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Planning for the development of evidence based guidelines for the nutritional management of obesity in Saudi Arabia

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Abstract
Objective: To seek agreement from key stakeholders on the main issues, considerations and key questions that need to be addressed when developing evidence based guidelines for nutritional management of obesity in Saudi Arabia. Methods: Forty six health professionals (including, dietitians, physicians, academics and government representatives) participated in an invited workshop held in Riyadh in June 2007. Participants were divided into groups to discuss five topics: priority areas to include in a critical literature review, best formats for presentation of guidelines, particular local issues to consider, information to be included in appendices, and methods to encourage the adoption and use of the guidelines. A questionnaire was also distributed to participants and they were asked to rank their level of agreement about issues related to the process of guideline development. Results: Participants agreed that Saudi clinical practice guidelines are necessary for dietitians and other health professionals to guide effective nutritional management of obesity. They also agreed about the most important key questions that need to be addressed in the guidelines. In contrast, there was no general agreement about the best formats of the guidelines and this may be due to the limited use of the guidelines for daily practices. Participants also discussed other topics and their views are summarized Conclusion: The development of specific clinical practice guidelines for nutritional management of obesity in Saudi Arabia is warranted and will be valued by Saudi dietitians and other health professionals.

Keywords
evidence-based guidelines, obesity management, dietitians, Saudi Arabia

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Planning for the development of evidence based guidelines for the nutritional management of obesity in Saudi Arabia

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Conclusion: The development of specific clinical practice guidelines for nutritional management of obesity in Saudi Arabia is warranted and will be valued by Saudi dietitians and other health professionals.

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Introduction

Obesity has become a global epidemic and the prevalence of both overweight and obesity is still increasing in Saudi Arabia.[1-4] The latest National Epidemiology Health survey conducted in Saudi Arabia showed that the overall prevalence of overweight and obesity was 72.5 %.[1] Therefore, appropriate treatment and strategies should be developed and implemented to manage this problem.

Clinical practice guidelines are "systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances."[5] Development of good guidelines should facilitate more consistent, effective and efficient medical care. While such guidelines have been developed for the management of obesity in a number of Western countries, including the USA, Canada, Scotland and Australia,[6-10] there are no clinical practice guidelines developed for use by physicians, dietitians or other health professionals in Saudi Arabia, in relation to the management of overweight and obesity. Therefore individual clinicians usually do not follow standard strategies for the nutritional assessment and treatment of obese patients.

Limited literature is available about the use of the evidence based guidelines in Saudi Arabia (SA). Al-Ansary *et al.*[11] conducted a questionnaire study to explore the attitude of primary health care physicians (PHCPs) in Riyadh towards evidence based medicine (EBM). Authors found that PHCPs mainly welcomed EBM but they had a low level of awareness of well-know resources of EBM. However, adaptation and use of Saudi guidelines have been highly recommended.[12]

To address this deficit, we have commenced a project to develop such guidelines, focusing on the nutritional management strategies that would be used by dietitians and medical nutrition specialists. The scope of this project will be limited to nutritional aspect of the clinical management of overweight and obese patients and will not include other aspects of management such as pharmacotherapy and surgery. This article presents the outcomes of the first of a series of workshops to be held as part of this project.

The primary functions of this workshop were to introduce the project to key stakeholders, present information on best practice in the process of development of clinical guidelines, and to collect the ideas and suggestions of a group of potential users as to their content and format.

Methods

This workshop was conducted in June 2007 at the King Faisal Specialist Hospital and Research Centre, Riyadh, Saudi Arabia, led by authors AMA, PGW and AMA. Key stakeholders were invited to attend through letters of invitation. Participants included the potential users of the guidelines and were selected by purposive sampling, based on advice from key local informants. Forty-six health professionals including 5 academic staff, 3 physicians or medical nutritionists, 33 clinical dietitians, and 5 government health representatives attended the workshop. After presentations on the need for the local development of practice guidelines in general (By Dr.Abdullah AL Khenizan, Consultant of family medicine and member of the National EBM Committee) and an overview of the project plan, participants were divided into 5 groups. Each group discussed three out of the following five topics and presented their views to the whole workshop for further comment. Comments were summarized by each group facilitator and recorded by the workshop leaders

The discussions were directed to the following topics:

Topic 1: The key questions that should be included in the critical literature review to guide the development of the guidelines.

Topic 2: The best format for the guideline presentation. Examples of different formats used in American, Australian, Canadian and Scottish obesity guidelines were provided for participants.

Topic 3: What are the particular differences from Western countries that need to be considered, including meal patterns, dietary choices and referral process?

Topic 4: A suggested list of the most important appendices that could be added to the guidelines was discussed.

Topic 5: The best ways to encourage the adoption and use of the guidelines.

A questionnaire was distributed to participants at the end of the discussion and they were asked to rank their level of agreement about specific issues in the process of guideline development. A five point Likert scale (1=strongly agree to 5=strongly disagree) was used to assess the level of agreement by calculating the mean scores for each statement.

Results

The summary results from the workshop discussions were as follows:

Discussion topic ONE:

The guiding questions that all groups agreed should be considered in the guidelines were:

- What are the recommended methods to assess and classify overweight and obesity?
- Which anthropometric measurements should be used?
- Which energy expenditure equations and weight should be used to calculate daily energy requirement?
- What are the appropriate goals for weight loss?
- What are the appropriate levels of energy restriction?
- How best to achieve weight loss (diet therapy, physical activity and behavior therapy)?
- When should other methods of weight reduction such as drugs and surgery be recommended and how effective are these methods?
- What are the recommended methods to maintain weight loss?

Each group listed several specific questions within the above broad questions. The most common questions are:

- What is the best method to assess the degree of obesity and to monitor the progress of weight loss? (Body mass index, waist circumference, waist/hip ratio, skin fold thickness, bioelectrical impedance etc.)

- In calculating energy requirements, which should be used: actual, ideal or adjusted body weight?
- How to use the adjusted factors when you calculate resting energy expenditure (REE) - activity factors, stress factors, etc.
- Are the current available prediction equations accurate in estimation of REE for Saudi people?
- Is the current common target for energy restricted diets (500 to 1000 Cal deficit per day) appropriate?
- Is the current practice of prescribing energy restricted diets (1000-1200 Cal/day for women; 1200-1500 Cal/day for men) appropriate?
- Is the current practice of targeting a weight loss (0.5- 1.0 kg/week) appropriate?
- What duration and intensity of physical activity are required to support weight loss?
- What lifestyle modifications can be shown to support weight loss?
- How to combine the three strategies of weight reduction? (energy restriction, physical activity and behavior & lifestyle modifications)
- What is the optimal meal pattern in terms of number and timing to support weight loss? Does missing breakfast matter?
- Is group education an effective intervention strategy and for whom? What is the evidence comparing effectiveness of group versus individual counselling?
- Is home delivered complete meal solution an effective strategy to assist weight loss? If so, for how long?

- What counselling strategies maximize compliance? When is it effective to threaten longer term healthy consequences of non-compliance?
- Is there any scientific support for use of common herbal remedies/drinks?
- How should dietitians attempt to manage adaptations of the body to weight loss (eg reduced REE)?
- What diet patterns/strategies will maximize satiety and make weight loss easier?
- Who should be involved in a multidisciplinary approach to managing overweight and obese patients? (eg dietitian, psychologist, social worker, physician, physiotherapist…)

Discussion Topic TWO:

Each group suggested a specific preferred format according to the examples that were distributed.

Four possible formats were identified:

- Literature review + Graded evidence statements + Conclusion + Graded practitioner recommendations
- Literature review + Graded recommendations
- Graded evidence statements + Dietetic practice recommendations
- Literature review + Graded evidence statement + graded recommendations

Discussion Topic THREE:

Differences from Western countries were discussed and summarized as follow:

- Difficulty promoting physical activity in Saudi Arabia because of issues related to weather and modesty for women.
- Compliance decreases when diet restrictions conflict with social expectations.
- Very high fat diets usually provided in Saudi social parties.
- Ramadan is often a time of weight gain (despite the day time fasting) because of consumption of high fat/high sugar sweet foods.
- Lack of patients referrals to dietitians.
- There is a lack of understanding of the barriers to compliance currently.

Discussion Topic Four:

Participants suggested a few appendices that could be added to the clinical practice guideline. These include:

- Sample reduce caloric Saudi meals
- Food Exchange List including Saudi food
- Educational materials for obese subjects
- Tables showing exercise required to burn off energy from different food portions.
- Body Mass Index Table.

Discussion topic FIVE:

Participants recommended the following ways to encourage the use of the guidelines including distribution, endorsement and training:

- Make the guideline as widely available as possible

- Use scientific journals and media to distribute it to hospitals, health organizations and universities.
- Produce the guidelines for use in a range of formats, including on the internet and on computer disks
- Endorsement by medical and dietetics profession
- Training in use of guidelines is critical to successful implementation, including continuing evaluation of adoption and outcomes.

Table 1 shows the mean level of agreement with specific statements ranked by participants. The mean level of agreement (1.04) was very strong when the participants were asked about the important of developing the clinical practice guidelines for nutritional management of obesity in Saudi Arabia. Participants also agreed about the importance of including an overall summary translated to Arabic (1.42) and also indicated the importance of including full written literature review, evidence based statements, practice recommendations, flow charges, and education tools (1.25 – 1.92).

Table 1: Mean level of participant agreement with specific statements (n=46)

Strongly agree =1, agree = 2, neither agree nor disagree = 3, disagree = 4, or strongly disagree = 5

Statements	Level of agreement (1-5)
There is a need for the establishment of clinical practice guidelines for nutritional management of obesity and overweight in Saudi Arabia	1.04
Ask respected dietetics and nutrition leaders to promote the guidelines	1.38
Guideline should include an overall summary	1.42
Use professional journals and magazines to inform people about guideline development and promote the completed guideline	1.54
Guideline summary should be translated to Arabic	1.63
Produce short summaries for use in a range of formats, including on the internet and on computer disks.	1.63
The full guideline should be translated to Arabic	1.71
The guideline should be endorsed by local clinical groups	1.71
How important is it to include each of the following:	
Practice recommendations	1.25
Assessment tools (eg. Equations, anthropometry, psychological questionnaire)	1.33
Education tools	1.50
Compliance and outcome measurement tools (wt loss, satisfaction, diet quality)	1.58
Full written literature review	1.58
Flow charts	1.63
Evidence based statements with grading	1.92

Discussion:

The way in which guidelines are established will undoubtedly affect their success. It is proposed that the methodology that has been described by the National Health and Medical Research Council in Australia[13] will be followed for the development of the Saudi guidelines in this project. A series of two further workshops will be conducted during guidelines development to review and refine the guidelines before they are finalized.

At this first workshop several questions were identified that need to be addressed when setting up the guidelines. They mainly focused on the estimation of REE. It was obvious that practitioners want to know how to assess REE accurately and the accuracy of the present predictive equations was questioned. To our knowledge there are no equations developed specifically for use with Middle Eastern people and the most commonly used current equations were derived from samples of normal weight subjects. Only two equations - those developed by Ireton-Jones *et al.*[14] and Bernstein *et al.*[15] - were derived from samples of obese subjects. This issue will be investigated further in the next stages of this project.

Participants discussed the best formats of guidelines but there was no general agreement about this. This is may be due to the limited use of the evidence based guidelines in daily practice. However, most of the groups agreed it would be important to include a literature review and graded evidence-based recommendations. Others preferred to include both graded evidence statements and graded recommendations.

The other ideas about topics for inclusion and the methods of dissemination of the guidelines will be considered in the next stages of this project. At the proposed second workshop, results of a literature review will be presented, which will summarise research in this area since the development of the US practice guidelines in 1997. The Grade of Recommendations, Assessment, Development and Evaluation (GRADE) system[16] will be used to evaluate the quality of evidence that is available to support nutrition practice recommendations and develop graded evidence-based recommendations. Drafts of the Saudi practice guidelines will be discussed at this workshop, planned for early 2008, and it is anticipated that the final version will be presented at a final workshop in mid 2008.

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