹

The importance of nutrition in the medical curriculum has been widely recognised overseas.^{42, 43} However, in Australia there is resistance to the implementation of a comprehensive nutrition curriculum into existing curricula.⁴⁴ Despite this resistance, attempts have been made to develop innovative initiatives to support the integration of nutrition into medical education in a time-efficient manner. It has been suggested that successful integration of nutrition competency into entry-level medical courses will result in graduates better prepared for working in multidisciplinary health care teams and with appropriate skills to assist the population to adopt healthier lifestyles.⁴⁴ Innovative resources to assist medical schools into integrating nutrition into the curriculum have recently been developed with scope to expand the range of resources and number of institutions utilising these types of resources to effectively embed nutrition into medical education.⁴⁴

In addition to limited nutrition education in Australian medical schools, the RACGP curriculum for Australia General Practice gives scant recognition to nutrition.⁴⁵ Nutrition is acknowledged as one of four common lifestyle factors: smoking, nutrition, alcohol and physical activity (SNAP) for which promoting the benefits of good nutrition would help prevent and control chronic disease.⁷ In some locations and practices, for example in rural and remote settings, the boundaries between primary and secondary care are less distinct, and GPs are responsible for a greater proportion of population groups suggesting that nutrition education needs to be given more prominence in the GP training curriculum.³³

There are limitations to this study. Resources were not available to conduct a re-test reliability with this study. Results may not be generalisable, as the sample size is relatively small in relation to the total number of GPs practising in Australia. It is likely that GPs who participated in this study had a greater interest and knowledge of nutrition and provide nutrition care more often than non-responders. However, the responding GPs were representative of the Australian GP workforce with regards to age and gender, and this survey indicates areas in which nutritional resources should be included in medical training.

In conclusion, GPs require sufficient knowledge, positive attitudes and effective approaches to provide nutrition care. Action is required to address this issue in medical training and GP training to empower medical graduates and GPs as to the importance of including nutrition care in practice. When GPs have the knowledge, skills and experience in identification of nutritional risk and nutritional management of patients they could be effective in supporting patients to eat well, and reducing the burden of disease in Australia.^{12, 13}

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Jennifer Crowley: Analysis and interpretation of data, drafted and edited article

Stella O'Connor: Concept and design, edited article

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Lauren Ball: Analysis and interpretation of data, drafted and edited article

Caryl A Nowson: Concept and design, edited article

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Conflict of Interest: Amy Kavka is employed by "Australian Doctor"

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Table 1: Demographic characteristics of respondents (n=322)

Demographic Characteristic	Respondents (n)	Percentage (%)	Comparison with Australian Workforce data ¹⁹
Gender			
<i>Male</i>	95	29.5	p>0.05 ^a
<i>Female</i>	214	66.4	
<i>No response</i>	13	4.1	
Age			p>0.05 ^a
<i>< 25 years</i>	3	0.9	
<i>25-39 years</i>	71	21.8	
<i>40-49 years</i>	68	20.9	
<i>50-59 years</i>	109	33.2	
<i>59+ years</i>	66	20.3	
<i>No response</i>	5	1.6	
Years since graduation			
<i><5 years</i>	10	3.1	N/A
<i>6-15 years</i>	69	21.4	
<i>16-25 years</i>	59	18.3	
<i>26-35 years</i>	110	34.2	
<i>36-45 years</i>	52	16.1	
<i>46+ years</i>	13	4.0	
<i>No response</i>	9	2.9	
Geographical location			
<i>Metropolitan</i>	188	58.3	p>0.05 ^a
<i>Regional</i>	112	34.8	
<i>Remote</i>	16	4.9	
<i>No response</i>	6	2.0	

N/A = Not applicable, no data was available for comparison.

^aNo significant difference between survey respondents and the Australian GP workforce.

Table 2: Respondents' interest and confidence to provide nutrition care to patients (n=322)

Item	Confident/ Interested n (%)	Somewhat confident/ Interested n (%)	Not confident/ Interested n (%)
Interest in providing nutrition care to patients in general	295 (91.6)	25 (7.7)	2 (0.7)
Confidence in providing nutrition care to patients in general	231 (71.7)	79 (24.6)	12 (3.7)
Confidence in providing nutrition care about:			
Weight loss ^a	282 (86.8)	35 (10.8)	3 (0.9)
Osteoporosis	270 (83.1)	41 (12.6)	11 (3.4)
Coeliac disease	220 (67.7)	84 (25.8)	18 (5.5)
Diabetes ^a	279 (85.8)	37 (11.4)	4 (1.2)
Irritable bowel syndrome	181 (55.7)	112 (34.5)	29 (8.9)
Sarcopenia	156 (48.0)	114 (35.1)	52 (16.0)
Risk of cancer ^a	180 (55.4)	83 (25.5)	58 (17.8)
Cardiovascular disease	290 (89.2)	26 (8.0)	6 (1.8)
Confidence in providing nutrition care to:			
Pregnant and breast feeding women ^a	240 (74.8)	67 (20.9)	14 (4.3)
Elderly ^a	238 (74.1)	70 (21.8)	13 (4.0)
Adolescents	212 (65.8)	88 (27.3)	22 (6.8)
Overweight adults	188 (58.4)	132 (40.9)	20 (6.6)
Parents/Carers of infants and toddler ^a	166 (51.7)	106 (33.0)	49 (15.2)

^aNumbers may not add up to n=322 due to incomplete responses.

Table 3: GPs' perceptions of barriers to and use of resources to provide nutrition care to patients (n=322).

Perception	Agreement (%)
Barriers to providing nutrition care	
Time constraints	170 (52.8)
Lack of specialised nutrition knowledge	87 (27.0)
Patient not open to advice	56 (17.4)
Lack of resource	44 (13.7)
I don't feel there are barriers	22 (6.8)
Other	11 (3.4)
Nutritional resources used in the past six months	
NHMRC ^a Australian dietary guidelines	188 (58.4)
Heart foundation recommendations	167 (51.9)
Talking to an allied health professional	145 (45.0)
Other ^b	114 (35.4)
Nutrition website	52 (16.1)
Nutrition brochure	47 (14.6)
Preference for accessing nutrition information	
Website/online	238 (73.9)
Printed factsheet/brochure	174 (54.0)
PDF fact sheet/brochure	150 (46.6)
Printed book	74 (23.0)
E-book	24 (7.5)
Other	25 (7.8)
Patient referrals to allied health practitioners in the past 12 months	
Dietitian	292 (90.7)
Diabetes educator	258 (80.1)
Exercise physiologist	178 (55.3)
Nurse	73 (22.7)
Personal trainer	44 (13.7)
Naturopath	29 (9.0)
Others	23 (7.1)
Own role in providing nutrition advice to patients^c	
General/topline advice on the role of nutrition in health	98 (79.03)
Assessment of nutritional risk (over/under deficiency)	295 (91.6)
Advice on nutrition for specific disease risk	300 (93.2)
Promotion of healthy dietary choices	306 (95.0)
Provision of detailed nutrition counselling	108 (33.5)
Role of allied health practitioners in providing advice to patients^c	
Some role	243 (81.0)
Prefer to refer any patient who requires nutrition advice to a dietitian or other allied health practitioner	30 (10.0)
No role	27 (9.0)

^aNational Health and Medical Research Council

^bOther included: dietitians/nutritionists books/websites, disease support organisations, producer boards, CSIRO, medical journals and ACNEM (Australian College of Nutrition and Environmental Medicine).

^cNumbers may not add up to n=322 due to incomplete responses.