Practice Guidelines: Pedantic Pontification or Pragmatic Progress?

2003 Ryley-Jeffs Memorial Lecture

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Abstract

Development and use of practice guidelines is one strategy to assist health professionals in translating research into practice. There has been a significant growth in the number of practice guidelines developed, with the increased focus on justifying health care costs and demonstrating outcomes. Quality and influence on established practice, however, has sometimes been lacking. Recognizing both the importance of practice guidelines and some of the controversies surrounding their quality and use, Dietitians of Canada convened a task group to make recommendations on future development. They reviewed the practice guideline programs of others and identified the key elements needed to ensure any dietetics-produced guidelines would be credible, feasible and applicable to clinical counselling, administration and community health promotion. In this memorial lecture, the chair of that task group briefly reviews the history of dietetic practice guidelines, new innovations in systematic review and consensus development methods, and specifically the Delphi process used to develop a new Dietetic Practice Guidelines Framework. The 34 elements of the framework direct overall management of the guideline development process, including topic nomination, systematic literature review, group judgment, and pilot testing.
(Can J Diet Prac Res 2003; 64:142-146)

Résumé

L'élaboration et l'usage de lignes directrices pour la pratique est une stratégie pour aider les professionnels de la santé à mettre la recherche en pratique. Un nombre croissant de lignes directrices pour la pratique ont été élaborées, axées de plus en plus sur la justification des coûts des soins de santé et sur la démonstration des résultats. Cependant, la qualité et les effets sur la pratique établie font parfois défaut. Reconnaissant tant l'importance des lignes directrices pour la pratique que certaines des controverses entourant leur qualité et leur usage, les Diététistes du Canada ont constitué un groupe de travail chargé de formuler des recommandations en cette matière. Les membres ont passé en revue les programmes de lignes directrices pour la pratique d'autres groupes et ont décelé les éléments clés susceptibles d'assurer que les lignes directrices pour la pratique soient crédibles, réalisables et applicables au counseling clinique, à la gestion et à la promotion de la santé communautaire. Dans cette conférence commémorative, la présidente du groupe de travail rappelle brièvement l'historique des lignes directrices pour la pratique diététique, expose les innovations dans la revue systématique et les méthodes d'élaboration de consensus et, en particulier, le processus Delphi utilisé pour concevoir un nouveau cadre d'élaboration des lignes directrices pour la pratique diététique. Les 34 éléments du cadre guident la gestion globale du processus d'élaboration des lignes directrices, notamment la détermination des sujets, la revue systématique de la documentation, le jugement de groupe et les tests pilotes.
(Rev can prat rech diétét 2003; 64:142-146)

Note: The text has been minimally altered from the original lecture to include content from the slides and to add relevant references.

INTRODUCTION

As you have heard, my colleagues have known me as both as an academic and a clinical counsellor. At various times in my career, they have seemed like different worlds. When I was younger, I just accepted this. No longer. I think Jonathon Lomas, the Executive Director of the Canadian Health Services Research Foundation (1) was most influential in changing my thinking. Rather than accept the gulf, he has spent an entire career creating ways for researchers and practitioners to bridge this gap. Follwing his lead, I believe practice guidelines provide another tool for bridging the research-practice gap.

There is a lot of controversy about practice guidelines, however. Are they dogmatic and pretentious shows of dull learning? I can certainly think of some examples, and you can too. Others have been very helpful – especially five minutes before I had to counsel an unfamiliar condition!

I will start by reminding you of the history of practice guidance in Canadian dietetics. Next, I will touch on THE key question – do practice guidelines improve practice? I will make a case for development of dietetics guidelines. I will then go on to give you an overview of the current "state of the art" for developing practice guidelines and finally I will discuss two initiatives I and others have been involved in.

What are practice guidelines?

Simply, they are systematically developed statements to assist practitioners' and clients' decisions about appropriate dietetic practice. They are developed according to a system,

Figure 1
The 1964 ODA Diet Manual beside the current Manual of Clinical Dietetics.

and they assist decision-making. Practice guidance has evolved with the growth and complexity of our practice. In the past, I believed the professional attitudes of dietitians were a relatively effective way of providing guidance. Violet Ryley was once quoted as saying of her employees, "they must rise to my standard or depart" (2), calling up memories of the tough but fair administrative dietitians most of us have known at some point in our careers. The first record I could find of modern practice guidelines was the 1964 Diet Manual of the Ontario Dietetic Association (3). I found a copy in the University of Guelph Library. Figure 1 shows that manual with the current 6th edition of the Manual of Clinical Dietetics (4), and illustrates why I believe we now need formal methods of providing guidance – look at how clinical knowledge has grown in 40 years. The same is true of community health promotion practice and administrative practice.

Do practice guidelines improve practice?

The vision is that practice guidelines ensure that practice is evidence-based, while supporting individual professional judgment. The reality in the past 25 years of active guideline development has been more mixed. Many guidelines have not changed practice and the true costs of developing guidelines have become more obvious.

In spite of these realities, I believe dietitians should become more involved in dietetic practice guideline development. Why? The first set of reasons relates to the politics of health services. In the clinical/medical arena, there is a general push for creation of practice guidelines. There are several reasons for this, but one is that administrators want to be able to control practice. At the moment guideline development and use is still voluntary, but I expect it to become mandatory in the future. Do we want to control our own destiny and scope of practice or let other groups develop nutrition guidelines we will have to work under? Do you want to be able to offer only group classes when you know "in your heart" that individual counselling combined with group classes is more effective? Are we going to be among the progressive health professions or followers?

Politics are important, but I also see an intrinsic need for dietetic guidelines. There are many players in nutrition and that alone would be a good reason for trying to get some consistency for clients. The main reason, however, is the gap between the research evidence and dietetic practice that I mentioned earlier. This gap exists for all health services, but is perhaps wider in nutrition. I see it with our undergraduate students who struggle to integrate energy metabolism and the social sciences and relate it all to giving clients advice about what to eat. The gap is most prominent in clinical areas, although I have seen some examples in the health promotion literature.

One reason for the gap is that most research studies are efficacy studies, not effectiveness studies. As you recall, efficacy studies are designed to answer the question "does the intervention work if given as intended?" The subjects of these studies are highly motivated volunteers, the interventions are designed to provide ideal care and the studies are usually done in teaching hospitals or universities. Effectiveness studies, on the other hand, are designed to answer the question "does the intervention work in the Canadian health system?" Subjects are still volunteers, but a wider range of people participates, interventions are feasible and occur in diverse and more typical practice settings.

With many efficacy studies in the research literature, and very few effectiveness studies, we lack evidence for practice. I can give a perfect illustration of the problem. Last year, the Diabetes Prevention Program Research Group published the results of a clinical trial showing that diet and exercise prevented type II diabetes better than standard life style advice or metformin (5). There were five new cases of diabetes in the lifestyle group, eight in the metformin group and 11 in the standard lifestyle advice group per 100 person-years. This was the first time I recall seeing a lifestyle intervention that

was more effective than drugs in areas that I normally review: obesity, dyslipidemia, hypertension and diabetes. The intervention consisted of 16 classes over 24 weeks, with extensive follow-up and a "tool-kit" of strategies, like loans of home exercise equipment, vouchers for classes, home visits, etc. (6). We still need the effectiveness study to see what proportion of "real world" clients would respond to a feasible program.

How can guideline development close the research-practice gap?

Let's assume we have only efficacy evidence for a topic. We can summarize the evidence and then use group judgment to decide on best practice. We then can do the effectiveness trials using the agreed upon "best practice" and see if client outcomes improve, compared to previous standard practice. The results of these effectiveness studies can then form the basis for generating the next set of guidelines.

This process will take time and effort. Do we have the capacity as a profession to develop practice guidelines? I believe so, if we are careful to manage our resources. First, buy-in by members of the profession is critical. I believe most dietitians support our strong tradition of evidence-based practice. We are already building capacity as individuals and an organization to successfully develop a practice guidelines program. As an organization, DC is also well positioned to take advantage of opportunities to participate in guidelines processes.

I hope I have convinced you that we should be involved in practice guidelines development. Now, I will give you a brief overview of what is involved in current guidelines processes, focusing on newer methods.

Table 1
Criteria for determining if a new practice guideline is needed, adapted from previous work (7,8)

To what degree would new guidelines:

- substantially improve patient/ client outcomes?
- affect a large or vulnerable client population?
- affect overall policy & administration?
- reduce health system costs?
- decrease practice uncertainty?

What is involved in current guidelines processes:

First, a needs assessment must be conducted. Development of guidelines is costly and most guideline development groups now use criteria to decide what guidelines need to be developed. In Table 1, I have adapted the lists from Patricia Splett's manual and the Scottish Intercollegiate Guideline Network, one of the most advanced guidelines programs in the world (7,8). As you think about your own practice, what areas are most uncertain or have the most potential to reduce costs or improve outcomes? Unfortunately, many guidelines in the past were developed based on the interests of health professionals, not the need for guidance.

Once you have established a need, the next step is to conduct a systematic review of the evidence. There are two main approaches being used in our profession. The first is the literature-based method, using computer databases like Medline, PsychINFO, or ERIC to search for studies. The other main method is the key informant method. This method is most used when the evidence consists of a mixture of unpublished and published work. Roy Cameron at Waterloo has published on the method and it is being used extensively in Canada to identify "best practices" in health promotion and disease prevention (9). Rhona Hanning and I are currently completing a study comparing the yield from the two methods for heart health prevention programs in schools. Some groups use a combination of both methods. It is now much easier to gather and assess studies with the new software. The bibliographic software allows you to download your literature search results without having to type them. Some of you may already use Reference Manager, ProCite or Endnote (10). Other software, such as Review Manager from the Cochrane Collaboration, is used to complete all aspects of a meta-analysis, and is free (11). The Cochrane Collaboration is the largest volunteer organization in the world organizing and publishing systematic literature reviews of health care. They have done a number of diet reviews. The Campbell Collaboration, a newer group, focuses on health promotion (12).

The next step is to develop the recommendations based on the systematic review. Invariably, there are many issues not addressed in the literature. In the past, a small group of experts went behind closed doors and came back with recommendations. More recently, as the focus has shifted to controversial topics, consensus has been more difficult to achieve. There has also been interest in bringing more diverse points of view, such as the client view, into guidelines development. More formal consensus methods, therefore, offer a way to complete a guideline even when consensus cannot be achieved (13,14).

Of the three most common methods used in practice guideline development, nominal group, consensus conference and Delphi methods, I will describe only the Delphi process in detail, as it was used in a recent Dietitians of Canada project.

This method was developed by the Rand Corporation to allow individuals to vote on ideas individually through a process of repeated questionnaires, and perhaps come to consensus. A questionnaire is developed with a series of statements that can be answered on a Likert-type scale, say 1 to 9. Participants complete the questionnaire on their own and return it to the coordinator by mail, fax, etc. The results are collated and the median and 25-75th percentile range calculated. Participants get the same questionnaire back showing their own original rating, as well as the group median and range (Figure 2). They then redo the questionnaire and send it in to the coordinator again. You can have several rounds of Delphi process. Originally, participants never met or interacted, but it is more common now to have a discussion between rounds of questionnaire completion.

Finally, to complete the overview of the guidelines process, implementation appears to be a major problem limiting the possible positive impact of practice guidelines. The advice from experienced guideline developers is that one needs to use multiple approaches and devote considerable resources to implementation. This is a very active area of research. One insight that rang true for me was that practitioners want "brief" guidance documents and need support in the workplace to implement change (15).

Figure 2

An example of the feedback given to one participant from the Delphi process. Two statements from the questionnaire are shown. The "x" indicates the participant's rating of the proposed activity. The "M" indicates the median of the ratings from all ten participants, while the bolded numbers indicate the 25-75th percentile range of the responses.

Should this process/component be included in a DC guidelines framework?

	Not Important/Disagree			Somewhat Agree			Essential/Agree			
Process/component to conduct an independent external review of the guidelines before their publication/ release and address the issues raised.	1	2 X	**3**	**4**	**5**	**6**	**M**	**8**	**9**	
A validation study is conducted, where feasible and applicable, prior to acceptance, to demonstrate that practice according to the guideline improves outcomes.	1	2 X	3	**4**	**M**	**6**	**7**	**8**	**9**	

Table 2

Task group goals in developing a dietetic practice guideline framework

To create a framework that is:

- Acceptable to practitioners
- Scientifically credible
- Understandable
- User friendly
- Cost effective
- Relevant to practice

Recent initiatives

In fall 2001, DC asked me to chair a task group on practice guidelines. Its mandate was to set up a "to-do" list for creating good guidelines. We wanted this "to-do" list or guidelines framework to be comparable to what other health professions were doing. I convinced the rest to try for a framework applicable to all areas of dietetics. We asked representatives from across Canada and from different areas of practice to be members of the task group. All had been involved in some way in practice guideline initiatives. We worked entirely by e-mail, teleconference, fax and courier. Most of us had not met previously. We first developed goals for the creation of the framework (Table 2). We reviewed all the guideline development programs from English-speaking countries, and created a questionnaire that included all their to-do items. We started out with 75 elements and refined the list to 34 principles or activities. There were two rounds of Delphi process, with a teleconference after the first questionnaire to discuss controversial issues.

Figure 2 shows two controversial statements from the 75 statements that we started with. This participant felt that an external independent review was not very important and rated the statement as "2". Other people in the task group thought it was more important. The median was "7" and it is in the essential range. This participant also felt that it was unnecessary to conduct a validation study before publishing guidelines and rated the statement as "2". The group median this time is "5", indicating a wide variety of opinion in the group. We eventually decided to recommend external review but not a validation study.

The framework is now finished and launched. I would like to thank all DC members across Canada who reviewed the draft and provided comments. The Dietetics Practice Guideline Framework is posted on the DC web site as a PDF document (16). This document has a glossary, key references and web sites. We hope all members involved in either dietetics-based or multidisciplinary guidelines development will find it a useful resource.

Finally, I will tell you briefly about our upcoming study. My co-investigators are Drs. Jose Arocha and Rhona Hanning of the University of Waterloo and the Cardiology Network will be providing support. We will use the Delphi process to get counsellors who are involved in dyslipidemia management to tell us how they actually counsel for different types of clients with dyslipidemia. We want to create more specific care maps than we have now. We are looking for both experts and generalists from across Canada to participate. Are you a generalist? Do you counsel for dyslipidemia as only one of many jobs you have? If you are interested, please watch for advertisements through DC as we will be holding workshops across the country on practice guidelines during the winter of 2004 and will train volunteers from these workshops to complete the Delphi questionnaires. We are very excited about this work and feel we can create some better decision aids than we have now.

Practice guidelines have the potential to help improve practice. Newer methods and technologies to review evidence and develop consensus have improved our ability to find, organize and summarize evidence and develop recommendations. The Practice Guidelines Framework, developed for Dietitians of Canada, provides a basis for further development in all areas of the profession. It has been an honour to give the Ryley-Jeffs lecture and continues to be a privilege to work as your colleague.

References

1. Canadian Health Services Research Foundation; 2003. http://www.chsrf.ca.
2. Brownridge E, Upton E. Canadian Dietitians Making a Difference. Toronto: Canadian Dietetic Association; 1993.
3. ODA/OHA Diet Manual. Toronto: Ontario Hospital Association; 1964.
4. Chicago Dietetic Association, South Suburban Dietetic Association (Ill.), Dietitians of Canada, Manual of Clinical Dietetics. Chicago: American Dietetic Association; 2000.
5. Knowler WC, Barrett-Connor E, Fowler SE, Hamman RF, Lachin JM, Walker EA, Nathan DM. Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. N Engl J Med 2002;346:393-403.
6. The Diabetes Prevention Program. Design and methods for a clinical trial in the prevention of type 2 diabetes. Diabetes Care 1999;22:623-634.
7. Scottish Intercollegiate Guidelines Network. SIGN 50: A Guideline Developers' Handbook. Government of Scotland; 2001. www.show.scot.nhs.uk/sign/guidelines/fulltext/50/index.html.
8. Splett PL. Developing and Validating Evidence-Based Guides for Practice. Chicago: American Dietetic Association; 2000.
9. Cameron R, Jolin MA, Walker R, McDermott N, Gough M. Linking science and practice: toward a system for enabling communities to adopt best practices for chronic disease prevention. Health Promotion Practice 2001;2:35-42.
10. ISI ResearchSoft; 2003. http://www.risinc.com/.
11. Cochrane Collaboration. Cochrane Reviewers Handbook; 2002. http://www.cochrane.org/.
12. Campbell Collaboration. Campbell Collaboration; 2002. http://www.campbellcollaboration.org/.
13. Murphy M, Black N, Lamping D, Mckee M, Sanderson C, Askham J, Marteau T. Consensus development methods, and their use in clinical guideline development. Health Technology Assessment. University of Southampton, Southampton, UK: National Health Service, United Kingdom; 1998. http://www.hta.nhsweb.nhs.uk.
14. Black N, Murphy M, Lamping D, Mckee M, Sanderson C, Askham J, Marteau T. Consensus development methods: a review of best practice in creating clinical guidelines. Journal of Health Services Research and Policy 1999;4:236-248.
15. National Health and Medical Research Council. How to put the evidence into practice: implementation and dissemination strategies. Government of Australia; 2002. http://www.health.gov.au/nhmrc/publications/synopses/cp30syn.htm.
16. Brauer PM, Alaverdy H, Basualdo-Hammond C, Cook S, Dumas A, Holuk Siddall L, Jackson S, Leadlay AG, Schmeltzer J, Seward C, Zibrik D. Dietetics Practice Guidelines Framework: Key Elements and Rationale; 2003. https://www.dietitians.ca/members_only/practicemanagement.asp.