



## IPSOS / GOLIN HARRIS POLL DATA

Prepared by Ipsos Public Affairs

### IPSOS PUBLIC AFFAIRS: ABBOTT DIABETES

09.09.2016

*These are findings from an Ipsos poll conducted August 19-September 1, 2016. For the survey, a sample of roughly 2,679 adults age 18+ from the continental U.S., Alaska and Hawaii was interviewed online in English. The sample includes 1,152 adults with type I diabetes and 1,527 adults with type II diabetes.*

*The sample for this study was randomly drawn from Ipsos's online panel (see link below for more info on "Access Panels and Recruitment"), partner online panel sources, and "river" sampling (see link below for more info on the Ipsos "Amparo Overview" sample method) and does not rely on a population frame in the traditional sense. Ipsos uses fixed sample targets, unique to each study, in drawing sample. After a sample has been obtained from the Ipsos panel, Ipsos calibrates respondent characteristics to be representative of the U.S. Population using standard procedures such as raking-ratio adjustments. The source of these population targets is U.S. Census 2015 American Community Survey data. The sample drawn for this study reflects fixed sample targets on demographics. Post-hoc weights were made to the population characteristics on gender, age, region, race/ethnicity and income.*

*Statistical margins of error are not applicable to online polls. All sample surveys and polls may be subject to other sources of error, including, but not limited to coverage error and measurement error. Where figures do not sum to 100, this is due to the effects of rounding. The precision of Ipsos online polls is measured using a credibility interval. In this case, the poll has a credibility interval of plus or minus 2.2 percentage points for all respondents (see link below for more info on Ipsos online polling "Credibility Intervals"). Ipsos calculates a design effect (DEFF) for each study based on the variation of the weights, following the formula of Kish (1965). This study had a credibility interval adjusted for design effect of the following (n=2,679, DEFF=1.5, adjusted Confidence Interval=3.7).*

*The poll also has a credibility interval plus or minus 3.3 percentage points for those with type I diabetes and plus or minus 2.9 percentage points for those with type II diabetes (see link below for more info on Ipsos online polling "Credibility Intervals").*

*For more information about Ipsos online polling methodology, please go here <http://goo.gl/yJBkuf>*

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Q1. Which type of diabetes are you living with?

	Type I	Type II
Type 1 diabetes	100%	0%
Type 2 diabetes	0%	100%

Q2. Do you use insulin to manage your diabetes?

	Type I	Type II
Yes	89%	44%
No	11%	56%

Q3. How long have you been living with diabetes?

	Type I	Type II
Less than 1 year	11%	6%



## IPSOS / GOLIN HARRIS POLL DATA

Prepared by Ipsos Public Affairs

1 to 5 years	29%	39%
6 to 10 years	12%	27%
More than 10 years	48%	28%

Q4. Who do you go to for regular/day-to-day management of your diabetes?

	Type I	Type II
Endocrinologist	52%	21%
Diabetologist	22%	11%
General practitioner or primary care physician	43%	80%
Other physician/specialist	6%	5%

Q5. How often do you visit your doctor? – Endocrinologist

*\*Asked of doctors chosen at Q4*

	Type I (n=603)	Type II (n=317)
Once a month	13%	13%
Once every 3 months	61%	59%
Once every 6 months	21%	23%
Once a year	3%	3%
No fixed schedule (as required)	2%	2%

Q5. How often do you visit your doctor? – Diabetologist

*\*Asked of doctors chosen at Q4*

	Type I (n=254)	Type II (n=161)
Once a month	45%	52%
Once every 3 months	40%	32%
Once every 6 months	10%	12%
Once a year	4%	4%
No fixed schedule (as required)	1%	1%

Q5. How often do you visit your doctor? – General practitioner or primary care physician

*\*Asked of doctors chosen at Q4*

	Type I (n=492)	Type II (n=1,222)
Once a month	27%	14%
Once every 3 months	44%	50%
Once every 6 months	19%	27%
Once a year	7%	5%



## IPSOS / GOLIN HARRIS POLL DATA

Prepared by Ipsos Public Affairs

No fixed schedule (as required)	3%	4%
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Q5. How often do you visit your doctor? – Other physician/specialist

*\*Asked of doctors chosen at Q4*

	Type I (n=72)	Type II (n=76)
Once a month	17%	15%
Once every 3 months	49%	46%
Once every 6 months	22%	18%
Once a year	6%	11%
No fixed schedule (as required)	7%	11%

Q6. Please indicate your HbA1C levels when last monitored.

	Type I	Type II
Below 6.5	16%	18%
6.5-7	37%	32%
7-8	29%	27%
Above 8	12%	12%
Do not know/Not sure	7%	12%

Q7. Please indicate which of the following you use to monitor your glucose levels.

*\*Yes Summary*

	Type I	Type II
Traditional finger pricking (self-monitoring)	89%	82%
CGM (continuous glucose monitoring)	41%	19%
Pathology laboratories	48%	42%
Doctor's office/clinic	62%	68%
Other	2%	1%

Q7A. Why do you self-monitor your glucose levels?

*\*Asked of those selected Yes to 'Traditional finger pricking (self-monitoring) OR CGM (continuous glucose monitoring) at Q7*

	Type I (n=1,084)	Type II (n=1,303)
I think it is important to know my glucose levels on a regular basis	65%	65%
It gives me greater peace of mind	47%	41%
My doctor tells me I have to	36%	49%
I need to for regular insulin dosing	62%	27%



## IPSOS / GOLIN HARRIS POLL DATA

Prepared by Ipsos Public Affairs

Other	2%	1%
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Q8. What keeps you from self-monitoring for glucose as often as you should?

*\*Asked of those selected No to 'Traditional finger pricking (self-monitoring) OR CGM (continuous glucose monitoring) at Q7*

	Type I (n=743)	Type II (n=1,291)
Strips are too expensive	23%	23%
I don't like pricking my finger	19%	24%
If I'm feeling fine I forget to test my glucose levels	23%	21%
I can tell if I have low/high glucose levels by the way I'm feeling	23%	18%
I'm too busy to check my glucose	19%	10%
Dealing with my insurance company to get more strips is a hassle	15%	10%
I am embarrassed to check my glucose in public	12%	5%
I'm worried about losing sensitivity in my fingers	9%	6%
I do not have the time	9%	6%
My family or household obligations make it difficult to check my glucose	10%	5%
I don't think self-monitoring makes a difference	7%	6%
Dealing with glucose meters and strips is too complicated	9%	5%
I do not have a private or clean place at work to prick my finger	6%	2%
Other	4%	9%
None of the above	23%	27%

Q9. How often do you monitor your glucose?

	Type I	Type II
More than five times per day	30%	4%
More than once, but less than five times per day	41%	32%
Once a day	15%	26%
2-3 times a week	8%	16%
Once a week	2%	5%
Once every 14 days	1%	3%
Once a month	1%	2%
Less than once a month	1%	8%
Before doctor's appointment	1%	5%

Q10. According to your doctor, how often should you monitor your glucose?



## IPSOS / GOLIN HARRIS POLL DATA

Prepared by Ipsos Public Affairs

	Type I	Type II
More than five times per day	28%	5%
More than once, but less than five times per day	46%	44%
Once a day	13%	28%
2-3 times a week	6%	12%
Once a week	3%	3%
Once every 14 days	1%	1%
Once a month	2%	1%
Less than once a month	1%	3%
Before doctor's appointment	1%	4%

Q11. Which of the following are reasons prevent you from following your doctor's recommendations when it comes to monitoring your glucose levels?

*\*Asked of those whose numbers are for Q9 and Q10 are different*

	Type I (n=327)	Type II (n=613)
Strips are too expensive	23%	31%
I do not have the time	15%	11%
I don't like pricking my finger	20%	29%
Dealing with glucose meters and strips is too complicated	12%	6%
I'm too busy to check my glucose	25%	15%
I do not have a private or clean place at work to prick my finger	8%	3%
My family or household obligations make it difficult to check my glucose	14%	6%
I'm worried about losing sensitivity in my fingers	17%	9%
I can tell if I have low/high glucose levels by the way I'm feeling	21%	22%
I don't think self-monitoring makes a difference	8%	7%
If I'm feeling fine I forget to test my glucose levels	25%	26%
I am embarrassed to check my glucose in public	15%	6%
Dealing with my insurance company to get more strips is a hassle	15%	12%
Other	4%	9%
None of the above	10%	12%

Q11A. Please indicate how strongly you agree or disagree with the following statements.

*\*Strongly agree/somewhat agree Summary*

	Type I	Type II
My doctor listens to my concerns about diabetes management	84%	82%



## IPSOS / GOLIN HARRIS POLL DATA

Prepared by Ipsos Public Affairs

My doctor spends time with me to ensure I understand the results of my glucose tests	83%	79%
My doctor is sympathetic when I complain about my diabetes management	67%	60%
I believe that my physician should give me more information about my diabetes management regiment	44%	35%
I get frustrated with my physician because he/she only uses my A1C levels to assess my condition	35%	27%
I do not feel that my physician takes my condition seriously	26%	16%

Q11A. Please indicate how strongly you agree or disagree with the following statements.

*\*Somewhat disagree/strongly disagree Summary*

	Type I	Type II
My doctor listens to my concerns about diabetes management	4%	5%
My doctor spends time with me to ensure I understand the results of my glucose tests	6%	7%
My doctor is sympathetic when I complain about my diabetes management	7%	9%
I believe that my physician should give me more information about my diabetes management regiment	31%	33%
I get frustrated with my physician because he/she only uses my A1C levels to assess my condition	42%	49%
I do not feel that my physician takes my condition seriously	61%	72%

Q12. How would you rate your glucose control, on a scale of 1 to 5, where 1 stands for not at all under control and 5 stands for completely under control?

	Type I	Type II
5 - Completely under control (5)	17%	15%
4	31%	25%
3 - Average (3)	40%	47%
2	10%	11%
1 - Not at all under control (1)	2%	3%

Q13. How do you feel about self-monitoring your glucose?

	Type I	Type II
It's necessary	67%	60%
It's useful	60%	54%



## IPSOS / GOLIN HARRIS POLL DATA

Prepared by Ipsos Public Affairs

I want more information about my glucose than what my meter can give me	26%	16%
It's painful	20%	20%
I monitor only because my doctor tells me to	17%	21%
I don't have control over my glucose levels while sleeping	15%	9%
It's not worth the pain and hassle of pricking my fingers	7%	9%
I don't really understand the information I get	6%	5%
I don't really understand why I'm doing it	4%	5%

Q14. Thinking about the things you do to manage your diabetes, how important is it for you to do each of the following in order to manage your diabetes on a day-to-day basis? How do you manage your diabetes on a day-to-day basis?

*\*Very/somewhat important Summary*

	Type I	Type II
I manage my stress levels with meditation, yoga, etc.	72%	68%
I exercise regularly	87%	87%
I monitor my glucose levels	96%	89%
I get a good night's rest	91%	93%
I try to stay active	93%	93%
I watch what I eat	93%	96%
I take medication	94%	95%
I see my doctor regularly	94%	96%

Q14. Thinking about the things you do to manage your diabetes, how important is it for you to do each of the following in order to manage your diabetes on a day-to-day basis? How do you manage your diabetes on a day-to-day basis?

*\*Somewhat/very unimportant Summary*

	Type I	Type II
I manage my stress levels with meditation, yoga, etc.	28%	32%
I exercise regularly	13%	13%
I monitor my glucose levels	4%	11%
I get a good night's rest	10%	7%
I try to stay active	7%	7%
I watch what I eat	7%	5%
I take medication	6%	5%
I see my doctor regularly	6%	4%

Q15. Which of the following describes your view on the level of information you receive from your glucose level tests?



## IPSOS / GOLIN HARRIS POLL DATA

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	Type I	Type II
I receive a lot of information but am uncertain on how to apply it to my daily routine	21%	18%
I'm receiving all the information I need to better manage my diabetes	39%	37%
I'm receiving enough information I need to better manage my diabetes	34%	36%
I'm not receiving enough information I need to better manage my diabetes	6%	9%

Q16. Do you believe more information about your glucose levels would help you better manage your diabetes?

	Type I	Type II
Yes	77%	62%
No	23%	38%

Q16A. What do you do once you've received your glucose test results?

	Type I	Type II
Record in a logbook and share them with my HCP	34%	45%
Download test results in to a software program	17%	8%
Take my meter to my HCP to download and discuss	23%	11%
I am not sure what to do with the test results	7%	7%
Nothing	19%	28%

Q17. If you had more information about your glucose levels, what would you do?

	Type I	Type II
Be more confident	42%	36%
I would change what I eat	28%	37%
Adjust my insulin use	47%	20%
Exercise more	31%	32%
Be able to focus more on daily activities	29%	26%
Sleep better (Get more hours of sleep per night or have more restful sleep during the night)	27%	22%
Change my treatment plan	25%	20%
Travel more	15%	9%
Take fewer personal/sick days at work	13%	7%
Other	2%	2%
Knowing more information about my glucose levels would not affect my life	14%	27%



## IPSOS / GOLIN HARRIS POLL DATA

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Q18. Which of the following, if any, are you concerned about with regard to managing your diabetes?  
Select all that apply to your situation.

	Type I	Type II
I worry about long-term complications	52%	47%
I worry that my glucose levels might be too high or too low (hypoglycemia/hyperglycemia)	40%	30%
I don't think my diabetes is under control	21%	21%
I have trouble tracking my food intake	22%	18%
I have trouble understanding why my blood sugar is high or low	22%	17%
I don't like to test my glucose regularly	17%	19%
I worry about having to go to the hospital because of my glucose levels	21%	15%
I worry that I am not dosing the proper amount of insulin	24%	11%
I have trouble taking my medications regularly	13%	9%
CGM (continuous glucose monitoring) tools are too difficult to manage	13%	5%
Other	2%	1%
None of these	12%	23%

Q19. Have you ever given your doctor insufficient information about your glucose monitoring?

	Type I	Type II
I did not give my doctor enough information about how often I test	29%	16%
I did not give my doctor enough information about my glucose numbers (changed them in my log)	10%	7%
Other	1%	2%
No	60%	75%

Q20. Have you ever experienced any of the following symptoms specific to your diabetes?

	Type I	Type II
Increased sweating	53%	39%
Suddenly feeling like you are going to pass out	38%	34%
Hypoglycemia	50%	22%
Nighttime hypoglycemia/hypoglycemia while sleeping	47%	15%
Hyperglycemia	41%	17%
Being unable to speak or think clearly	40%	16%
Twitching	21%	13%
Loss of muscle coordination	20%	12%



## IPSOS / GOLIN HARRIS POLL DATA

Prepared by Ipsos Public Affairs

Seizures	12%	4%
Loss of consciousness	17%	5%
None of the above	11%	36%

Q21. In the PAST WEEK, how often have you had a hypo (day or night) that you were able to treat yourself?

*\*Asked of those that experienced hypoglycemia at Q20*

	Type I (n=575)	Type II (n=337)
Once	56%	72%
Between two to three times	35%	23%
More than three times	10%	5%

Q21A. After you have a hypo, do you usually decrease your next insulin dose?

*\*Asked of those that experienced hypoglycemia at Q20*

	Type I (n=575)	Type II (n=337)
Always	18%	15%
Sometimes	48%	30%
Rarely	21%	13%
Never	12%	41%

Q22. How would you rate the importance of self-monitoring your glucose, on a scale of 1-5, where 1 stands for not at all important and 5 stands for very important?

	Type I	Type II
5 – Very important	68%	54%
4	21%	30%
3 – Neither important nor unimportant	9%	13%
2	2%	2%
1 - Not important at all	1%	1%

Q22A. Please rank the following aspects of diabetes management in order of importance to you, with 5 being very important and 1 being not important at all.

*\*Very important (5/4) Summary*

	Type I	Type II
Managing your diet	85%	88%
Checking your glucose levels	89%	82%
Managing hyperglycemia (high glucose levels)	88%	82%
Getting regular physical activity	83%	84%



## IPSOS / GOLIN HARRIS POLL DATA

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Managing hypoglycemia (low glucose levels)	89%	75%
Counting carbohydrates	80%	72%
Taking your insulin doses	89%	64%
Analyzing your glucose patterns	78%	71%

Q23. How closely do you follow your doctor's recommendations on the following aspects of managing your diabetes? – Medications

	Type I	Type II
I follow his/her recommendations exactly	66%	78%
I usually follow his/her recommendations	21%	14%
I somewhat follow his/her recommendations	7%	5%
I rarely follow his/her recommendations	3%	2%
I never follow his/her recommendations	2%	2%

Q23. How closely do you follow your doctor's recommendations on the following aspects of managing your diabetes? - Exercise routine

	Type I	Type II
I follow his/her recommendations exactly	21%	24%
I usually follow his/her recommendations	35%	28%
I somewhat follow his/her recommendations	26%	24%
I rarely follow his/her recommendations	12%	16%
I never follow his/her recommendations	6%	8%

Q23. How closely do you follow your doctor's recommendations on the following aspects of managing your diabetes? - Diet

	Type I	Type II
I follow his/her recommendations exactly	25%	26%
I usually follow his/her recommendations	35%	32%
I somewhat follow his/her recommendations	28%	31%
I rarely follow his/her recommendations	7%	8%
I never follow his/her recommendations	5%	4%

Q23. How closely do you follow your doctor's recommendations on the following aspects of managing your diabetes? - Glucose monitoring schedule

	Type I	Type II
I follow his/her recommendations exactly	42%	40%



## IPSOS / GOLIN HARRIS POLL DATA

Prepared by Ipsos Public Affairs

I usually follow his/her recommendations	30%	25%
I somewhat follow his/her recommendations	13%	18%
I rarely follow his/her recommendations	11%	12%
I never follow his/her recommendations	4%	6%

Q23. How closely do you follow your doctor's recommendations on the following aspects of managing your diabetes? - Sleep

	Type I	Type II
I follow his/her recommendations exactly	25%	30%
I usually follow his/her recommendations	32%	29%
I somewhat follow his/her recommendations	20%	20%
I rarely follow his/her recommendations	9%	10%
I never follow his/her recommendations	14%	11%

Q24. Please choose the statements you agree with:

	Type I	Type II
The current amount of times I monitor my glucose levels helps me manage my diabetes	25%	26%
Understanding my glucose levels helps me manage my day	25%	21%
I should monitor my glucose levels more often	16%	23%
Not knowing my glucose levels may have repercussions on my diabetes management	11%	13%
I want more information about my glucose levels than what my meter provides	11%	9%
I would monitor my glucose levels more often if I had better tools	11%	8%

Q25. Imagine a new glucose monitoring device is being designed just for you. How important to you is each feature below? For each feature below, please indicate how important it is to you from 1 (not at all important) to 5 (extremely important). I would like a glucose monitoring device...

*\*Extremely important (5/4) Summary*

	Type I	Type II
...that allows me to always maintain a good glucose level	85%	83%
...that doesn't require finger pricks	71%	73%



## IPSOS / GOLIN HARRIS POLL DATA

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...that measures my glucose continuously throughout the day and night (24 hours)	79%	67%
...that means I no longer have to remember to check my glucose levels	72%	69%
...that doesn't require me to carry testing supplies	73%	68%
...that means I no longer have to remember to purchase testing strips	69%	69%
...that won't interrupt my activities to do a check	74%	65%
...that doesn't require a drop of blood	69%	68%
...that means I no longer have to dispose of testing supplies	61%	61%
...that means I no longer have to excuse myself to go check my glucose	59%	57%
...that does not require me to clean up (no need to wash hands before or after checking)	55%	54%



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### How to Calculate Bayesian Credibility Intervals

The calculation of credibility intervals assumes that  $Y$  has a binomial distribution conditioned on the parameter  $\theta$ , i.e.,  $Y|\theta \sim \text{Bin}(n, \theta)$ , where  $n$  is the size of our sample. In this setting,  $Y$  counts the number of “yes”, or “1”, observed in the sample, so that the sample mean ( $\bar{y}$ ) is a natural estimate of the true population proportion  $\theta$ . This model is often called the likelihood function, and it is a standard concept in both the Bayesian and the Classical framework. The Bayesian <sup>1</sup> statistics combines both the prior distribution and the likelihood function to create a posterior distribution. The posterior distribution represents our opinion about which are the plausible values for  $\theta$  adjusted after observing the sample data. In reality, the posterior distribution is one’s knowledge base updated using the latest survey information. For the prior and likelihood functions specified here, the posterior distribution is also a beta distribution ( $\pi(\theta/y) \sim \beta(y+a, n-y+b)$ ), but with updated hyper-parameters.

Our credibility interval for  $\theta$  is based on this posterior distribution. As mentioned above, these intervals represent our belief about which are the most plausible values for  $\theta$  given our updated knowledge base. There are different ways to calculate these intervals based on  $\pi(\theta/y)$ . Since we want only one measure of precision for all variables in the survey, analogous to what is done within the Classical framework, we will compute the largest possible credibility interval for any observed sample. The worst case occurs when we assume that  $a=1$  and  $b=1$  and  $y=n/2$ . Using a simple approximation of the posterior by the normal distribution, the 95% credibility interval is given by, approximately:

$$\bar{y} \pm \frac{1}{\sqrt{n}}$$

For this poll, the Bayesian Credibility Interval was adjusted using standard weighting design effect  $1+L=1.3$  to account for complex weighting<sup>2</sup>

Examples of credibility intervals for different base sizes are below. Ipsos does not publish data for base sizes (sample sizes) below 100.

Sample size	Credibility intervals
2,000	2.5
1,500	2.9
1,000	3.5
750	4.1
500	5.0
350	6.0
200	7.9
100	11.2