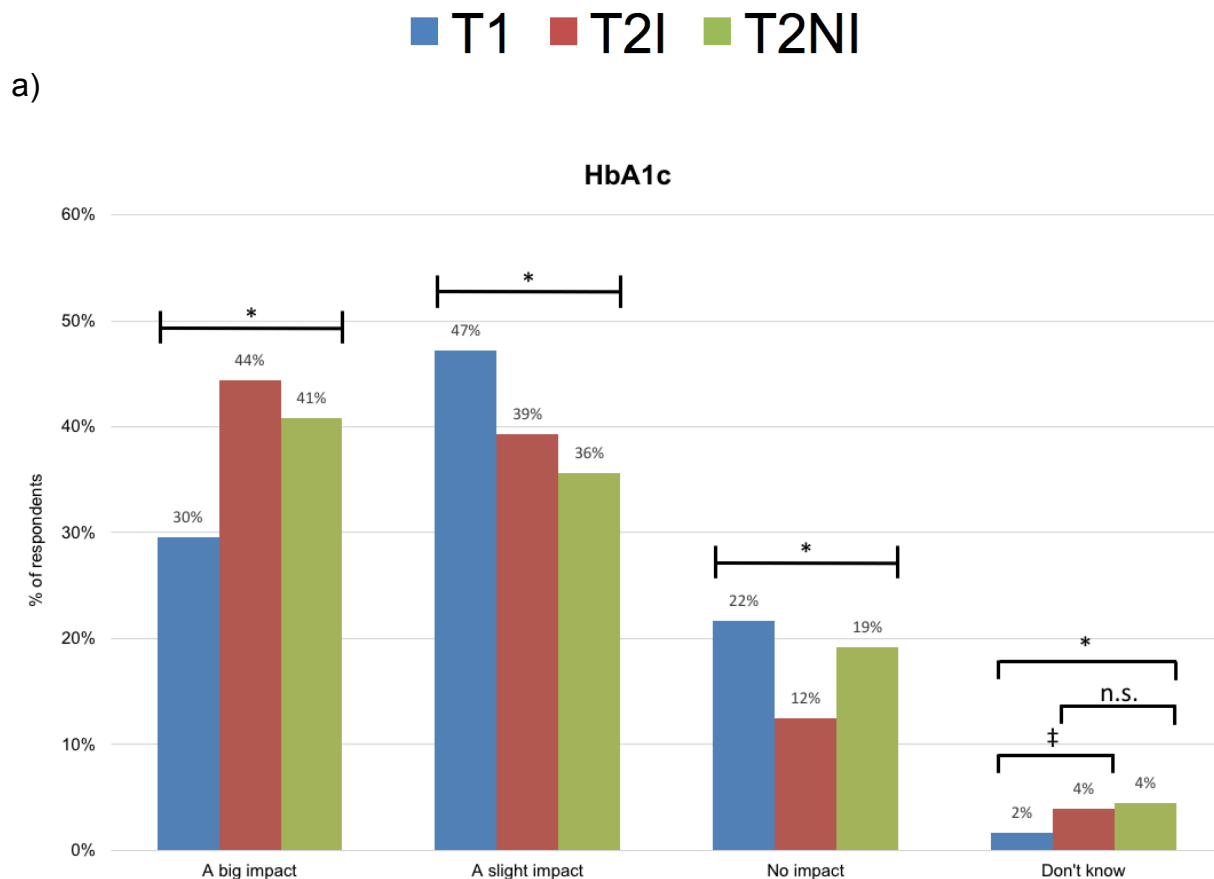


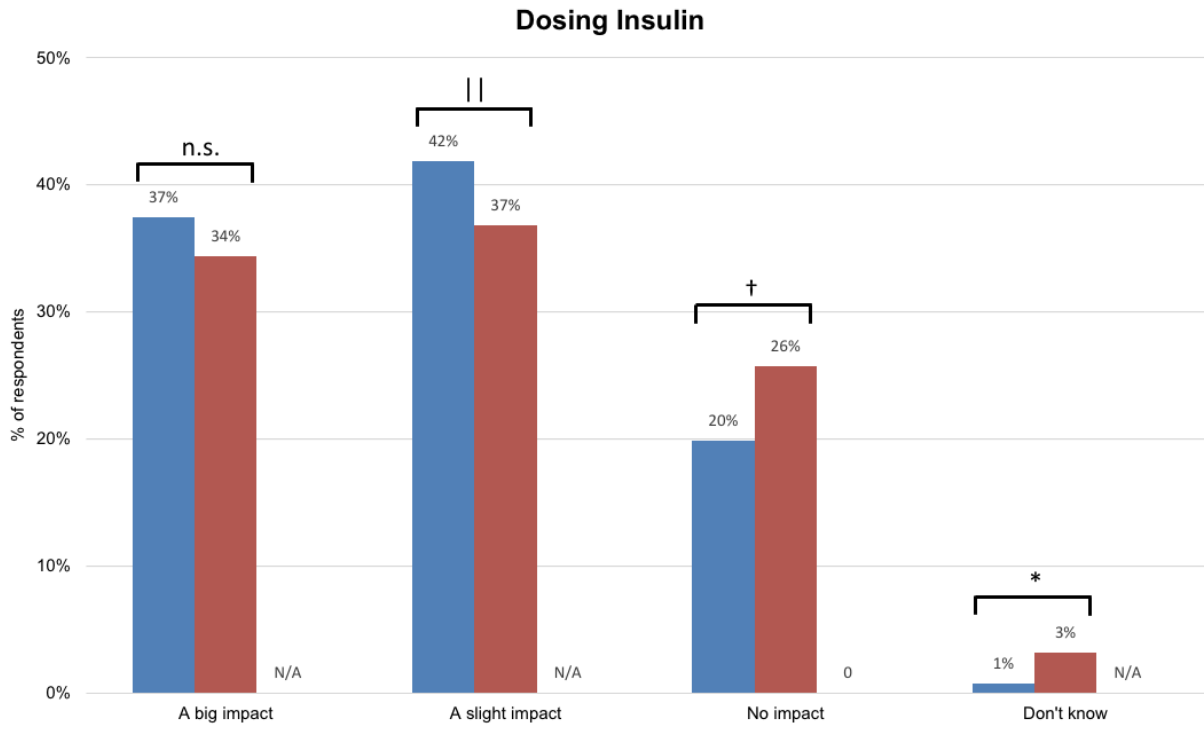
## Does Time-in-Range Matter? Perspectives From People With Diabetes on the Success of Current Therapies and the Drivers of Improved Outcomes

Ava S. Runge, Lynn Kennedy, Adam S. Brown, Abigail E. Dove, Brian J. Levine, Sophie P. Koontz, Varun S. Iyengar, Sarah A. Odeh, Kelly L. Close, Irl B. Hirsch, and Richard Wood

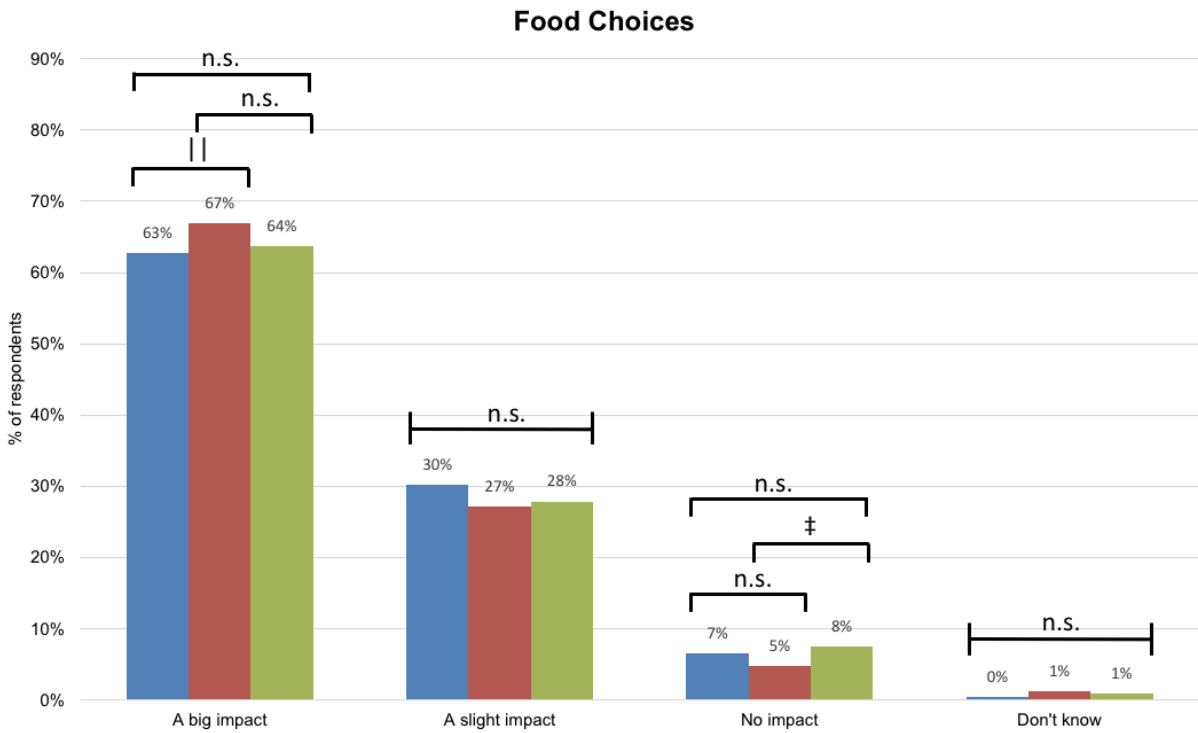
FIGURE S1. Factors that Have a “Big Impact” on Daily Life with Diabetes, by Factor and Diabetes Type. Survey respondents were asked to rate the impact of nine factors on daily life with diabetes: a) HbA1c, b) Dosing Insulin (insulin users only: T1, T2I), c) Food Choices, d) Hypoglycemia, e) Non-Diabetes Health Issues, f) Side Effects of Diabetes Medications, g) Symptoms of Diabetes Complications, h) Time-in-Range, and i) Unexpected Blood Glucose Numbers. A Z-test was used to compare the significance of results between groups (T1, T2I, T2NI) to the 95% confidence level: \* =  $p \leq 0.0005$ ; † =  $p \leq 0.001$ ; ‡ =  $p \leq 0.005$ ; § =  $p \leq 0.01$ ; || =  $p \leq 0.05$ ; n.s. =  $p > 0.05$ .



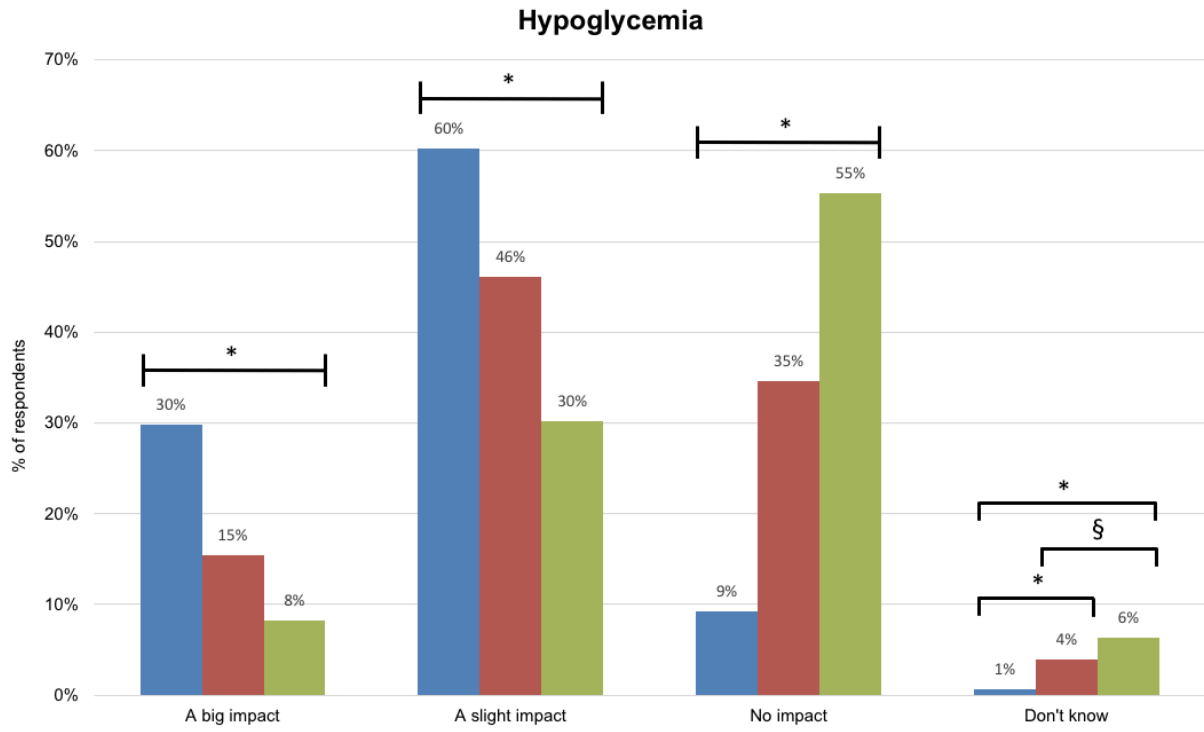
b)



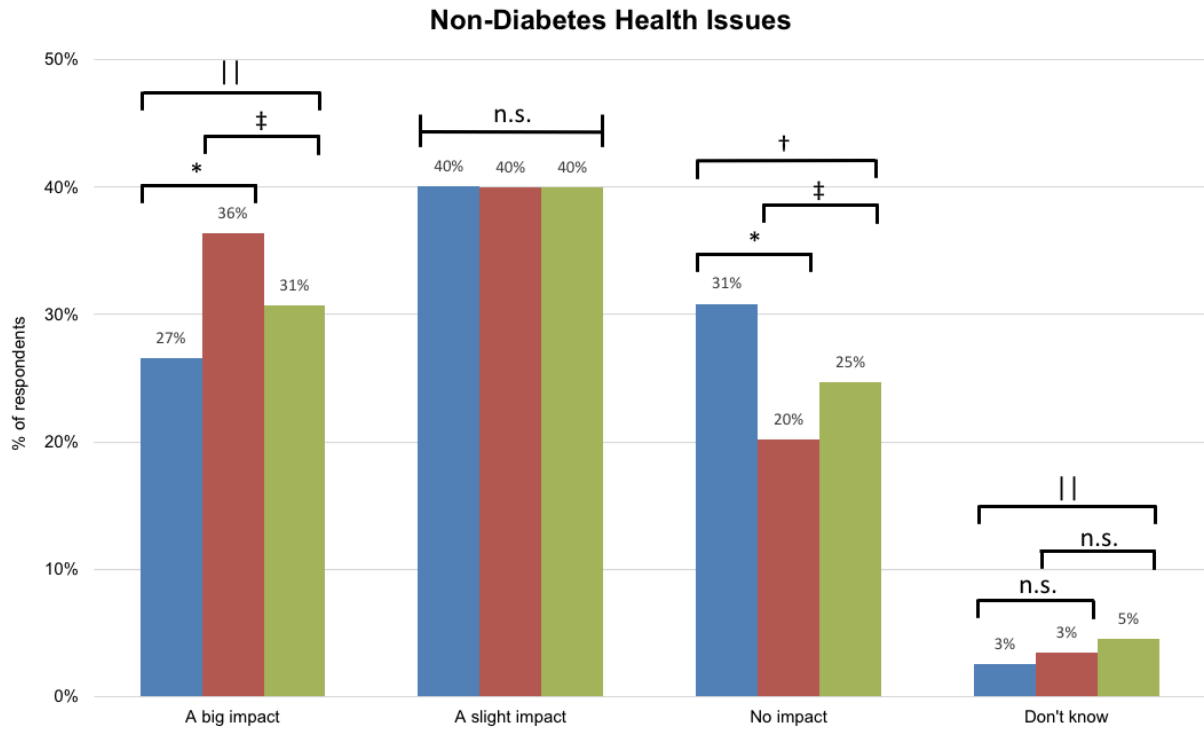
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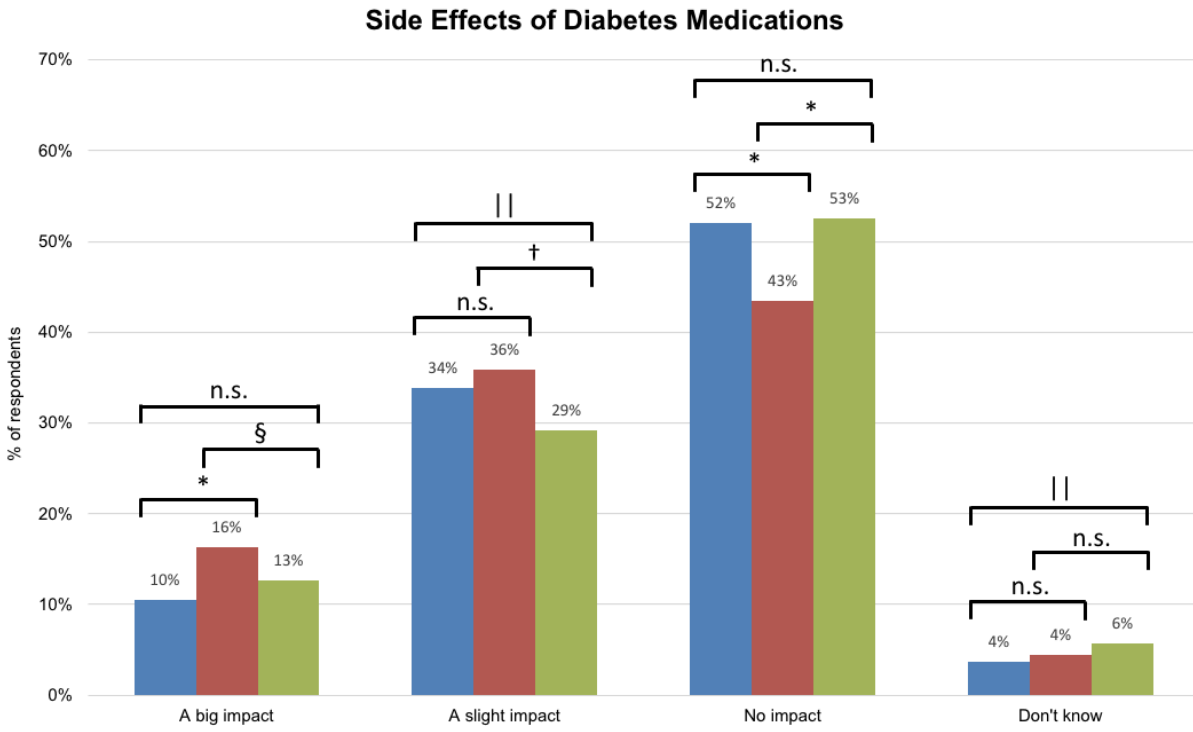
d)



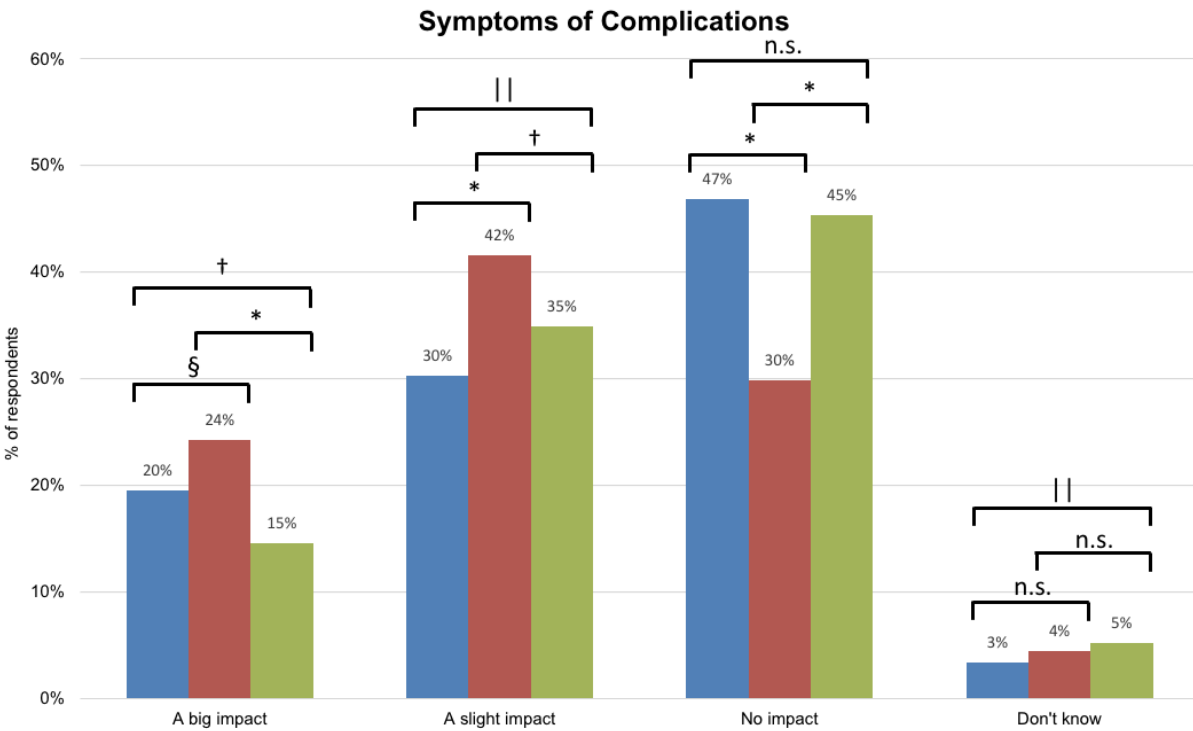
e)



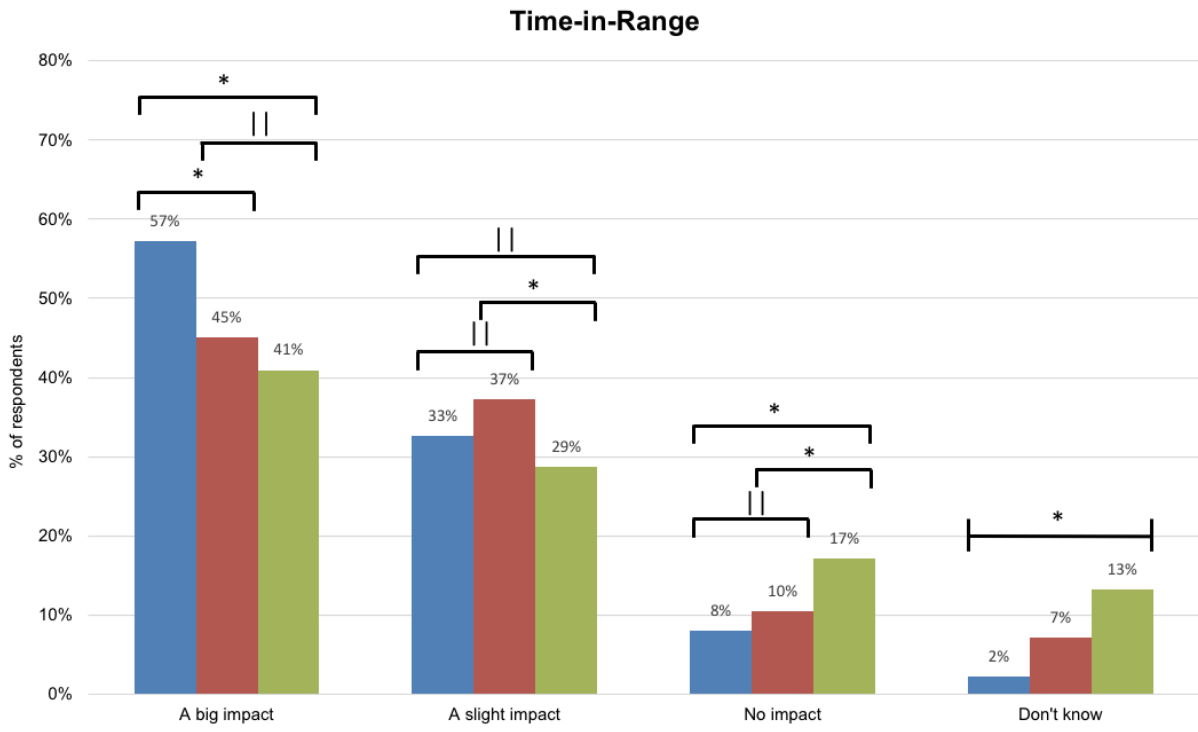
f)



g)



h)



i)

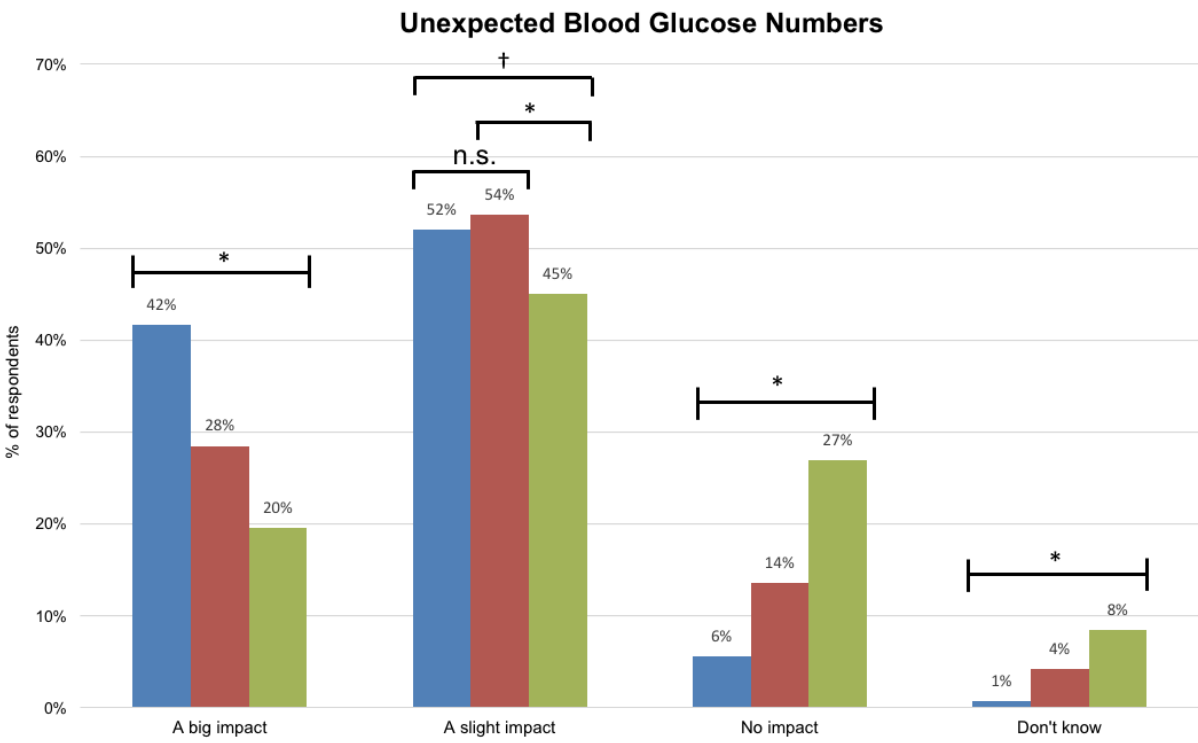


TABLE S1. dQ&A Patient Survey.

**A. What changes to the things below would have the biggest positive impact on your diabetes? Please place these items in order of importance to you personally.**

**A change to:**

\_\_\_\_\_ Your diet and exercise

\_\_\_\_\_ The medications you take (for example: pills, insulin, other injections)

\_\_\_\_\_ The medical devices you use (for example: blood glucose meter, insulin pump, continuous glucose monitor)

\_\_\_\_\_ The care you get from doctors and/or nurses

\_\_\_\_\_ Your emotional state (for example: whether you feel mostly relaxed/cheerful, or mostly anxious/depressed)

\_\_\_\_\_ Your relationships with family/loved ones

\_\_\_\_\_ Other (please specify)

**B. How often do you feel that each of the following phrases have applied to you during the past few weeks?**

|  | None of the time      | Rarely                | Sometimes             | Often                 | All of the time       |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I've been feeling useful                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I've been feeling optimistic                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I've been feeling relaxed                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I've been feeling interested in other people | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I've had energy to spare                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

|   |                       |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I've been dealing with problems well    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I've been thinking clearly              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I've been feeling good about myself     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I've been feeling close to other people | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I've been feeling confident             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I've been able to make up my mind       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I've been feeling loved                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I've been interested in new things      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I've been feeling cheerful              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**C. How successful is your current diabetes care regime at delivering the following for you personally?**

***For this question, 1 is 'not at all successful' and 5 is 'very successful'.***

|  | Not at all successful<br>1 | 2                     | 3                     | 4                     | Very successful<br>5  | Don't know            |
|--|----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Blood glucose numbers throughout the day that are generally between 70 mg/dl and 180 mg/dl | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Morning (fasting) blood glucose numbers that are between 70 mg/dl and 130 mg/dl            | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Blood glucose numbers after a meal that are less than 180 mg/dl                            | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Overnight blood glucose numbers that are generally between 70 mg/dl and 130 mg/dl          | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**D. For you personally, how successful is your current diabetes care regime at preventing the following?**

***For this question, 1 is 'not at all successful' and 5 is 'very successful'.***

|  | Not at all successful<br>1 | 2                     | 3                     | 4                     | Very successful<br>5  | Don't know            |
|--|----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Mild hypoglycemia (low blood glucose that you can correct yourself by eating or drinking something)                | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Moderate hypoglycemia (low blood glucose that needs help from someone else to correct, but not medical assistance) | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |



|   |                       |                       |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Severe hypoglycemia (low blood glucose that requires urgent help from a medical professional)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Diabetic Ketoacidosis, or DKA. This is the build-up of ketones in the blood which in turn makes the blood more acidic. DKA needs immediate medical attention. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**E. How successful is your current diabetes care regime at the following?  
For this question, 1 is 'not at all successful' and 5 is 'very successful'.**

|  | Not at all successful<br>1 | 2                     | 3                     | 4                     | Very successful<br>5  | Don't know            |
|--|----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Improving or maintaining your HbA1c                            | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Preventing hyperglycemia (high blood glucose: above 250 mg/dl) | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**F. How much impact on your daily life do the following have?**

|   | No impact             | A slight impact       | A big impact          | Don't know            |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| Hypoglycemia (low blood glucose)            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Time spent in the ideal blood glucose range | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Unexpected blood glucose numbers            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Side effects from diabetes medicines        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Symptoms of diabetes complications          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Non-diabetes health issues                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your A1c                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your food choices                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Dosing insulin                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**G. How much impact on your daily life do concerns about the following have?**

|  | No impact             | A slight impact       | A big impact          | Don't know            |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| Mild hypoglycemia (low blood glucose that you can correct yourself by eating or drinking something)                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Moderate hypoglycemia (low blood glucose that needs help from someone else to correct, but not medical assistance) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Severe hypoglycemia (low blood glucose that requires urgent help from a medical professional)                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**H. How successful has your diabetes care regime been at helping you avoid the following?**

***For this question, 1 is 'not at all successful' and 5 is 'very successful'.***

|   | Not at all successful<br>1 | 2                     | 3                     | 4                     | Very successful<br>5  | Don't know            |
|---|----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Eye problems caused by diabetes   | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Nerve problems caused by diabetes (for example, pain or numbness in feet, legs, or hands) | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Foot problems caused by diabetes (for example, calluses, ulcers, dry skin)                | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Skin problems caused by diabetes  | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Kidney problems caused by diabetes  | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

|  |                       |                       |                       |                       |                       |                       |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Anxiety, frustration or depression caused by diabetes (sometimes called 'diabetes distress') | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Weight gain  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**I. How successful is your current diabetes care regime at helping you with the following?**

***For this question, 1 is 'not at all successful' and 5 is 'very successful'.***

|   | Not at all successful<br>1 | 2                     | 3                     | 4                     | Very successful<br>5  | Don't know            |
|---|----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Avoiding heart or circulation problems    | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your blood pressure                       | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your cholesterol                          | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Reaching, or keeping to, a healthy weight | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**J. How successful is your current diabetes care regime is at freeing you from worry about the following?**

***For this question, 1 is 'not at all successful' and 5 is 'very successful'.***

|   | Not at all successful<br>1 | 2                     | 3                     | 4                     | Very successful<br>5  |
|---|----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Your glucose numbers during the day     | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How well you feel from day to day       | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The longer-term outlook for your health | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your overnight blood glucose            | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**K. How successful is your current diabetes care regime at preventing or limiting the following negative feelings about your diabetes?**

***For this question, 1 is 'not at all successful' and 5 is 'very successful'.***

|                               | Not at all<br>successful<br>1 | 2                     | 3                     | 4                     | Very<br>successful<br>5 | Does<br>not<br>apply  |
|-------------------------------|-------------------------------|-----------------------|-----------------------|-----------------------|-------------------------|-----------------------|
| Frustration or discouragement | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |
| Stress or anxiety             | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |
| Guilt                         | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |
| Feelings of failure           | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |
| Feelings of being overwhelmed | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |

**L. On any given day, which of the following is most likely to put you in a positive frame of mind about your diabetes and your health?**

***Please select THREE items, putting your most important at the top.***

|  |
|--|
| _____ You take your diabetes medications exactly as prescribed |
| _____ Your blood glucose numbers are on-target all day         |
| _____ You eat healthy food at every meal                       |
| _____ You get the exercise you need or want                    |
| _____ You are relaxed and taking your diabetes in your stride  |
| _____ Other (please specify)                                   |

**M. Thinking about the previous question, on how many days per month do these things typically happen?**

***Days per month: \_\_\_\_\_***

**N. On a typical day, how many minutes per day do you spend managing your diabetes? Please give us your best estimate.**

**Minutes per day:**\_\_\_\_\_

**O. Please estimate for us what percentage of a typical day you spend with your blood glucose in the ideal range (between between 70 mg/dl and 180 mg/dl).**

**Percentage (without the % sign):**\_\_\_\_\_

**P. How successful is your current diabetes care regime at helping free your loved ones from the following?**

**For this question, 1 is 'not at all successful' and 5 is 'very successful'.**

|  | Not at all successful<br>1 | 2                     | 3                     | 4                     | Very successful<br>5  | Don't know            |
|--|----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Worry about your diabetes day-to-day                         | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Restrictions on what they can do because of your diabetes    | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Concern about the impact of your diabetes in the longer term | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**Q. What do you think would most help reduce any concerns your loved ones have about your diabetes?**

**R. How successful is your current diabetes care regime at maintaining or improving...**

**For this question, 1 is 'not at all successful' and 5 is 'very successful'.**

|  | Not at all successful<br>1 | 2                     | 3                     | 4                     | Very successful<br>5  | Does not apply        |
|--|----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Your ability to be intimate with a partner | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your sexual health and well-being          | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your interest in intimacy and/or sex       | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**S. How successful is your current diabetes care regime at the following?  
For this question, 1 is 'not at all successful' and 5 is 'very successful'.**

|   | Not at all<br>successful<br>1 | 2                     | 3                     | 4                     | Very<br>successful<br>5 | Does<br>not<br>apply  |
|---|-------------------------------|-----------------------|-----------------------|-----------------------|-------------------------|-----------------------|
| Limiting the mental effort needed to manage your diabetes             | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |
| Not taking up too much of your time                                   | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |
| Limiting the number of pills or injections you have to take every day | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |
| Minimizing the amount of 'diabetes stuff' you need to keep with you   | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |
| Not controlling or taking over your daily schedule                    | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |
| Giving you a reasonable amount of flexibility with food and exercise  | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |
| Giving you 'breaks' from thinking about diabetes                      | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |

**T. How successful is your current diabetes care regime at the following?  
For this question, 1 is 'not at all successful' and 5 is 'very successful'.**

|   | Not at all<br>successful<br>1 | 2                     | 3                     | 4                     | Very<br>successful<br>5 | Don't<br>know         |
|---|-------------------------------|-----------------------|-----------------------|-----------------------|-------------------------|-----------------------|
| Keeping your diabetes from intruding into social situations   | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |
| Preventing you from feeling embarrassed about having diabetes | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |

|   |                       |                       |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Preventing you from feeling isolated or different | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Not making your diabetes visible to others        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**U. How important it is to you that people you meet or see in your daily life who are NOT friends or family...**

***For this question, 1 is 'not at all important' and 5 is 'very important'.***

|   | Not at all important<br>1 | 2                     | 3                     | 4                     | Very important<br>5   | Does not apply        |
|---|---------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Don't know that you have diabetes   | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Don't see you managing your diabetes  | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Don't form opinions or make assumptions about you because you have diabetes | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Don't label you a 'diabetic'  | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**V. From your personal point of view, how true are the following statements about your healthcare providers?**

***For this question, 1 is 'not at all true' and 5 is 'very true'. If you don't currently see a diabetes specialist, endocrinologist, or a diabetes educator, please select 'does not apply'.***

|   | Not at all true<br>1  | 2                     | 3                     | 4                     | Very true<br>5        | Does not apply        |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I have a good relationship with my primary care provider (your doctor or nurse for general health issues) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I have a good relationship with my diabetes specialist or endocrinologist                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

|  |                       |                       |                       |                       |                       |                       |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| My healthcare team is 'on my side' when it comes to diabetes   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My healthcare team does NOT blame me when something goes wrong with my blood glucose control or my diabetes care | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My healthcare team does its best to keep my diabetes care affordable   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I have a good relationship with my diabetes educator   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**W. Almost done! Below are some things that could be said to contribute to a good 'quality of life'. You can also add your own items. Please tell us how much each of these is affected positively or negatively by your diabetes.**

|   | Very negatively affected | Somewhat negatively affected | Not affected at all   | Somewhat positively affected | Very positively affected |
|---|--------------------------|------------------------------|-----------------------|------------------------------|--------------------------|
| Feeling in control of your life                       | <input type="radio"/>    | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/>    |
| Being able to plan for the future                     | <input type="radio"/>    | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/>    |
| Enjoying social situations                            | <input type="radio"/>    | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/>    |
| Getting enough sleep                                  | <input type="radio"/>    | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/>    |
| Not feeling stressed or anxious                       | <input type="radio"/>    | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/>    |
| Having the energy for new challenges or opportunities | <input type="radio"/>    | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/>    |
| Not having to worry too much about money              | <input type="radio"/>    | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/>    |



|  |                       |                       |                       |                       |                       |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Having a good sex life and/or intimacy with someone you care for | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Having a rewarding work or school career                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Being physically able to do the things you want                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Practicing your chosen religion or spiritual life                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Not feeling isolated or different                                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Having the support of your family and friends                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Being able to help family members, friends or your community     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Feeling confident and capable                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Being able to be spontaneous and live in the present             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other (please specify)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other (please specify)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other (please specify)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**X. If new diabetes therapies could improve all of the following, which would matter to you most? Please select up to FIVE items, in your personal priority order, with the most important at the top.**

|   |
|---|
| _____ Better general well-being               |
| _____ Less risk of complications              |
| _____ Less effect on loved ones               |
| _____ Less hypoglycemia (low blood glucose)   |
| _____ Less effect on work/school              |
| _____ Less effort needed for diabetes care    |
| _____ Fewer eating restrictions               |
| _____ Fewer exercise restrictions             |
| _____ Less stress and anxiety from diabetes   |
| _____ Less hyperglycemia (high blood glucose) |
| _____ Less effect on social life              |
| _____ Less visibility to others               |

TABLE S2. Baseline Characteristics of dQ&A Patient Panel Survey Respondents.

|  | Overall respondent pool % (n=3,461) | Respondents with type 1 diabetes % (n=1,026) | Respondents with type 2 diabetes taking insulin % (n=1,154) | Respondents with type 2 diabetes not taking insulin % (n= 1,281) |
|--|-------------------------------------|--|---|--|
| <b>HbA1c</b>                               |                                     |  |   |  |
| ≤6% (<42 mmol/mol)                         | 16                                  | 15   | 9   | 23   |
| >6% to ≤7.6% (>42 mmol/com to 60 mmol/mol) | 62                                  | 63   | 58  | 64   |
| >7.6% (>60 mmol/mol)                       | 21                                  | 20   | 33  | 13   |
| <b>Age range</b>                           |                                     |  |   |  |
| 18-34                                      | 4                                   | 12   | 1   | 1  |
| 35-44                                      | 9                                   | 19   | 4   | 4  |
| 45-54                                      | 16                                  | 21   | 14  | 13   |
| 55-64                                      | 34                                  | 29   | 37  | 35   |
| 55-64                                      | 37                                  | 19   | 43  | 46   |
| ≥65  | 0                                   | 0  | 0   | 0  |
| <b>Sex</b>                                 |                                     |  |   |  |
| Male                                       | 38                                  | 35   | 41  | 37   |
| Female                                     | 62                                  | 65   | 59  | 63   |
| <b>Employment</b>                          |                                     |  |   |  |
| Employed                                   | 44                                  | 61   | 37  | 38   |
| Not employed                               | 6                                   | 7  | 6   | 6  |
| Retired                                    | 36                                  | 19   | 42  | 44   |
| Other                                      | 14                                  | 13   | 15  | 12   |
| <b>Ethnicity</b>                           |                                     |  |   |  |
| White                                      | 86                                  | 90   | 86  | 85   |
| Hispanic                                   | 2                                   | 2  | 3   | 2  |
| Black                                      | 5                                   | 2  | 5   | 6  |
| Asian                                      | 1                                   | 1  | 1   | 1  |
| Native American                            | 0                                   | 0  | 0   | 1  |
| Other                                      | 5                                   | 6  | 5   | 5  |
| <b>Income</b>                              |                                     |  |   |  |
| <\$25,000                                  | 16                                  | 8  | 22  | 17   |
| ≥\$25,000 to <\$50,000                     | 20                                  | 12   | 23  | 24   |
| ≥\$50,000 to <\$75,000                     | 16                                  | 17   | 15  | 16   |
| ≥75,000 to <\$100,000                      | 10                                  | 13   | 9   | 9  |
| ≥100,000 to <\$150,000                     | 10                                  | 16   | 8   | 7  |

|                                   |    |    |    |    |
|-----------------------------------|----|----|----|----|
| ≥\$150,000                        | 6  | 10 | 2  | 3  |
| Prefer not to answer              | 22 | 24 | 19 | 27 |
| <b>Education</b>                  |    |    |    |    |
| ≤High school diploma/equivalent   | 13 | 5  | 17 | 15 |
| Some college or bachelor's degree | 63 | 50 | 65 | 65 |
| Graduate or professional degree   | 23 | 18 | 18 | 19 |
| <b>BMI Ranges</b>                 |    |    |    |    |
| <18.5                             | 1  | 2  | 0  | 0  |
| 18.5-24.9                         | 19 | 40 | 7  | 12 |
| 25-29.9                           | 27 | 33 | 19 | 28 |
| 30-34.9                           | 23 | 15 | 25 | 27 |
| 35-39.9                           | 15 | 6  | 24 | 15 |
| ≥40                               | 16 | 4  | 24 | 17 |
| <b>Duration of Diabetes</b>       |    |    |    |    |
| <5                                | 5  | 3  | 3  | 8  |
| 6-10                              | 22 | 9  | 16 | 39 |
| 11-15                             | 22 | 10 | 25 | 29 |
| 16-20                             | 17 | 10 | 26 | 15 |
| ≥20                               | 34 | 67 | 30 | 10 |

TABLE S3. Patients' Perceptions on the Success of Current Therapies.

\*Statistically significant success score relative to other groups; 95% confidence interval

| <b>A. BG Management</b>  |                              |   |                                |
|--|------------------------------|---|--------------------------------|
| <b>Question</b>  | <b>Diabetes/Therapy Type</b> | <b>% Very Successful ("5" on a 1-5 scale)</b> | <b>Mean Success Score ± SD</b> |
| Q1. Blood glucose numbers throughout the day that are generally between 70 mg/dl and 180 mg/dl | T1                           | 23  | 3.7 ± 1.00                     |
|  | T2I                          | 26  | 3.64 ± 1.14                    |
|  | T2NI                         | 47  | 4.1 ± 1.08                     |

|   |      |    |                     |
|---|------|----|---------------------|
| Q2. Morning (fasting) blood glucose numbers that are between 70 mg/dl and 130 mg/dl   | T1   | 25 | 3.64 ± 1.11         |
|   | T2I  | 32 | 3.59 ± 1.30         |
|   | T2NI | 44 | 3.83 ± 1.34         |
| Q3. Blood glucose numbers after a meal that are less than 180 mg/dl   | T1   | 17 | <b>3.42 ± 1.06*</b> |
|   | T2I  | 18 | <b>3.35 ± 1.17*</b> |
|   | T2NI | 37 | <b>3.84 ± 1.16*</b> |
| Q4. Overnight blood glucose numbers that are generally between 70 mg/dl and 130 mg/dl   | T1   | 18 | 3.49 ± 1.07         |
|   | T2I  | 28 | 3.56 ± 1.25         |
|   | T2NI | 45 | 3.90 ± 1.28         |
| Q5. Preventing mild hypoglycemia (low blood glucose that you can correct yourself by eating or drinking something)                | T1   | 41 | 4.01 ± 1.04         |
|   | T2I  | 61 | 4.45 ± 0.81         |
|   | T2NI | 70 | 4.59 ± 0.71         |
| Q6. Preventing moderate hypoglycemia (low blood glucose that needs help from someone else to correct, but not medical assistance) | T1   | 70 | 4.48 ± 0.93         |
|   | T2I  | 73 | 4.49 ± 0.98         |
|   | T2NI | 78 | 4.62 ± 0.85         |
| Q7. Severe hypoglycemia (low blood glucose that requires urgent help from a medical professional)                                 | T1   | 85 | 4.67 ± 0.91         |
|   | T2I  | 79 | 4.52 ± 1.08         |
|   | T2NI | 85 | 4.68 ± 0.92         |
| Q8. Preventing Diabetic Ketoacidosis, or DKA  | T1   | 85 | 4.7 ± 0.85          |
|   | T2I  | 81 | 4.58 ± 1.02         |
|   | T2NI | 85 | 4.65 ± 0.98         |
| Q9. Improving or maintaining your HbA1c   | T1   | 33 | 3.85 ± 1.05         |
|   | T2I  | 31 | 3.77 ± 1.13         |
|   | T2NI | 39 | 3.99 ± 1.07         |
| Q10. Preventing hyperglycemia (high blood glucose: above 250 mg/dl)   | T1   | 23 | 3.62 ± 1.08         |
|   | T2I  | 40 | 3.95 ± 1.13         |
|   | T2NI | 67 | 4.46 ± 0.90         |

| <b>B. Complications and Comorbidities</b>   |                              |                          |                                |
|---|------------------------------|--------------------------|--------------------------------|
| <b>Question</b>   | <b>Diabetes/Therapy Type</b> | <b>% Very Successful</b> | <b>Mean Success Score ± SD</b> |
| Q1. Preventing eye problems caused by diabetes  | T1                           | 53                       | <b>4.12 ± 1.15*</b>            |
|   | T2I                          | 43                       | <b>3.97 ± 1.15*</b>            |
|   | T2NI                         | 56                       | <b>4.22 ± 1.07*</b>            |
| Q2. Preventing nerve problems caused by diabetes (for example, pain or numbness in feet, legs, or hands)    | T1                           | 52                       | 4.08 ± 1.18                    |
|   | T2I                          | 28                       | 3.41 ± 1.35                    |
|   | T2NI                         | 41                       | 3.79 ± 1.27                    |
| Q3. Preventing foot problems caused by diabetes (for example, calluses, ulcers, dry skin)                   | T1                           | 54                       | 4.21 ± 1.05                    |
|   | T2I                          | 38                       | 3.74 ± 1.29                    |
|   | T2NI                         | 49                       | 4.01 ± 1.20                    |
| Q4. Preventing skin problems caused by diabetes   | T1                           | 53                       | 4.20 ± 1.07                    |
|   | T2I                          | 40                       | 3.83 ± 1.22                    |
|   | T2NI                         | 51                       | 4.15 ± 1.08                    |
| Q5. Preventing kidney problems caused by diabetes   | T1                           | 70                       | 4.47 ± 0.98                    |
|   | T2I                          | 52                       | 4.08 ± 1.18                    |
|   | T2NI                         | 63                       | 4.35 ± 1.04                    |
| Q6. Preventing anxiety, frustration or depression caused by diabetes (sometimes called 'diabetes distress') | T1                           | 26                       | <b>3.47 ± 1.25*</b>            |
|   | T2I                          | 27                       | <b>3.46 ± 1.27*</b>            |
|   | T2NI                         | 39                       | <b>3.83 ± 1.20*</b>            |

|  |      |    |                     |
|--|------|----|---------------------|
| Q7. Preventing weight gain                     | T1   | 28 | 3.32 ± 1.40         |
|  | T2I  | 15 | 2.91 ± 1.33         |
|  | T2NI | 27 | 3.36 ± 1.32         |
| Q8. Avoiding heart or circulation problems     | T1   | 58 | <b>4.34 ± 0.96*</b> |
|  | T2I  | 39 | <b>3.95 ± 1.09*</b> |
|  | T2NI | 51 | <b>4.20 ± 1.00*</b> |
| Q9. Your blood pressure                        | T1   | 58 | <b>4.36 ± 0.90*</b> |
|  | T2I  | 43 | <b>4.07 ± 1.04*</b> |
|  | T2NI | 49 | <b>4.18 ± 0.99*</b> |
| Q10. Your cholesterol                          | T1   | 55 | <b>4.27 ± 0.98*</b> |
|  | T2I  | 43 | <b>3.99 ± 1.11*</b> |
|  | T2NI | 42 | <b>4.04 ± 1.06*</b> |
| Q11. Reaching, or keeping to, a healthy weight | T1   | 28 | 3.35 ± 1.39         |
|  | T2I  | 10 | 2.63 ± 1.32         |
|  | T2NI | 17 | 3.07 ± 1.31         |

| <b>C Freedom from Stress and Worry</b>                               |                              |                          |                                |
|--|------------------------------|--------------------------|--------------------------------|
| <b>Question</b>  | <b>Diabetes/Therapy Type</b> | <b>% Very Successful</b> | <b>Mean Success Score ± SD</b> |
| Q1. Freedom from worry about your glucose numbers during the day     | T1                           | 16                       | <b>3.48 ± 1.08*</b>            |
|  | T2I                          | 21                       | <b>3.61 ± 1.07*</b>            |
|  | T2NI                         | 33                       | <b>3.90 ± 1.06*</b>            |
| Q2. Freedom from worry about how well you feel from day to day       | T1                           | 22                       | <b>3.60 ± 1.09*</b>            |
|  | T2I                          | 20                       | <b>3.53 ± 1.13*</b>            |
|  | T2NI                         | 32                       | <b>3.84 ± 1.08*</b>            |
| Q3. Freedom from worry about the longer-term outlook for your health | T1                           | 19                       | 3.44 ± 1.17                    |
|  | T2I                          | 19                       | 3.44 ± 1.14                    |
|  | T2NI                         | 27                       | 3.73 ± 1.09                    |
| Q4. Freedom from worry about your overnight blood glucose            | T1                           | 17                       | <b>3.41 ± 1.12*</b>            |
|  | T2I                          | 27                       | <b>3.61 ± 1.18*</b>            |
|  | T2NI                         | 36                       | <b>3.85 ± 1.15*</b>            |
| Q5. Preventing/limiting frustration or discouragement                | T1                           | 17                       | <b>3.31 ± 1.20*</b>            |
|  | T2I                          | 21                       | <b>3.31 ± 1.26*</b>            |
|  | T2NI                         | 32                       | <b>3.67 ± 1.23*</b>            |
| Q6. Preventing/limiting stress or anxiety                            | T1                           | 18                       | <b>3.33 ± 1.20*</b>            |
|  | T2I                          | 22                       | <b>3.34 ± 1.25*</b>            |
|  | T2NI                         | 30                       | <b>3.65 ± 1.21*</b>            |
| Q7. Preventing/limiting guilt  | T1                           | 34                       | <b>3.67 ± 1.25*</b>            |
|  | T2I                          | 31                       | <b>3.53 ± 1.28*</b>            |
|  | T2NI                         | 39                       | <b>3.79 ± 1.25*</b>            |
| Q8. Preventing/limiting feelings of failure                          | T1                           | 28                       | <b>3.55 ± 1.24*</b>            |
|  | T2I                          | 28                       | <b>3.44 ± 1.32*</b>            |
|  | T2NI                         | 38                       | <b>3.77 ± 1.24*</b>            |
| Q9. Preventing/limiting feelings of being overwhelmed                | T1                           | 25                       | <b>3.46 ± 1.24*</b>            |
|  | T2I                          | 25                       | <b>3.43 ± 1.26*</b>            |
|  | T2NI                         | 36                       | <b>3.77 ± 1.21*</b>            |

| <b>D. Family and Relationships</b> |                         |               |                     |
|------------------------------------|-------------------------|---------------|---------------------|
| <b>Question</b>                    | <b>Diabetes/Therapy</b> | <b>% Very</b> | <b>Mean Success</b> |

|   | Type | Successful | Score ± SD          |
|---|------|------------|---------------------|
| Q1. Relief for loved ones from worrying about your diabetes day-to-day                      | T1   | 38         | 3.88 ± 1.17         |
|   | T2I  | 43         | 3.94 ± 1.17         |
|   | T2NI | 60         | 4.33 ± 1.01         |
| Q2. Relief for loved ones from restrictions on what they can do because of your diabetes    | T1   | 56         | 4.26 ± 1.04         |
|   | T2I  | 51         | 4.09 ± 1.14         |
|   | T2NI | 64         | 4.38 ± 1.00         |
| Q3. Relief for loved ones from concern about the impact of your diabetes in the longer term | T1   | 36         | 3.83 ± 1.17         |
|   | T2I  | 38         | 3.83 ± 1.20         |
|   | T2NI | 52         | 4.21 ± 1.03         |
| Q4. Your ability to be intimate with a partner  | T1   | 28         | 3.43 ± 1.36         |
|   | T2I  | 18         | 2.8 ± 1.49          |
|   | T2NI | 27         | 3.27 ± 1.44         |
| Q5. Your sexual health and well-being   | T1   | 26         | 3.38 ± 1.33         |
|   | T2I  | 17         | 2.78 ± 1.45         |
|   | T2NI | 27         | 3.31 ± 1.40         |
| Q6. Your interest in intimacy and/or sex  | T1   | 27         | <b>3.38 ± 1.35*</b> |
|   | T2I  | 19         | <b>2.87 ± 1.47*</b> |
|   | T2NI | 28         | <b>3.32 ± 1.40*</b> |

| <b>E. Burden</b>  |                       |                   |                         |
|---|-----------------------|-------------------|-------------------------|
| Question  | Diabetes/Therapy Type | % Very Successful | Mean Success Score ± SD |
| Q1. Limiting the mental effort needed to manage your diabetes             | T1                    | 20                | 3.36 ± 1.23             |
|   | T2I                   | 26                | 3.61 ± 1.19             |
|   | T2NI                  | 45                | 4.08 ± 1.06             |
| Q2. Not taking up too much of your time                                   | T1                    | 21                | 3.48 ± 1.15             |
|   | T2I                   | 34                | 3.87 ± 1.06             |
|   | T2NI                  | 55                | 4.32 ± 0.92             |
| Q3. Limiting the number of pills or injections you have to take every day | T1                    | 38                | 3.8 ± 1.24              |
|   | T2I                   | 26                | 3.47 ± 1.24             |
|   | T2NI                  | 49                | 4.11 ± 1.09             |
| Q4. Minimizing the amount of 'diabetes stuff' you need to keep with you   | T1                    | 16                | 3.14 ± 1.24             |
|   | T2I                   | 28                | 3.65 ± 1.15             |
|   | T2NI                  | 55                | 4.31 ± 0.93             |
| Q5. Not controlling or taking over your daily schedule                    | T1                    | 24                | 3.58 ± 1.16             |
|   | T2I                   | 33                | 3.78 ± 1.14             |
|   | T2NI                  | 53                | 4.25 ± 0.98             |
| Q6. Giving you a reasonable amount of flexibility with food and exercise  | T1                    | 32                | 3.85 ± 1.08             |
|   | T2I                   | 23                | 3.59 ± 1.12             |
|   | T2NI                  | 37                | 3.99 ± 1.02             |
| Q7. Giving you 'breaks' from thinking about diabetes                      | T1                    | 17                | 3.07 ± 1.33             |
|   | T2I                   | 27                | 3.51 ± 1.27             |
|   | T2NI                  | 47                | 4.05 ± 1.14             |

| <b>F. Social Interactions</b>            |                       |                   |                         |
|--|-----------------------|-------------------|-------------------------|
| Question                                 | Diabetes/Therapy Type | % Very Successful | Mean Success Score ± SD |
| Q1. Keeping your diabetes from intruding | T1                    | 31                | 3.79 ± 1.12             |

|   |      |    |             |
|---|------|----|-------------|
| into social situations  | T2I  | 40 | 3.94 ± 1.13 |
|   | T2NI | 57 | 4.34 ± 0.94 |
| Q2. Preventing you from feeling embarrassed about having diabetes | T1   | 53 | 4.19 ± 1.05 |
|   | T2I  | 54 | 4.20 ± 1.07 |
|   | T2NI | 68 | 4.46 ± 0.95 |
| Q3. Preventing you from feeling isolated or different             | T1   | 38 | 3.83 ± 1.20 |
|   | T2I  | 47 | 4.01 ± 1.17 |
|   | T2NI | 60 | 4.33 ± 1.01 |
| Q4. Not making your diabetes visible to others                    | T1   | 28 | 3.66 ± 1.19 |
|   | T2I  | 43 | 4.02 ± 1.09 |
|   | T2NI | 64 | 4.46 ± 0.86 |