

Original Article

Improving primary care nutrition skills

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The aim of this project was to improve clinical nutrition practice amongst Australian general practitioners by offering of web-based learning as a medium for integrating clinical nutrition into general practice. Eleven nutrition units were developed in conjunction with nutritionists at www.healthyeatingclub.org and offered as part of an existing comprehensive online continuing professional development program comprising 400 educational units and offered free to Australian General Practitioners. Pre- and post-assessment questionnaires and evaluations were collected over a 19 month period and the results collated. The experience of providing online continuing professional development to general practitioners within an integrated comprehensive primary care curriculum demonstrates that they are both interested and able to integrate clinical nutrition into practice. Since 2002, 1437 (28% of participating general practitioners) have voluntarily selected and completed clinical nutrition units as part of their learning programs. Effective educational modalities are case-based learning and peer group discussion supported by resource material and clinical tools to take learnings into practice. Educational outcomes include increased confidence to undertake counselling for weight management, increased use of anthropometric measurements, increased understanding of and use of dietary intake evaluation tools, especially the food variety score. Sustained change in clinical practice was measured by the use of clinical nutrition tools with 59% of participants making modifications to practice. A further 34% indicated an intention to review their practice and/or take up the clinical nutrition practice tool kit. Web-based nutrition education programs can be designed to be both modular and flexible, and are able to adapt to the different learning needs and styles of the different practitioners within Australia. They are an effective way of increasing knowledge, skills and confidence of general practitioners in nutrition counselling.

Key words: nutrition, physicians, family, computer-assisted instruction, diet therapy, education

Introduction

Australian consumers rank general practitioners (GPs) second to dietitians as having the highest expertise in nutrition.¹ With around 87% of the Australian population attending a general practice at least once a year,² and the increasing focus in general practice on integrating disease prevention and health promotion into routine clinical care, GPs have a unique opportunity to improve the health outcomes of their patients through nutritional counselling. However, GPs have identified lack of knowledge, skills and confidence as barriers to providing nutrition counselling.¹ With the increased accessibility of the Internet, web-based education resources are available to a growing number of health professionals and may offer a creative solution to overcoming these barriers.

PriMeD is a free online continuing professional development curriculum for Australian General Practitioners. Since 2002, units specifically targeting improvement of clinical nutrition skills in primary care settings have been included in the program. As participants are free to choose personal learning plans from within the program, the nutrition units compete for the attention of General Practitioners with all other clinical topics in the curriculum. Our hope was that GPs would select the nutritional units and that the education offered would have an impact on clinical nutrition practice.

Aims

The aim of this project was to improve clinical nutrition practice amongst Australian general practitioners by offering online learning as a medium for integrating clinical nutrition into general practice. We aimed to assess whether general practitioners were willing to allocate learning time to clinical nutrition topics as compared to other clinical topics. As a by-product of the standard systematic evaluation across all units in the total curriculum, we could also assess the impact of the program on the knowledge and skills of general practitioners and determine whether change in practice was likely to occur.

Methods and materials

Eleven nutrition units were developed in conjunction with nutritionists⁶ at www.healthyeatingclub.org and offered as part of an online continuing professional development (CDP) program comprising 400 educational units. This program is access-controlled and restricted to medical practitioners. The software provides a flexible learning platform which can be used to deliver any program other

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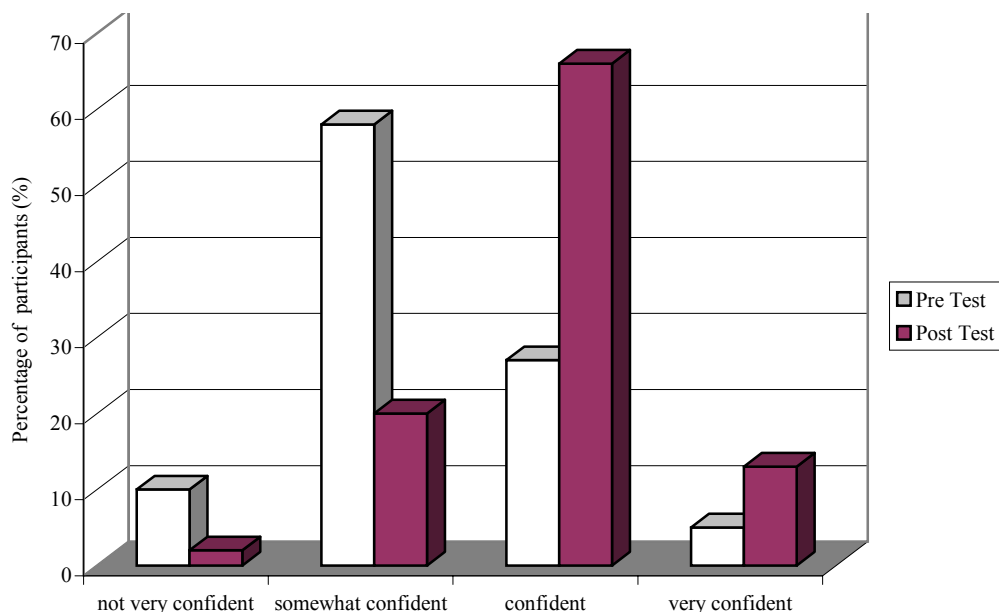


Figure 1. Percentage of participants confident and counselling patients in weight management

than manual dexterity skills and is particularly well suited to group learning with peers.

The nutrition units addressed the topic of weight management, including nutritional assessment (using www.healthyeatingclub.com's modified Healthy Eating Pyramid and Food Variety Score), the maintenance of a healthy weight through healthy food choices and activity, and the treatment of overweight and obesity. The unit types comprised didactic material, cases, quizzes, and tools to assist in nutrition counselling.

The education was developed based on best-practice adult learning principles and incorporated the use of peer groups to enhance the learning experience and to foster change in professional behaviour. Learning models were informed by group theory and reflected the professional work environments of clinicians who work in teams.

To achieve behaviour change, evidence-based continuing medical education best-practice was used: (1) multiple educational modalities (2) positive peer group interventions, including professional detailing and (3) tools for migrating rehearsed behaviours into professional practice.³ A self-reported assessment of the nutritional knowledge, skills, attitude and behaviour of participants was carried out at the start of their engagement with the education and repeated at completion. An evaluation of participant satisfaction with mode, content and relevance of education was carried out at their completion of the education. Pre- and post-assessment questionnaires and evaluations were collected from participants who completed 8 or more units from over a 19 month period and the results compared.

Results

Interest in continuing professional development in nutrition

During the 19 month study period, 5126 general practitioners completed units in the continuing professional development program. Of these, 1437 (28%) completed

clinical nutrition units. This compared with an average of 600 (12%) participants completing any one clinical area as part of their continuing professional development. Participants stressed the importance of nutrition counselling in general practice: *"I'm [a] GP currently working for a busy 24 Hour Medical Centre... Although the clinic focuses on acute care and tourism related services, as it is in any busy general practice, weight loss and nutritional counselling is an important ongoing part of what we do"*

Confidence in undertaking counselling for weight management

Prior to starting the nutrition units, many participants expressed a desire to feel more confident in the advice they were giving to patients. *"... I am interested in updating my skills in nutrition management, which is a very confusing, but equally important topic. Patients look up to us for advice and I would like to feel more confident and keep up with the current trends."* 431 participants who completed 8 or more units submitted pre- and post-test information. Results from the pre-assessment questionnaire showed 10% of participants described themselves as 'not very confident' and 58% 'somewhat confident'. Only 32% described themselves as 'confident' to 'very confident' in counselling patients in weight management. At completion of the education, 2% of participants described themselves as 'not very confident' and 20% 'somewhat confident', while 79% described themselves as 'confident' to 'very confident' in weight management counselling (Fig. 1).

Use of anthropometric measurements in general practice

Pre-assessment questionnaires indicated that BMI (used by 94% GPs) was the main anthropometric measurement used by GPs to assess overweight and obesity, followed by weight (used by 62% GPs). The use of waist circumference and waist-to-hip ratio as assessment tools were less common (used by 44% and 23% of GPs respectively). While the proportion of GPs using BMI and weight as

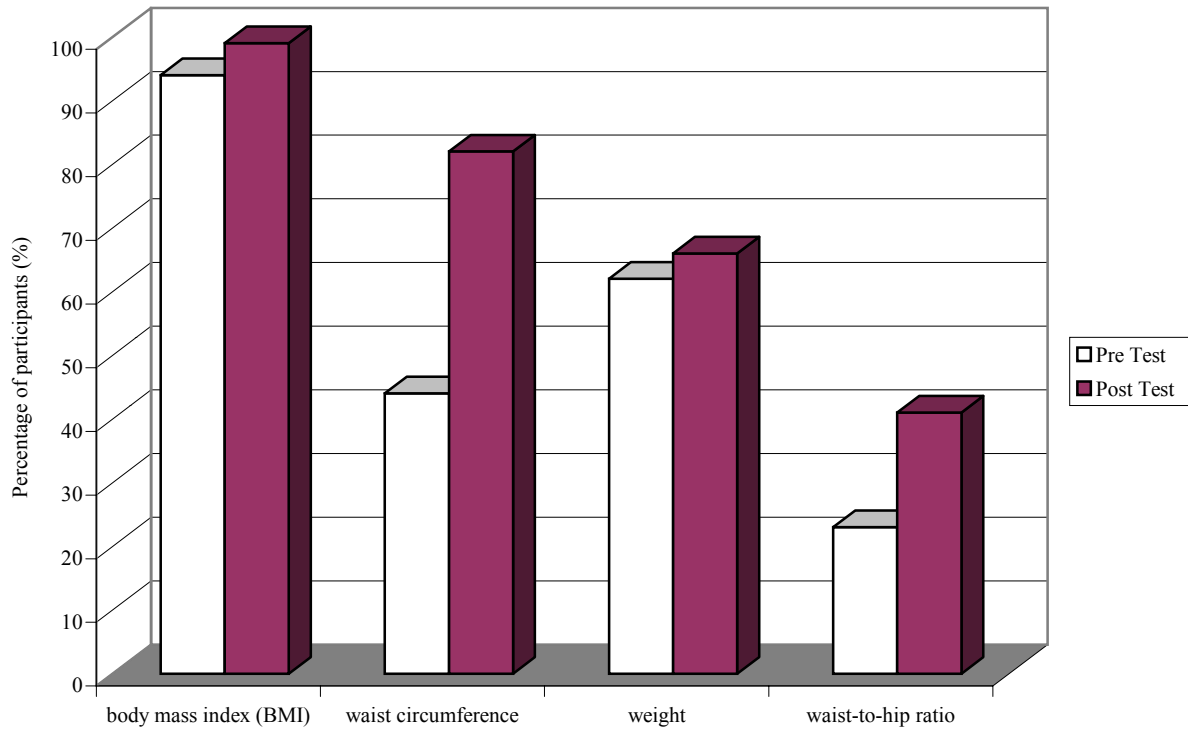


Figure 2. Anthropometric measurements used by participants to assess overweight and obesity

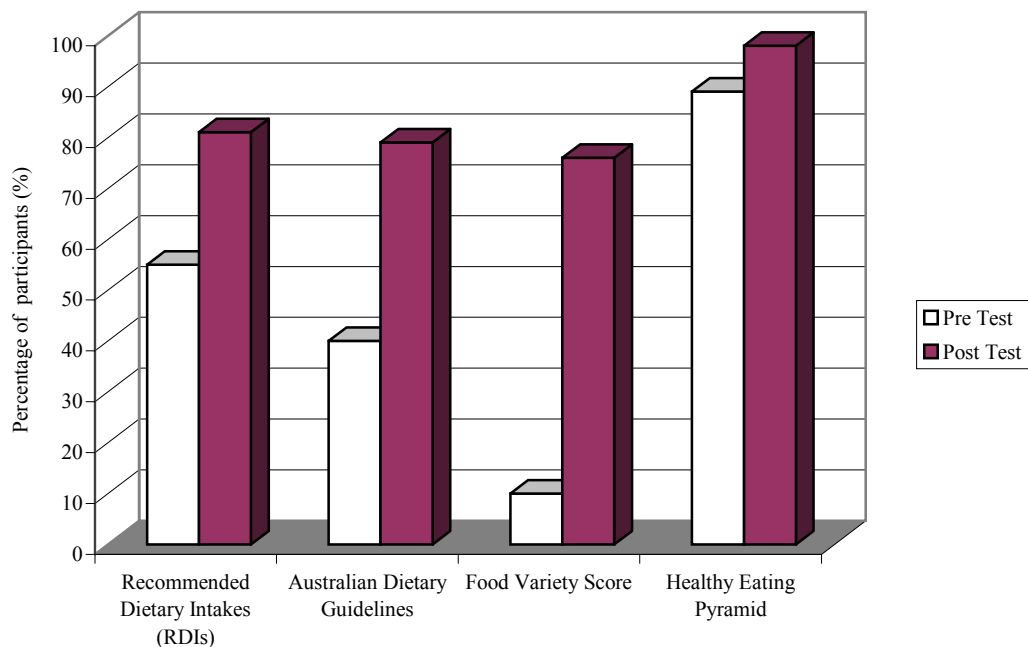


Figure 3. Participant's familiarity with methods of evaluating dietary intake

assessment tools, didn't change (used by 99% and 66% of GPs respectively) after completing the nutrition units, there was a two-fold increase in the proportion of GPs using waist circumference (82% of GPs) and waist-to-hip ratio (41%) to assess overweight and obesity in

their practice (Fig. 2).

"I learnt a lot and have applied it already...e.g. actually measured and recorded someone's waist for the first time..."

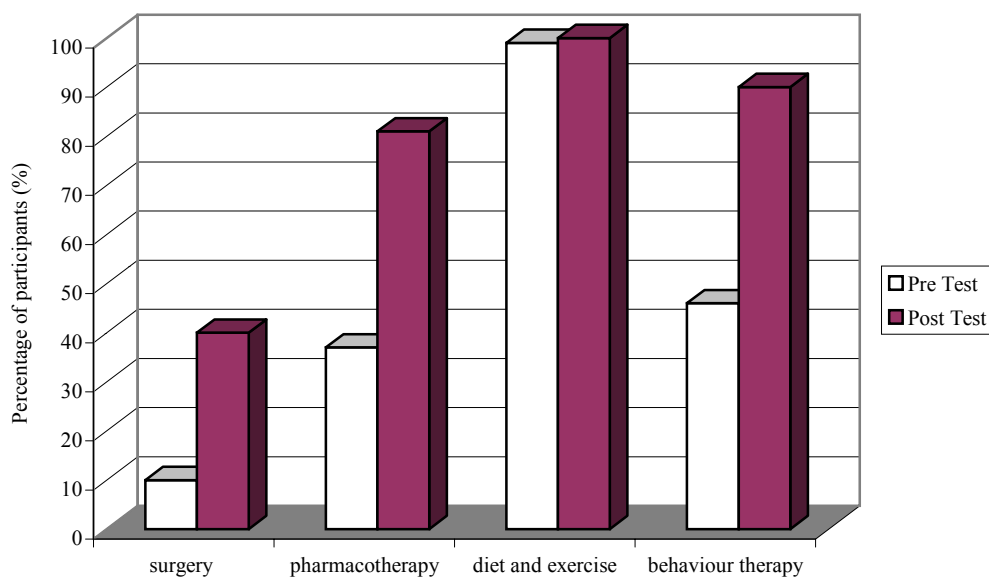


Figure 4. Weight management strategies participants feel confident in recommending to their patients

Understanding of dietary intake evaluation tools

We asked participants about their familiarity with four different methods for evaluating dietary intake. These were the Healthy Eating Pyramid, Recommended Dietary Intakes, Australian Dietary Guidelines and the Food Variety Score. While 89% of GPs were familiar with the Healthy Eating Pyramid as a method of evaluating dietary intake in their patients, they were less familiar with other evaluation tools. 55% of GPs indicated they were familiar with Recommended Dietary Intakes, 40% were familiar with Australian Dietary Guidelines and 10% were familiar with the Food Variety Score. This changed after exposure to nutrition education, with over 75% of GPs expressing understanding of all four methods to evaluate dietary intake in their patients (Fig. 3).

Use of weight management strategies

Prior to engaging with nutritional education, diet and exercise were the most common weight management strategies that GPs felt confident recommending to their patients (99% of GPs). Although behaviour modification is a valuable weight management strategy, less than 50% of GPs felt confident in recommending it. This changed after education, with 90% confident in recommending behaviour modification in addition to diet and exercise, as weight management strategies to their patients (Fig. 4).

Effective educational modalities

Problem-based learning is recognised as an effective educational modality, as it allows for practical application of theoretical knowledge in a way that simulates real-life. Web-based learning can add the dimension of peer-group learning to problem-based learning, by the inclusion of discussion groups. This enhances the learning experience.

Cases

87% of participants found the cases useful learning opportunities. *“one can almost put names to the cases presented and as each patient poses their own problems this case study is important”*

Tools

Clinical assessment tools can assist practitioners to implement the knowledge they have gained. 99% of participants indicated that they would implement the clinical tools, included in this workshop, in their practice. *“A very useful learning tool which I have enjoyed completing and which provides a good overview of weight management strategies. I will revisit this unit and use the patient worksheets”*

Change in practice

As a result of completing this education, 33% of GPs planned to review their practice and 53% planned to make modifications to their practice.

Discussion

The project demonstrated that GPs are interested in increasing their knowledge of nutrition and want to become more effective in nutrition counselling. Twice as many GPs engaged in nutrition units as any other clinical area offered in this CPD program. Maiburg *et al.*, have shown that web-based learning is an effective education strategy to increase nutrition knowledge in the medical profession.⁴ Their conclusion is supported by this study which showed an increase in the knowledge of participants, and a change in their behaviour, as a result of engaging with the education.

Evidence of change in behaviour in our study comes from pre- and post- evaluations reveal:

- 53% planned to make modifications to their practice and 33% of GPs indicated they planned to review their practice.
- 99% of participants indicated that they would implement the clinical tools, included in the nutrition units, in their practice.
- There was a two-fold increase in the proportion of GPs using waist circumference (82% of GPs) and waist-to-hip ratio (41%) to assess overweight and obesity in their practice.
- There was a two-fold increase in the percentage of GPs confident to recommend behaviour modification as a weight management strategy to their patients.

It has been mentioned previously that one of the barriers to GPs engaging in nutrition counselling is lack of confidence.¹ This study shows that web-based learning is effective in increasing the confidence of GPs in nutrition counselling. Only 32% of participants described themselves as 'confident' to 'very confident' in counselling patients in weight management prior to starting the nutrition units, this number increased to 79% after completing the education.

Conclusion

GPs have identified lack of knowledge, skills and confidence as barriers to providing nutrition counselling.¹ To assist GPs in overcoming these barriers will require a mixture of strategies targeted to be appropriate for different individuals, depending on their situation and particular learning needs, rather than one simple "solution" that will be right for everyone.

In developing any learning strategies, it must be remembered that we are trying to engage busy adult learners. Education programs will need to be both modular and flexible, and able to adapt to the different learning needs and styles of the many different practitioners and their practice contexts within Australia.

Some general principles used in this program should be remembered; education programs should be: patient-centred; learner-centred; active and interactive; modelled as essential to becoming an expert clinician; match, and take advantage of, the clinical setting and circumstances; well-prepared; and multi-staged.⁵

Web-based nutrition education is appealing to GPs as it: allows learner autonomy to choose the rate and pace of course material; addresses the time-poor; uses multiple modalities to re-enforce learning; is accessible by remote-learners allows peer-group learning.

But perhaps GPs should speak for themselves...

"Thank you very much [to] every one of my colleagues who participated in this workshop, indeed it was very useful, educational and extremely important in our practical every day to day work."

"there is always something more to learn in this field and its programs like this one that keep us on our toes"

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