It is widely accepted that educating patients about ways to better understand and self-manage type 2 diabetes is a cornerstone for managing the disease.\(^1\) However, there is still much debate over the educational approach that is most effective in delivering such crucial health information in a way that leads to measurable changes in patient behavior and improved clinical outcomes.\(^2\)

In an effort to help resolve this debate, the Journey for Control of Diabetes: The IDEA Study, a multisite randomized trial, is underway, conducted by researchers at HealthPartners Research Foundation (HP) in Minneapolis, Minn., and LCF Research (LCF), in Albuquerque, N.M. The study aims to evaluate the effectiveness of two methods of education: 1) a traditional individual educational approach and 2) a more novel group-based, interactive learning experience called IDEA (Interactive Dialogue to Educate and Activate) using the U.S. Diabetes Conversation Map education tools. This form of group education, using the Conversation Map tools as a vehicle to facilitate interaction between educators and patients, shows promise to change patient attitudes toward diabetes, improve self-efficacy, and lead to better clinical outcomes.

The purpose of this article is to describe the IDEA Study educator experience with implementing the Conversation Map education approach to inform and assist others in integrating this learning tool in their care settings.

**IDEA Study Background**

The IDEA Study enrolled 623 participants with a history of sub-optimally controlled type 2 diabetes through HP and LCF from June 2008 to May 2009, with the purpose of evaluating the effectiveness of an interactive, group-based diabetes educational experience using the Conversation Map tools. Individuals interested in the study were eligible to participate if they had an A1C value within the past 6 months of ≥ 7% and if they had not participated in group education within the previous 2 years or individual education within the previous year.

After giving informed consent, participants were randomly assigned to one of three groups: 1) group education, 2) individual education, or 3) usual care (care as recommended by the participant’s usual providers with no study-assigned education). The study’s educational interventions were delivered through the ADA-recognized education programs of the participants’ affiliated care systems (HealthPartners Clinics in Minnesota or ABQ Health Partners in New Mexico).

To document the educators’ experience using the maps in the IDEA Study, education program supervisors were interviewed, and a well-attended focus group was conducted at each site with the diabetes educator staff after the learning interventions were completed. Educator staff in New Mexico included five nurse and dietitian educators and in Minnesota included 18 nurse and dietitian educators.
A predetermined set of focus group questions was used at both sites, and written responses to these questions were summarized on paper and discussed among the multi-site research team. A process of consensus was used to reach agreement on overall educator perceptions, including some of the challenges that were faced early on, as well as some lessons learned and practical solutions to common issues related to Conversation Map usage.

The IDEA Group-Education Intervention
IDEA group education consisted of four 2-hour sessions over a 4-week period (one session per week), with groups of participants using one of four different Conversation Map visuals at each visit. Using six components, including a map visual, conversation questions, discussion cards, group interaction, facilitation, and an action plan, the overall purpose of the group visit was to empower individuals with diabetes to take responsibility for their own health and well-being. Each map, a laminated 3-by-5-foot table-top visual with colorful drawings as metaphors of situations familiar to people with diabetes, is placed on a table with participants gathered around it. Map 1 provides an overview of diabetes and is designed to debunk common myths and discuss feelings associated with having the disease. Map 2 focuses on the relationship between diabetes and food and includes strategies for healthy eating. Map 3 highlights the importance of monitoring blood glucose and using the results to manage diabetes. Map 4 describes the natural course of diabetes and stresses the potential long-term complications of the disease, including ways to delay or reduce risks (Figure 1). A fifth map that focuses on gestational diabetes was not used in the study.

The diabetes educators who utilized the Conversation Map tools at the two study sites are experts in a mix of disciplines. Educators at the Minnesota site include both nurses and dietitians; the majority of educators at this site are certified diabetes educators (CDEs). The New Mexico site includes dietitians and one nurse who all are CDEs. Educators at both sites participated in local training sessions from the same expert facilitator through Healthy Interactions.

Overall Educator Experience Using the Conversation Map Education Approach
One of the major themes highlighted by educators at both study sites about the Conversation Map tools is that they successfully facilitated interactive dialogue among study subjects through rapport building and the sharing of personal stories and experiences.

However, both sites noted that some individuals were not as receptive as others to the map concept. In general, educators observed that women were more often engaged and tended to like the interactive group environment more than did men, and extroverted individuals preferred the interactive experience more than their introverted peers. In addition, the educators reported that group bonding was strongest when the same participants attended all four map sessions, so much so that some participants actually committed to continuing this peer support by meeting offsite after their sessions had ended. Educators also found that a group containing a dominant personality or individuals with conflicting personalities tended to cause disruptions that resulted in a less enjoyable experience for fellow participants. It is therefore important for educators to consider how patient characteristics, including but not limited to sex and personality, can influence the dynamic of an IDEA-like group.

Aside from patient characteristics influencing group dynamics, individuals’ readiness to make healthy behavior choices may also affect their performance in and what they eventually take away from a map session. Study educators found that some of the IDEA group-education participants had not taken time to reflect on what they wanted to get out of the map sessions and were only there with the hope of receiving the study incentives (gift cards for completing baseline and follow-up surveys during the year after joining the study). Based on this observation, a few educators thought that pre-screening prospective group-education patients with selective criteria to identify those suitable for a map session may be beneficial.

The Minnesota site, which has since incorporated the Conversation Map tools into its usual diabetes education curriculum, requires patients to have at least one individual diabetes education appointment before joining a map session. By doing this, educators can review patients’ medical history, assess their current levels of diabetes knowledge, gauge their readiness to engage in behavior change, and assess their enthusiasm to participate in an interactive, group-based learning environment.

How the Conversation Map tools are introduced and used can also influence how much participants enjoy the learning process. According to anecdotal comments made to the educators, the maps were perceived by some study participants, many of whom had higher educational levels, to be too elementary, childish, and almost cartoonish in nature because of the way they are illustrated. These participants said they would have preferred more sophisticated graphic images and detailed content instead of the “children’s book” or “board game” layout of the maps.

There was also an indication from some educators that patients’ duration of diabetes or preexisting diabetes knowledge (they are often related) may be important in determining how they fare with maps, but there were varying opinions on this issue.

Educators at the New Mexico site felt that this educational tool may be more appropriate for people with newly diagnosed diabetes as opposed to those with established, sub-optimally controlled diabetes and who may have previously had some form of initial diabetes education. These educators said some participants felt the Conversation Map subject matter was too basic for them and did not incorporate enough detail to equate with how far they had advanced in their self-management knowledge.

Alternatively, educators at the Minnesota site thought the maps
worked well for the study population with a longer duration of diabetes because the higher knowledge base facilitated ease of information sharing among participants and greater interactivity.

Despite these differing opinions by site, the perceived elementary nature of the maps by some study participants is an important factor to keep in mind for educators preparing to use them in other care settings. Educators at the Minnesota site addressed the perceived elementary characterization of the maps by acknowledging their cartoonish appearance to the group early on, while pointing out that the concepts would still be addressed in great depth. Another solution adopted by the educators at this site was to be prepared for participants who desired more knowledge on frequently addressed subjects by having supplemental information and handouts ready to use as topics arose.

There was general consensus among the educators that the use of supplemental materials with the maps greatly enhances learning. This was particularly true for the dietitians who taught the second map visual that covers nutrition and the relationship between diabetes and food. Educators at both sites who facilitated this nutrition map advocated for the use of supplemental materials because they felt the map’s subject matter “does not incorporate enough detail on planning meals, building menus, discussing recipes, evaluating portion sizes, reviewing food labels, and so on.”

The New Mexico site also stressed the importance of tailoring nutritional and menu information to local and culturally appropriate food preferences. Some other reasons voiced by the educators for encouraging the use of supplemental materials, such as visual graphics, were to help visual learners understand word descriptions on map cards and to address pertinent questions brought up during a discussion.

Overall, integrating supplemental information to aid Conversation Map topic discussions may not only reduce a perceived elementary view of the maps, but could also add a significant amount of information not addressed by them.

**Group Implementation Processes**

In addition to encouraging the use of supplemental materials with the Conversation Map education program, educators in the study also shared views about the map topics and the order in which they were presented. Overall, educators at both sites appreciated how each map reviewed the content of the previous map. They noted that participants particularly enjoyed discussing the myths surrounding diabetes in the first map and found the metaphor of the hot air balloons in the third map beneficial for its reinforcement of concepts relating to blood glucose control.

Because of scheduling logistics, the Minnesota site moved the second map, Healthy Eating, which is taught by dietitians, to the last session. This was felt by the educators to be suboptimal because many of the study participants wanted nutrition addressed much earlier in the education program. In fact, educators...
Diabetes, to be a somewhat depressing matter for patients with the coping process. Although this topic is covered in the first map, An Overview of Diabetes, some educators thought it was out of place, particularly with the pathophysiology component, and was covered too quickly. In fact, some educators suggested that the topic of feelings could be developed as its own Conversation Map to help patients with the coping process.

A few educators also found the final map, The Natural Course of Diabetes, to be a somewhat depressing and challenging note to end on. As one put it, it was “a real downer for some participants,” because it describes the short- and long-term complications of the disease. To counter the negative feelings evoked by this map, educators at the Minnesota site developed supplemental fact cards that highlighted how the rates of complications could be reduced with proper control of blood glucose and cardiovascular risk factors. Also, the use of generic medication names that were unfamiliar to most study participants made the topic on medications in the final map difficult for patients to relate to.

On the whole, it is important for map educators to consider the content of each map, as well as the order in which the maps are presented to best benefit their target population.

Although the IDEA Study had planned for a group size of 10 participants per session, the consensus about whether this was an ideal number differed at each site. Educators at the New Mexico site felt that having six to eight participants would be optimal, whereas educators at the Minnesota site felt that eight to 10 was optimal to allow for an enhanced “support-group feeling.”

In planning the sessions, there were also several logistical issues to consider, including the size of the room (family members were also invited to attend) and ideal positioning of the map to optimize visualization for all participants. Because many participants complained about not being able to see everything on the map well from where they were seated, educators at the Minnesota site decided to include individual placemat-sized maps with the packet of supplemental handouts that could be placed underneath the larger map and pulled out as needed for individual participant viewing.

Although group size varied among the map sessions, the length of the sessions was protocol-driven. The study called for four sessions, each 2 hours in length, for a total of 8 hours. To accommodate those who were employed, both sites offered day and evening sessions. Some educators felt that three sessions would have been sufficient, whereas others felt that distributing the 8 hours over an 8-week period would have been better.

An ideal group and room size, the positioning of the map for good visualization, and the time frame used to teach the maps are therefore all important issues to consider when incorporating the Conversation Map learning tools into a diabetes education program.

Lessons Learned and Advice on Getting Started
It is important to note that, for the diabetes education programs at the Minnesota and New Mexico sites, the IDEA Study provided the first exposure to the Conversation Map education program. In the IDEA group-education method, educators play a different role than in other educational settings. Instead of in-depth didactic teaching, their role is more to promote participant discussion by asking leading, open-ended questions, filling in knowledge gaps, and correcting misinformation.

We learned that training is crucial to becoming proficient in this new role. The study afforded the opportunity to develop a Web seminar called STARTT (Set Up, Tell, Assess, Reflect, Track, and Transition), delivered by some of the study’s educators and hosted by Healthy Interactions.3 Through the STARTT program, educators learn to set up, by reviewing participants’ medical history, gathering supplies, setting up the meeting room (it is helpful to have drinking water on hand), and determining the optimal map placement.

The tell component recommends that educators begin the sessions with statements about the ground rules, scheduled breaks, location of restrooms, and respectful limits on participant speaking time. An upfront statement that the map is an educational tool and not a cartoon or a game helps to dispel negative first perceptions.

Next, educators should assess the group dynamic with patient introductions. Introductions set the stage and help the instructor know where patients are with respect to their diabetes management. This process also gives the instructor valuable insight into how to manage the group’s personalities.

Educators must reflect by throwing questions back to the group. Correct any misinformation that surfaces and “fill in the blanks” as needed.

Discussion topics can be tracked on an educator checklist, which allows the instructor to verify that all topics have been addressed, even when discussed outside of the order of the maps. Being prepared with a supplemental packet of materials and handouts facilitates more in-depth discussion on topics as dictated by the group discussion.

Transition is made from a didactic to a facilitation approach by taking advantage of available training venues. Healthy Interactions provides online tools and Web seminars about the use of the Conversation Map education tools. Educators can also sign up for monthly online newsletters. Videos of experienced facilitation and role-plays of how to deal with different personalities could also be very helpful but are not currently available.

Conclusion
Before initiating group education with the Conversation Map approach, patient satisfaction with the traditional classroom-style of education used in both diabetes education programs was quite high. The reason to experiment with a change
in educational methodology was not to improve patient evaluations, but rather to create an opportunity for patients to be more interactive, to increase the potential for behavior change, and to improve clinical outcomes. Our evaluation clearly showed that when implementing the Conversation Map education program, numerous considerations and preparations are required to make a smooth transition and that practice, belief in the process, and determination are necessary for educators to become confident and to build their facilitation skills. Nevertheless, the group-based IDEA education method using the Conversation Map approach was executed as planned and showed promise to improve diabetes self-management behaviors. Clinical and behavioral outcome data are necessary and will be forthcoming.

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References


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