

## Meal Planning in Groups

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Medical nutrition therapy (MNT) and meal planning are an integral part of diabetes management. Diabetes MNT involves 1) assessment of a patient's nutrition knowledge and skills, 2) identification and negotiation of individually designed nutrition goals, and 3) nutrition interventions that include meal planning and other education materials to meet patients' needs.<sup>1,2</sup> The Diabetes MNT guidelines<sup>3,4</sup> can help patients acquire the knowledge and skills that are important for behavior change when implementing nutrition education. Group education is increasingly advocated as being as successful as, if not more successful than, individual counseling. This article discusses some of the issues involved in establishing and running group education for nutrition and meal planning.

### Reimbursement of Group Education in Diabetes Self-Management

Group classes are advantageous and have become an essential method of teaching meal planning, given the reimbursement limitations for diabetes self-management training and MNT. Group education is the standard and is required by Medicare unless barriers to learning are identified. The Federal Balanced Budget Act of 1997 resulted in changes in reimbursement by the Centers for Medicaid and Medicare Services (formerly the Health Care Financing Administration) that supported group delivery of diabetes education.<sup>5</sup> Medicare reimburses 10 hours in the first year for initial diabetes education and 2 hours of follow-up education per year. Medicare coverage for MNT is 4 hours for the first year and 2 hours for the second.<sup>6</sup> Group education allows for

better utilization of the coverage provided by Medicare and some insurance companies.

### Benefits of Groups

The benefits of group education are many. It stimulates interactions among participants, which enhances learning. Many individuals with diabetes have faced the challenge of trying to follow a meal plan and make necessary changes to control blood glucose and lipids many times over. In group settings, participants have the opportunity to share these experiences and learn from others. Staffing challenges also favor group education, which provides patients with an opportunity to receive education in a timely manner.

An increasing number of outcome studies have documented the advantages of diabetes group education, and it is clear that patients benefit from learning in groups.<sup>1</sup> Adults learn best when education is interactive and personally relevant and when patients see the advantage in learning. Interactive formats are thought to be superior to lesson-style group programs because they are more effective in enhancing interaction among patients.<sup>7</sup>

Deakin et al.<sup>8</sup> reported the results of a meta-analysis in favor of group-based diabetes education programs for individuals with type 2 diabetes. Significant improvement was seen in hemoglobin A<sub>1c</sub> (A1C; 1.4% reduction), as well as a reduction of fasting blood glucose levels, a reduction of body weight, an improvement in diabetes knowledge, a reduction of systolic blood pressure, and a reduction of medication needs.

Group education can be successful, but it is beneficial to have a standardized curriculum outlining specific out-

comes and behaviors targeted for change and trained educators who can facilitate learning. A few authors have reviewed the art of group education,<sup>1</sup> but as Weinger<sup>9</sup> points out, more studies are needed by well-trained researchers to determine the use of groups in improving diabetes self-management.

### Development of Group Education

Questions to ask when developing a group education program include:

- What is the purpose of the program?
- What is the program design?
- Do you have the space?
- Do you have administrative support?
- Who is the target group? Who needs the program, and why do they need it?
- Is the program learner-focused?
- What are the learners' skills, knowledge, and attitudes to be developed?
- Is the program action-oriented?
- How will learning occur in the program?
- What are the achievement-based objectives of the program? What will learners achieve?
- Is the content specific and measurable?
- Does the program involve behavioral goal setting?
- How will the program be evaluated? What will serve as evidence of change?

### Challenges of Group Education

The challenges of group education include:

- Limited assessment tools. How can educators determine what participants are interested in learning to enhance their diabetes self-care?

- Facilitation skills of educators. Group education and interaction require flexibility and excellent facilitation skills on the part of the educator to ensure that all participants have a chance to speak and interact. This allows the educator to perform additional assessment of participants so that when the time comes for behavioral goal setting, the educator is able to assist patients in identifying goals that are relevant.
- Patient-based barriers. These include culture; language; hearing, visual, and cognitive impairments; age; and behavioral issues.
- System barriers. These include lack of funding, space, and staffing and uncoordinated patient education.

Ways to overcome these challenges are to get the support of administration and to assess your target population to find out what their needs are.

**Where to Start**

When initiating a group education program, it is important to create an environment that promotes trust. It is helpful to set the stage by letting participants know that all information discussed within the group is and needs to be confidential and contained within the group. This will enhance discussion and encourage participation throughout the class.

There are many diabetes meal-planning approaches, and each one has its advantages and disadvantages. The most successful plan is the plan a given patient is willing and able to follow and to integrate into daily life. That said, the author has found that beginning with carbohydrate counting can be advantageous when teaching meal planning in a group setting.

A group education class for meal planning might include two stages of learning. The first class should focus on the basics of healthy eating, the impact of food on blood glucose, and the role of carbohydrates. This would include teaching how to identify serving sizes of carbohydrate and label-reading skills. An interactive activity would have participants plan their own carbohydrate goals for meals and snacks. Include participants' plans for record keeping, to be used for a follow-up class to assess behavior change.

Following are two meal-planning approaches that might be successfully taught during an initial session.

**Basic carbohydrate counting**

This approach that has also been labeled a "consistent carbohydrate" meal plan and is a simplified version of carbohydrate gram counting. Carbohydrate foods are listed per serving size as carbohydrate choices. Choices are then distributed throughout the day based on patients' preferred ways of eating, with medication and activity schedules taken into consideration. Basic carbohydrate counting can be used for patients on oral medication or insulin. It is used most often with patients who are on fixed doses of insulin and those attempting to lose weight as well as improve blood glucose control.

**Plate method**

The plate method has been shown to be successful in all patient populations,<sup>10,11</sup> and it may work well depending on the assessment of participants. The plate method is a simplified meal planning approach that designates certain portions of the meal plate for carbohydrate, protein/fat, and vegetables. The plate method is a good visual technique and helps adult learners adapt meal-planning education to their lifestyle.

When deciding on the appropriate meal planning approach for group education, diabetes educators must assess the needs of their target population (Table 1). It is important to help individuals develop the skills and acquire the knowledge to follow a meal plan that best fits their lifestyle and that is one they can live with. In the end, it is the patients' choice of

which behaviors to change based on their readiness to change. Dietitians and educators can only facilitate that change.

The second part of a group education program would be a follow-up class during which participants return with food and blood glucose records. Discussing these records is important to assess whether participants were able to see the impact of their food on their blood glucose and to make appropriate changes in their eating. A knowledge test in the form of a food lab can be helpful to assess knowledge from the previous class and initiate discussion about what barriers are present that prevented participants from making changes. Goals are redefined here with plans to follow up in individualized sessions to further personalize meal planning.

**Managing the Process**

Group education has to be a planned process. The process should include:

- An educational needs assessment of the participants in the group.
- Acknowledgement of participants' needs and help in setting priorities and negotiating goals in partnership with them.
- Educational materials in appropriate formats to allow participants to assimilate information at their own pace.
- Evaluation of the activity. Outcomes, such as clinical outcomes, knowledge, self-care skills, psychosocial measures, and quality of life, need to be assessed after a minimum of 1 year to reflect the effect of the intervention.

As noted above, education can be delivered on a one-to-one basis or in

**Table 1. Strategies for Educators Teaching Meal-Planning Strategies**

- Employ active listening skills.
- Assess patients' individual needs, necessary behavior changes, and learning styles.
- Actively engage and empower patients.
- Assist patients in choosing an appropriate meal plan to fit their lifestyle.
- Help patients establish behavioral goals and a diabetes self-care action plan.
- Assist patients in identifying barriers and challenges to implementing a meal plan.
- Strategize with patients about how to overcome barriers to making changes in eating.
- Elicit feedback from patients.

a group, and there are also innovative techniques involving distance learning or multimedia packages. The appropriate format should be determined by patients' needs and choices. Studies have shown that to achieve best outcomes, both clinical and quality-of-life, educational interventions should:

- Incorporate behavioral models and adult education principles to facilitate improving self-care behavior.
- Recognize that an important component of the process is participants' personal and unique experiences of living with diabetes.
- Involve collaboration between providers and participants, which may be more effective than didactic interventions in improving self-care behaviors and thus overall health.
- Take into account the social, emotional, cultural, and psychological aspects of participants' lives to help them adjust to their condition. This can be achieved through a pre-screening assessment process and personalized dialogue on a one-to-one basis.
- Include personalized goal setting. It is important to find out what is acceptable and realistic within the context of each participant's life.
- Include problem-solving skills.

We must assess our patients and help make learning relevant. Adult learners learn best when the information pertains to what they perceive their needs to be. Be sure to help your patients personalize their goals and plan for a follow-up evaluation and assessment.

### A Final Word

Programs should be evaluated retrospectively for effectiveness. Evaluation is often looked at from four different levels:<sup>12</sup>

1. Reaction. What do participants feel about the class experience? This can be assessed with a participant satisfaction survey.
2. Learning. What facts or knowledge did participants acquire? This knowledge can be assessed by having participants complete pre- and

posttests, making sure that the questions are truly written to the learning objectives.

3. Behaviors. What new skills did participants develop? Were participants able to apply their newly acquired knowledge? It is important to evaluate what, if any, behavior changes occurred as a result of attending the group session. Reviewing food records and blood glucose logbooks will help educators assess whether participants were able to apply the information and how much transfer of knowledge, skills, and attitudes actually occurred. Follow-up sessions are helpful in evaluating this.
4. Results or effectiveness. These are frequently thought of as the bottom line. This level measures the success of the program. What impact did education have on participants' health. Did A1Cs improve? Was overall blood glucose control better? What self-care behavior change actually occurred? Data can be collected through questionnaires, surveys, interviews, observations, and testing.

Evaluating and documenting outcomes is important to validate the effectiveness of the program in helping participants learn about diabetes and self-care skills and in maintaining participant, referrer, and educator satisfaction with the program. Building evaluation into the continuous improvement process helps to identify 1) areas of improvement, 2) areas that are working to meet the needs of the participants in a cost-effective manner, and 3) solutions to any areas that may need improvement.

Properly evaluating a program requires one to think through the purposes of the program and of the evaluation, the target audiences for the results of the evaluation, the points or spans of points at which measurements will be taken, the time perspective to be employed, and the overall framework to be utilized.

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