



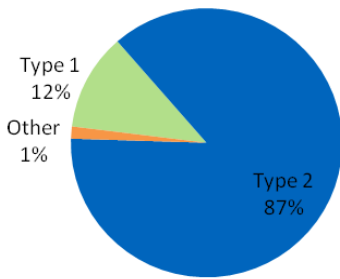
March 2015

Alberta Health Services

Diabetic Patients Survey of In-hospital Experience

The Diabetes, Obesity, and Nutrition (DON) Strategic Clinical Network (SCN) is embarking on a provincial initiative to enhance and improve inpatient diabetes management. In preparation for this initiative, the DON SCN, in conjunction with AHS Survey and Evaluation services, conducted a survey of diabetic patients across Alberta who had recently received inpatient care. The primary intent of this survey was to gather the patients' perspective on the quality of diabetes management in acute care sites across the province and to help establish how clinical practices and systems related to diabetes could be improved.

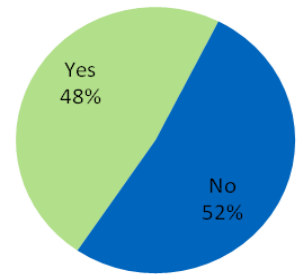
Diabetes Type



An invitation to participate in the survey was mailed to 2,800 diabetic patients discharged from an Alberta hospital in June of 2014 (approximately 20% of the total inpatient population). These patients were identified using Discharge Abstract Data and were included if they were 18 years or older, had stayed in hospital for any reason for longer than 24 hours, and who had a diagnosis of diabetes coded in their inpatient record. The survey was mailed out in September of 2014 and participants were invited to complete either a paper-and-pencil or web-based version of the questionnaire.

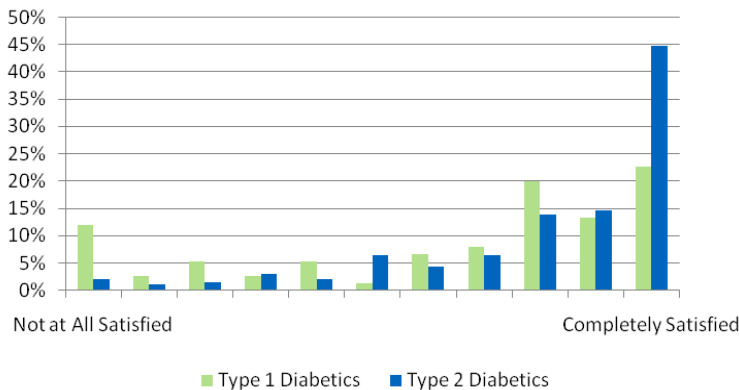
Of those patients who were contacted, 672 (26%) patients completed the survey. The survey sample was predominantly male (54%), between 60 and 79 years of age (59%), self-reported being Type 2 diabetics (86%), reported receiving insulin during their hospital stay(48%), and reported having lived with diabetes for 11 to 20 years (30%). It should be noted that there was a relatively low response rate from 'younger' patients (i.e., < 60) and as a result this age group was underrepresented here.

Insulin Given In Hospital



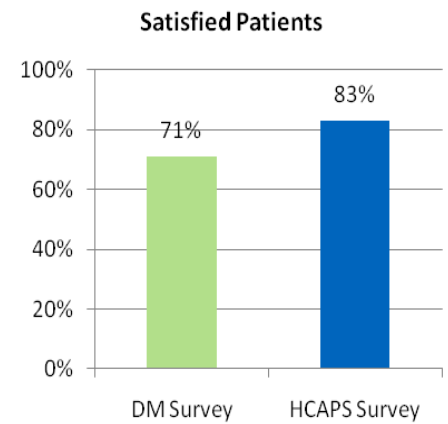
The survey consisted of 32 close-ended questions covering various aspects of hospital care that included monitoring of sugar levels, administration of diabetic medications, diabetic diets, responsiveness of healthcare providers, and discharge preparation. The survey also contained three open-ended questions where respondents could provide additional feedback (both positive and negative) about their experience.

Overall Satisfaction with Diabetes Care in Alberta Hospitals

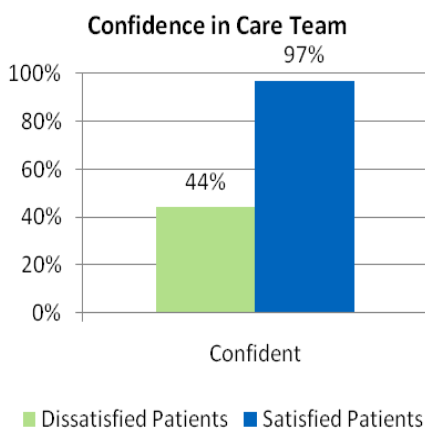


Overall, when asked to rate their satisfaction with the diabetic care they received while in hospital, 71% of respondents rated the care they received as very satisfactory (8, 9 and 10 combined, from the 10-point scale where 0 means not at all satisfied and 10 means completely satisfied).

Clearly, many of the diabetic patients who replied had positive experiences and valued the diabetic care they received in Alberta hospitals. Viewed from the patient perspective, there certainly appears to be a positive base to work from. That being said, when comparing this result to the provincial AHS inpatient experience survey completed at the same time, the results would seem to suggest that diabetic patients' experience less satisfaction with care (71% rated care as very high) than the general inpatient population (83% rated care as very high). A deeper analysis of the survey results might suggest potential reasons for why this is the case and where improvements could be made.

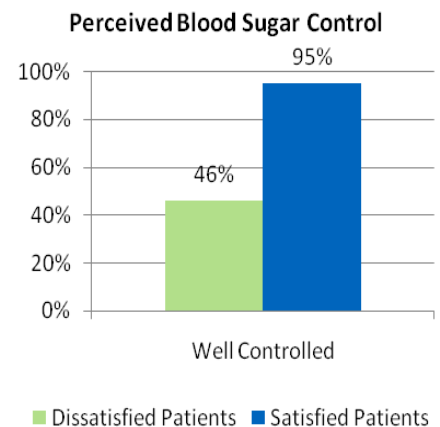


Further analysis of the data was conducted to compare those who were dissatisfied¹ ($n = 115$) with the care they received to those who were satisfied ($n = 461$) in order to explore potential drivers of satisfaction. The response patterns of these groups highlighted three areas that potentially drive satisfaction among respondents. These areas were as follows:

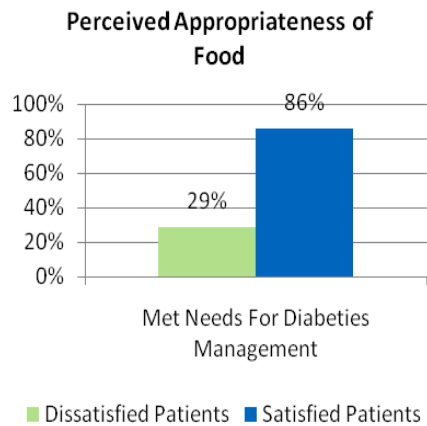


1. *Health Care Providers:* While the vast majority of patients reported very little involvement in their diabetic care (e.g., care planning), ratings of the health care team varied markedly between those who were satisfied and those who were not. In particular, patients were more likely to be satisfied if they had confidence in their care team, felt that the team was knowledgeable about diabetes, presented a consistent message, and acknowledged them in their diabetes care. A breakdown in these areas did lead to lower ratings of satisfaction and underlines the importance of the patient-provider interaction.

2. *Control of Blood Sugars:* Ratings of blood sugar control also varied markedly by satisfaction groups. That is, patients who were satisfied were more likely to report feeling that their blood sugar levels were always well controlled and noted fewer instances of hypo-and hyper-glycemia. Clearly, diabetics understand the importance of controlling blood sugar levels and likely expect a high degree of blood sugar control while in hospital.

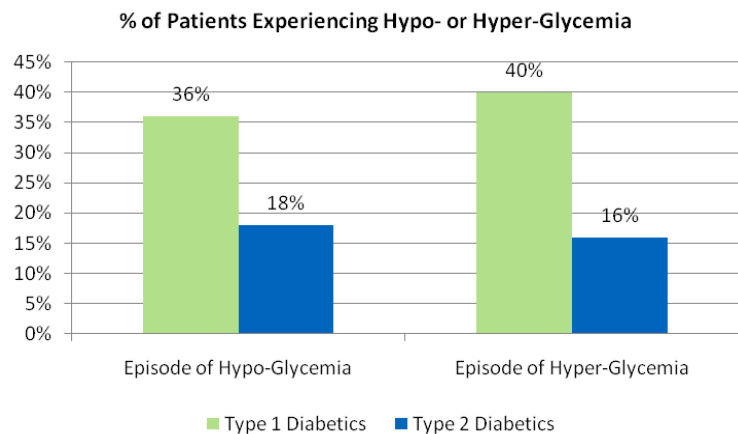


¹ Dissatisfied patients were defined as those who score 0 to 5 on the 10-point overall satisfaction question. Satisfied patients were defined as those who scored 8, 9, or 10 on the 10-point overall satisfaction question.



3. *Nutrition Component:* Ratings of the nutritional component of their stay varied markedly between those who were satisfied and those who were not. As one might expect, patients who were satisfied with their care were more likely to report being provided with food that met their diabetic management needs and that the food was timed appropriately with insulin/medication use. Given that 70% of respondents reported using diet as an essential part of their home management regimen, it is easy to see how this could drive patient experience.

It is also worth noting that an additional analysis was conducted to establish differences between respondents with Type 1 ($n=75$) and Type 2 diabetes ($n=530$). Overall, the analysis indicated that patients with Type 1 diabetes were more critical of their care than that of Type 2 patients. In fact, the average rating of overall satisfaction was 6.5 among Type 1 respondents and 8.1 for Type 2 respondents. The drivers of satisfaction for Type 1 and Type 2 diabetics did align with the three highlighted areas above (e.g., patient-provider interaction, sugar control, and nutrition) and suggested that Type 1 diabetics are particularly sensitive to these aspects of care. Blood sugar control and noted episodes of hypo- or hyper-glycemia were two of the biggest gap areas between the groups as Type 1 diabetics noted far less control.



As mentioned above, patients were also offered the opportunity to provide written responses to three open-ended questions. In total, 427 respondents provided open-end comments about the care they received while in hospital and qualitative analysis of the data was completed by Survey and Evaluation services to group the responses into key theme areas. As with the overall theme of the survey, the majority of the comments highlighted the positive experiences most patients had during their inpatient stay. In particular, there were numerous commendations about the knowledgeable and caring doctors and nurses who made the experience positive (126 overall). Again, this positive regard toward the health care team underscores the importance of the patient-provider interaction within inpatient settings.

While the majority of responses were positive, the written comments also highlighted a number of potential areas for improvement. These areas are as follows:

1. Improvement in food options for diabetic patients (74 comments): Respondents made several suggestions for improving the food options available to diabetic patients during inpatient visits. For example, patients asked for greater availability of sugar free food, food with proper calories, more fruits and vegetables, better availability of food when needed, more snacks, proper servings, better tasting food, and the information on carb counts for food.

‘Most of the food was high in sugar content such as prepared puddings, yogurt, and fruit juices. Two hours after eating, my blood sugar would be over 10, so I would get insulin’

‘They changed my insulin and it was not controlling my sugar level, as it was always high.’

2. Improvement in diabetic medication administration (66 comments): Respondents also made several comments about blood sugar control and medication administration. For example, patients indicated that their blood sugar was not well controlled, that insulin was not given on time, that there was no option to use a consistent type of insulin as at home, and that the timing of medications was not adequate in relation to food. Several respondents indicated that they would prefer to bring their own medication from home. Other suggestions were to provide insulin pens in hospital, and better support for insulin pump users.

3. Improvement in health care providers' communication about diabetic patients (40 comments): Respondents made a number of comments about the care teams. For example, patients indicated that healthcare providers should better coordinate care across the care team as not all providers were aware that a particular patient was diabetic. This includes communication about medications and food requirements. Several patients indicated that their diabetic specialist should be involved while they are in hospital care. In addition, there were recommendations that health care providers should listen better to diabetic patients and accept their suggestions, and that the blood sugar results should be communicated regularly to patients.

‘They changed the dose of my insulin and had difficulty remember my insulin. I always had to ask for it and by the time I got it my meal was cold’

In summary, there are some key issues from the patients' perspective to work from as we proceed with the inpatient diabetes management initiative. The respondents did value the care they received and highlighted a number of important areas of focus. The patient-provider interaction, consistent blood sugar control, and nutrition are all important aspects of care that patients respond to. The DON SCN will continue to work with various stakeholders in the inpatient community to improve on the gaps supported by this survey and to establish a consistent, positive inpatient experience for all diabetics who visit inpatient settings across the province.