Healthcare leaders have long expressed the need to effectively engage all members of their organizations in the process of decision-making (Burns 2001; Narine and Persaud 2003). The group priority sort is an innovation in healthcare leadership that supports both consensus building and effective consultation. It was developed in acknowledgement of the knowledge that

- stakeholder engagement and input contribute to stronger decisions, as well as a shared understanding and commitment to strategic directions (Ackerman et al. 2001; Jackson 2003);
- decision-making often draws on subjective information, for which there is little to no direct evidence; and
- common methodologies for collecting subjective information from broad groups of stakeholders (i.e., surveys, interviews, focus groups and the Delphi technique) can be extremely impersonal, time consuming and labour intensive.

The group priority sort, an adaptation of a methodology from the social sciences, is proving to be an efficient and effective way of responding to these challenges. It provides a mechanism that allows leaders to draw upon the unique knowledge and opinions of a broad range of stakeholders, ultimately leading to better-informed decision-making.

This article provides an overview of the group priority sort method, outlining its strengths and limitations, particularly in comparison to another often-used approach, the Delphi method. The article also provides an example of one application in which the group priority sort was used to build an assessment framework for healthcare environments to assess their preparedness for inter-professional education and collaboration.

**Uses**
The group priority sort is a tool for informing decision-making. It draws on the combined knowledge of diverse stakeholders to provide healthcare leaders with the information they need to identify highest-priority items. It is, essentially, a structured opportunity for stakeholders to build consensus in areas of uncertainty and where empirical evidence is either unavailable or inappropriate. For example, imagine that a hypothetical healthcare organization has identified 10 new initiatives to include in its strategic plan but is only able to devote resources to five of them. By participating in a group priority sort, the organization is able to bring together a diverse group of stakeholders to discuss which of these initiatives it should focus on in the coming years. While use of the group priority sort would not yield a decision in and of itself, it would provide rich information that could help decision-makers make an informed decision.

Healthcare settings may find this method useful in a variety of situations, such as selecting performance measures to include...
in a Balanced Scorecard, deciding which benefits to include in their employee compensation packages or developing clinical guidelines. Although the method is called priority sort, the process can also be used to sort items along dimensions other than importance (e.g., desirability, effectiveness or the degree to which different items are a "core" part of a concept).

Origins
The group priority sort has its origins in Q methodology, which is a quantitative research method used in psychology and other social sciences to study people's "subjectivity." Q methodology provides a framework for the systematic study of subjectivity, a person's viewpoint, opinion, beliefs, attitude and the like (Brown 1993). Developed by psychologist William Stephenson in 1953, it has been used both in clinical settings and research to examine how people think about a particular topic and make meaning of it.

The group priority sort builds on Q methodology with two important adaptations:

1. The group priority sort is a predominantly qualitative method: unlike Q methodology, the value of this method lies in the richness of its qualitative information, generating a "thick description" of the group's subjective opinion of a construct or organizational priority.
2. The group priority sort takes place in a group setting: unlike Q methodology, this allows participants to build on each other's ideas and capitalizes on the power of group consensus building.

Process
Typically, a group priority sort is carried out with a group of 12–24 participants, although the process could be used for groups as small as four or larger than 24. Participants are seated in groups of four to six people, with a facilitator and a note taker at each table. Each group is given a set of index cards. Each index card lists an item to be sorted (i.e., an indicator or a statement about the topic). On the table in front of the group is a set of categories into which the cards might be sorted. If items are to be sorted along a continuum of importance, the categories might look like those in Figure 1.

After being oriented to the topic, the groups are asked to do a Rapid Sort. The facilitator reads out each index card and participants shout out their "gut level" reaction about where the card should be placed (i.e., one, two, three, four or five; see Figure 1). Using a democratic process (i.e., majority wins), the facilitator places each index card under the appropriate category. The main goals for the Rapid Sort are to give participants a chance to familiarize themselves with the items and to provide a starting point for the next part of the process, the Forced-Choice Sort (Figure 2).

During the Forced-Choice Sort, group members work together to move the index cards so that there are a specified number in each of the categories (e.g., each category must end up with five cards in it). Final placement is based on consensus, meaning that, where there is disagreement, group members must try to convince one another of their perspective. This requires participants to think more critically about their priorities (or other dimension of interest) and gives them an opportunity to explain their perspectives to others in their group. In addition, the group is provided with several blank index cards on which they can write new items for consideration. Group discussion and final rankings for each item are recorded.

The main goals for the Forced-Choice Sort are to identify relative priorities (or other dimension of interest), as well as to build an understanding of the issues to be considered during decision-making. The session ends with a full group debriefing during which the rankings across the groups are summarized and discussed.
Analysis

Appropriate analysis of a group priority sort may vary depending on the core purpose of the exercise and decision-maker needs. At the end of the sorting process, each potential item has a numeric ranking from each group. Typically, one starts the analysis by organizing items according to their average ranking. Items with consistent rankings at scale extremes (e.g., items ranked as one or five by all groups) yield simple decisions. Items for which there are substantial differences in opinion across the groups (e.g., an item with an average ranking of four, but one group ranked it as two) are identified for a more in-depth analysis.

Analysis of the qualitative data (i.e., the discussion notes) provides information for making decisions on these contentious items, and it explains the more obvious decisions (e.g., the notes may explain why all groups ranked an item as five). As the purpose of this process is to inform decision-making, not to yield a final decision, analysis primarily consists of identifying the relevant opinions and their rationales. Each perspectives should be explored in the context of the role of the person who voiced it (i.e., one should consider the types of information the person has access to as well as the agendas the person brings to the table).

Critical Success Factors

There are a number of factors, described briefly below, that are critical to the success of the group priority sort process:

• Development of the pool of items. Ideas can be generated in a number of ways, including interviews, surveys, literature review, media review, brainstorming etc. No more than 40 items should be sorted at a given time. Also, all items should be stated clearly and concisely and be at the same level. For example, it would be inappropriate to sort the relative importance of “frequent handwashing” versus “appropriate hygiene” as frequent handwashing is one component of appropriate hygiene (i.e., they are not at the same level).

• Selection of the right participants. Participants should all have a vested interest in the subject, as well as be knowledgeable about it. It is also important that they reflect a range of different perspectives. For example, within a healthcare setting, it may be appropriate to include patients/clients and family members, various members of the healthcare team, senior managers/leaders and community stakeholders, as each of these participants may offer a different perspective on the subject.

• Participant grouping. There should be a mix of perspectives at each table. It is helpful to group participants to deliberately minimize negative group dynamics (e.g., avoid putting a particularly outspoken person at the same table as someone who is particularly timid).

• Experienced facilitators. Effective facilitators can minimize any negative group dynamics and encourage participants to share their perspectives.

• Open-minded analysis. Although it can be tempting to make decisions based on the numeric rankings that the group priority sort produces, this narrow perspective is too limiting as the greatest value of the group priority sort is the discussion it generates. Summary analysis of the process should include the consideration of differences in opinion between groups and within groups, as well as the reasons for these differences.

Advantages of the Group Priority Sort Method

One of the benefits of conducting a group priority sort is that participants experience it as meaningful and instructive. After completing the priority sort, groups can concretely see their collective opinion or preference regarding the subject of the study reflected both on the table in front of them and in the summary presented to the broader group. This generates a sense of genuinely meaningful contribution and confidence in the process as a whole. As a result, the participants in the group priority sort feel ownership for the resulting decisions and are therefore more likely to support them.

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A second benefit is that the process provides an opportunity for building a shared understanding among people with very different perspectives. The priority sort allows minority viewpoints to be expressed and explained, and at the same time gives a sense of the majority opinion. Participants in the process come away with a deeper understanding of their own perspectives as well as a broader understanding of other viewpoints on the subject under study. This provides a foundation for building or strengthening communities of practice that involve diverse stakeholders.

It is also worth mentioning that participants find the group priority sort process itself enjoyable. Priority sorting does require greater involvement than standard survey methods, but this involvement is pleasant and engaging for the participants.

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Group Priority Sort Compared with the Delphi Method

One of the most common methods currently used in the health field to elicit similar stakeholder opinions and perspectives is the Delphi method (Powell 2003), in which panel members independently score items on a given scale. These responses are collated and shared with the panel. This process is repeated as many times as is deemed appropriate. The Delphi method can be completed with a geographically dispersed panel of experts and involves little to no physical interaction between panel members (e.g., items may be scored via e-mail).

While both the Delphi method and the group priority sort are able to build consensus in areas of uncertainty where there is a lack of empirical evidence, the group priority sort leverages the energy of the group dynamic to provide important qualitative information about various perspectives that contribute to informed decision-making, in addition to capitalizing on the phenomena of subjectivity and relativity in ways that the Delphi cannot. The Delphi and the group priority sort methods are compared and contrasted in Table 1.

Example of the Group Priority Sort: IP-COMPASS

The Interprofessional Collaborative Organizational Map and Preparedness Assessment (IP-COMPASS) project was funded by HealthForceOntario and led by members from the University of Toronto and The Hospital for Sick Children. The project aimed to create a reflective self-assessment framework to help clinical sites take stock of their degree of preparedness to provide “good” inter-professional education (IPE) opportunities to students. (IPE occurs when people from two or more professions learn with, from and about each other in order to improve collabora-

### TABLE 1.
Comparison of the Delphi and group priority sort methods

<table>
<thead>
<tr>
<th>Delphi Method</th>
<th>Group Priority Sort Method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purposes</strong>: To forecast, consensus build, develop program alternatives, identify priorities, correlate informed judgments on a topic and educate respondent group about diverse and interrelated aspects of a topic</td>
<td><strong>Purposes</strong>: To consensus build, help groups of diverse stakeholders identify priorities, define a complex concept and contribute to informed decision-making</td>
</tr>
<tr>
<td><strong>Outputs</strong></td>
<td>Consensus-based relative importance score for each item Rich qualitative information about reasons given for relative importance of each item Engaged participants with a greater understanding of the topic and greater ownership of the process</td>
</tr>
<tr>
<td><strong>Advantages</strong></td>
<td>Draws on multiple perspectives and group consensus building Engages a large number of stakeholders in a short period of time at a single meeting Harnesses the power of interpersonal interaction and physical movement (i.e., the moving of index cards on the table) to fully engage participants Enables a more sophisticated understanding of the topic (e.g., sheds light on both consensus and contrasting views about specific items) May contribute to the development of a community of practice across different stakeholder groups Enjoyable process Process can be completed in less than a day Builds ownership of the process and outcomes</td>
</tr>
<tr>
<td><strong>Disadvantages</strong></td>
<td>Requires substantial human resources (trained facilitators and note takers) Requires that all participants convene in person Group dynamics may affect the outcomes Limits the number of items that can be sorted Item list must be determined in advance</td>
</tr>
<tr>
<td><strong>Disadvantages</strong></td>
<td>Time consuming Communication and interpretation issues; difficulties can arise because there is no opportunity for verbal clarification or face-to-face comment on the feedback report Participants may lose interest due to a lack of interaction and drop out early in the process</td>
</tr>
<tr>
<td><strong>Outputs</strong></td>
<td>Average relative importance score for each item Engaged participants with a greater understanding of the topic and greater ownership of the process</td>
</tr>
<tr>
<td><strong>Advantages</strong></td>
<td>Draws on multiple perspectives Eliminates the need for group meetings, so good for geographically dispersed panel of experts Generation of ideas in isolation produces a high volume of responses Anonymity may relieve participants’ feelings of pressure to conform Avoids the negative effects of face-to-face panel discussions and solves the usual problems of group dynamics Process tends to conclude with a strong sense of closure and accomplishment</td>
</tr>
<tr>
<td><strong>Disadvantages</strong></td>
<td>Requires that all participants convene in person Group dynamics may affect the outcomes Limits the number of items that can be sorted Item list must be determined in advance</td>
</tr>
</tbody>
</table>

50 Healthcare Quarterly Vol.14 No.4 2011
tion and the quality of care.) Primary and secondary research identified 26 factors and 55 indicators critical to the success of an inter-professional education experience. It was then necessary to identify the items to be included in the IP-COMPASS framework, which had to accurately reflect the findings of the research and at the same time be feasible to complete.

Through a group discussion, a research team including experts in IPE narrowed the pooled potential items to 39. This list was brought forward to a panel of 24 experts in IPE, inter-professional collaboration (IPC), organizational development and measurement. The expert panel members participated in a group priority sort to prioritize the items in terms of how important each was to a clinical setting’s readiness to provide good IPE learning experiences to students.

Not surprisingly, many of the 39 items were ranked as high priority during the initial Rapid Sort (i.e., when the groups were not limited to selecting a particular number of items per category). However, during the Forced-Choice Sort, some panel members successfully advocated for their top priorities, convincing other group members and building consensus on the key factors for IPE readiness.

At the end of the process, each potential item had a numeric ranking from four different groups. The rankings were entered into a spreadsheet, and the average ranking was calculated for each item. The potential items were then sorted based on their average rankings, from most important (five) to least important (one). The researchers then reviewed the extent to which the groups ranked the items in similar ways, making note of any disagreement (within or across groups) as well as the reasons for this disagreement. Through this process, the wording of some items was revised based on comments from the expert panel members (e.g., the requirement that teams be “highly collaborative” was seen as excessive by one panel member; as a result, the word highly was removed from the requirement).

The researchers developed a decision tree identifying which items should be automatically included in the IP-COMPASS framework (e.g., items with an average ranking of four or greater), which items should be automatically excluded (e.g., items with an average ranking of 2.75 or lower and a high level of agreement both within and across groups) and which items required further consideration (e.g., items with a high level of disagreement either within or across groups).

The research team briefly reviewed the items that were automatically included or excluded to ensure that they agreed with those decisions. They then reviewed and discussed the numeric and qualitative priority sort data for those items for which they remained undecided. The group came to consensus about which items should be included and which should be excluded. In total, 27 items were selected for inclusion in the IP-COMPASS framework.

The use of the group priority sort method in this example accomplished two important objectives: (1) the process enabled the group to decide which of the 39 factors were critical and should be included in the IP-COMPASS framework based on rich, thick descriptions from a diverse range of stakeholders; and (2) the bringing together of 24 experts in IPE/IPC built enthusiasm and ownership for the resulting IP-COMPASS framework.

Variations
As stated previously, in addition to facilitating discussion regarding the relative priority (i.e., importance) of an item, the group priority sort can capture subjective information on other dimensions, including desirability, effectiveness and the degree to which items are a “core” part of a concept. When conducting a variation on the priority sort, one would follow the process as described above, changing only the categories (e.g., “more important”/”less important” may be replaced with “more desirable”/”less desirable”).

For example, in 2005, the Michener Institute for Applied Health Sciences was incorporating the teaching of professionalism into the curricula of all undergraduate and post-diploma programs. As part of this process, they used the group priority sort with all program faculty members to gain a better understanding of what professional behaviour looked like in the health professions represented at Michener. The findings provided the beginning of a collective understanding of the construct of professionalism, which helped Michener considerably in the development of the curricula and the building of an assessment system.

We also have used the group priority sort to better understand the concepts of quality education in academic health science centres.

Discussion
In this article, we provide an overview of the group priority sort method and illustrate how it was used to build an assessment framework for healthcare environments to assess their preparedness for IPE. In this section, we provide a summary of the advantages of the method, a brief description of circumstances in which the group priority sort is not applicable and recommended next steps in the evolution of the method’s use in the healthcare community.

The group priority sort benefits from being a structured approach that harnesses the collective wisdom of participants in a meaningful and enjoyable way. More importantly, the group priority sort generates useful information that helps healthcare leaders to make critical decisions regarding operating priorities, allocation of resources and strategic directions. The advantages of this method are that it allows healthcare leaders to make decisions with consideration given to multiple viewpoints, provides a more structured approach to enabling rich discussion...
and the gathering of detailed descriptions of varying perspectives, helps to build common understanding (breaking down barriers between silos) and can generate commitment and buy-in to ultimate decisions.

The group priority sort, while valuable in many ways, is not the best method for every circumstance. Therefore, we need to draw attention to situations in which the use of the method will not generate useful and valuable information. The group priority sort captures subjective opinions and is particularly useful in consensus building in an area of uncertainty or when there is a lack of empirical evidence. If you are seeking objective facts or studying a construct that is already well defined, the group priority sort may not be appropriate or add value. Furthermore, the results from the group priority sort are not intended to produce final decisions but, rather, relative priorities that contribute to informed decision-making. If you need to arrive at a key decision in the moment, you might not want to use the group priority sort process. Finally, the success of the priority sort is highly dependent on how it is implemented. Highly skilled, trained staff/facilitators are critical. Therefore, if skilled facilitators (those who can attend to and manage group processes) are not in your system or cannot be brought in, the group priority sort method might not be the best choice.

The Q methodology on which the group priority sort is based is not new to the field of psychology and psychological measurement. However, its metamorphosis into the group priority sort and the application of this method to the field of healthcare leadership represents an innovation that requires further study and investigation into its validity, utility and feasibility.

The next steps in the evolution of the group priority sort are to continue using this method in the health field and beyond, to collect information during its use to assess the validity of the process, to develop a toolbox for healthcare organizations that will orient them to the process and prepare in-house facilitators and, finally, to compare the value of the information obtained in the group priority sort with that obtained through traditional methods.

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