Diabetes: can social media do anything?

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GRADE AWARDED: PASS

Research Paper based on lectures at the Medlink or Workshop Conferences at Nottingham University in December 2013

18th April 2014
In November 2013 I attended a lecture on Diabetes type 2, in Cardiff University and it sparked my interest about diabetes. I later went on to shadow the professor that gave the lecture giving me background information on diabetes type 1. My paper was then based upon diabetes and what social media could do. I came to the conclusion that it would be more influential with diabetes type 2 than type 1 due to the limited risk it could lead to.

Diabetes is a condition that affects around 3.2 million people in the UK: with an estimated 630,000 people suffering from the condition but are unaware. Diabetes is a lifelong condition that affects the insulin levels in your body. The body doesn’t know what to do with excess sugar in the blood as the pancreas doesn’t make any insulin, or not enough to be used. Another problem associated with diabetes is insulin resistance where the insulin made doesn’t work properly. Insulin is a hormone that “unlocks” cells allowing glucose to cross the cell membrane of the cell meaning it’s a very important hormone for the body to possess and use effectively. Insulin resistance occurs when your body makes too much insulin which goes around your body for a long period of time. When this happens, the body’s sensitivity hormone gets reduced letting the problem carry on. Once insulin resistance occurs it can be a difficult process to reverse. A knock on effect of this insulin resistance would be weight gain as the excess glucose can go onto be stored as fat.

**Diabetes Type 1: The Facts**

Diabetes type 1 is caused when there is little to no insulin being produced by the pancreas meaning glucose cannot enter cells to be used for cell respiration. Due to the glucose being unable to enter the cells it builds up in the bloodstream. Once this happens the body is forced to try and get energy from elsewhere: the protein and fat stores. Nobody is sure why the insulin-producing cells get destroyed but it’s believed it is due to a cell mutation: most likely caused by a virus or an infection. Statistics show that around 5 to 10% of the population with diabetes have type 1 diabetes meaning that around 85 to 90% suffer from type 2. This means that diabetes type 1 is the least common form of diabetes.

**Diabetes Type 1: Health conditions due to type 1**

Many health conditions can be caused due to diabetes type 1 if it is not treated early on. This means it is essential for an early diagnosis. A major problem associated with diabetes is the increased chance of a stroke; you would be 5 times more likely to have one if you have type 1 diabetes. If you let your body go through long term high blood glucose levels you would increase your likelihood of developing atherosclerosis: the narrowing of your blood vessels. This then goes onto increase your risk of strokes and other heart conditions greatly due to the poor blood flow to and from the heart.
Nerve damage is another problem associated with diabetes. This is due to high levels of blood glucose damaging the tiny blood vessels in your extremities (e.g. fingertips) causing a burning sensation. These could also damage nerve endings in your stomach or intestine which could lead to other problems e.g. vomiting. If the small blood vessels in the kidney become blocked or damaged due to diabetes kidney problems could become a serious risk. If the case was considered severe, kidney dialysis would be the treatment or even a kidney transplant may be necessary.

Another very serious health risk caused by diabetes type 1 is retinopathy. This is where the thin layer of tissue at the back of the eye is damaged stopping light from being able to pass through. If this happens your vision could be damaged badly but with regular checks with eye specialists the risk is minimised.

There are also many other problems associated with diabetes including:

- Foot problems
- Sexual dysfunction
- Miscarriage and stillbirth

**Diabetes Type 2: The Facts**

Diabetes type 2 is when the body doesn’t produce enough insulin or there is no insulin being produced. This means glucose cannot enter cells therefore it builds up in the bloodstream. To treat this problem living a healthy lifestyle by eating a new diet and with regular exercise is usually the first option, if the case is not severe. Medication and/or insulin are generally prescribed along with the new, healthier lifestyle.

Diabetes type 2 accounts for around 85-95% of the diabetes suffering population making it the more common type. Diabetes type 2 could potentially be prevented. The mix of your genetics and lifestyle contribute to the condition becoming a risk. The assumption that having a larger build due to weight means you will automatically get diabetes is wrong, but by being over-weight you are at an increased risk compared to others. By living a healthier lifestyle you are at less risk of developing diabetes. Adults who maintain a weight within their recommended body mass index (BMI) range have a reduced risk of developing diabetes.

**Table 1: recommended adult BMI ranges**

<table>
<thead>
<tr>
<th>Category</th>
<th>BMI Score</th>
<th>South Asian Adult BMI Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight</td>
<td>Less than 18.5</td>
<td>Less than 18.5</td>
</tr>
<tr>
<td>Healthy Weight</td>
<td>Between 18.5-24.9</td>
<td>Between 18.5-22.9</td>
</tr>
<tr>
<td>Overweight</td>
<td>Between 25-29.9</td>
<td>Between 23-27.5</td>
</tr>
<tr>
<td>Obese</td>
<td>30 and above</td>
<td>27.5 and above</td>
</tr>
</tbody>
</table>

This simple table shows that it is important to take into account ethnicity and other genetic factors along with BMI score. If you were from Britain you could have a BMI score of 30 and only then get into the threshold for obese whereas if you were from South Asia you would need 2.5 less on a BMI score to be considered obese. Once
reaching this threshold you are at a greater risk of Diabetes type 2 making it very important to track your BMI score once reaching the overweight threshold alongside your ethnicity to limit your risk.

Diabetes Type 2: Health conditions due to type 2

Diabetes type 2 shares many of the risks and complications associated with type 1. In addition, diabetes type 2 carries some further risks which should also be mentioned.
A major risk is miscarriage and still birth. If the blood sugar levels are not carefully controlled then problems can occur due to these levels. In the early stages of the pregnancy if the levels are not carefully monitored there is an increased chance of the child developing birth defects.
Foot problems can also become a problem for sufferers. Poor circulation caused due to blood sugar levels can cause ulcers that can get infected which could mean serious complications. Around 1 in 10 diabetes sufferers get a foot ulcer which leads to serious infection.

Brief introduction to social media and medicine

Social media already has an impact on many different forms of medicine and is going to continue in the future. Statistics have shown that 40% of people say it affects the way they deal with their health and with people ages 18-24 years old twice as likely to use it compared to 45-54 year olds (source 6).
On the 7/3/14 there was a social media movement tag-lined #BandanaDay to raise awareness for brain tumours. It showed that it had not come as far with treatment as other cancers have, such as breast cancer. This was a big fundraiser with celebrity endorsement from Tom Daley showing his support for the campaign to try and raise money for advancements in the future.
These facts show how essential it is for health professionals to utilise such a valuable resource.

Diabetes type 1 and social media

There is a lot of research going on with diabetes type 1 to find new forms of treatments and potential preventions. This means that a lot of papers and publications are available online to do with new treatments. Therefore, social media can help medical professionals share their ideas. It’s very easy to take links and share them with people you want to or “post” them to your page. This would be useful if a researcher needs another, involved in the same project to see the same information as it could be easily shared. This would enable a fast and efficient way to share the vital information that could lead to innovations in diabetes type 1 treatment.
Social media could also have an effect on patient and doctor relationships. By the use of social media and easily spreading information patients could learn about new methods of treatment. For example, during a recent work experience
placement with a diabetes consultant a patient came in and was asking about a new pump that they had read about online. Unfortunately this pump was to stop patients from becoming hypoglycaemic, which didn’t affect their condition, so was of no use of them. It did demonstrate however that the simple sharing of information by social media could have affected that patient and no doubt could affect others.

With all the research that goes on, the availability of resources is dependent on budget. Social media could be used alongside a campaign to help raise funds that could be used for research projects. This could enable projects to spend more money on better resources to potentially gain better, more reliable results.

I believe that the greatest thing social media could do for diabetes type 1 would be support groups set up especially for young, newly diagnosed patients. Young people are generally a lot more reckless with insulin injections, due to the careless nature of their age, as they don’t fully consider the consequences, especially the long term effects it could have on their body. While on a recent placement I met a patient under the age of 30 whose case supports this scenario. They didn’t take their insulin to work meaning they’d take larger doses to keep them going through the day. In the short term nothing serious would happen but in the long term serious complications could arise. If a support group was available online, on a site like Facebook, patients in similar situations could discuss how they feel about their experiences with diabetes type 1 and provide support for each other. This could be a cost effective way to help sufferers through their most reckless stage; hopefully preventing any future problems as the group could push them away from risky choices, helping others to keep their health.

Diabetes and social media

Social media could influence both forms of diabetes in a number of different ways, the main way being easier access to information. With any illness people need to know the facts to feel safe, however, while in a doctor’s surgery you could feel overwhelmed by the information; no doubt diabetes sufferers may feel this way. With trusted social media pages in place it would create easy access to all the information needed for patients with the added bonus of being able to access it at your own leisure.

With these bonuses people would have easy access to the information they need to feel more safe and confident in how to proceed with their condition. If trusted organisations such as the NHS created devoted sites for specific conditions it would be a simple and effective way to let people know that support is there. Also, with most forms of social media, people are able to have a private chat with that site or page. This means they could also become “help lines” allowing vulnerable people to get the support they need at the touch of a button. This would all help put patient’s minds at rest and have a greater understanding of their condition.

Many campaigns could also be run using social media, raising awareness for people at risk. On Facebook you now have advertisements appearing on your news feed encouraging you to buy products; but what’s to say that campaigns couldn’t appear on news feeds instead? With a very simple, yet effective sentence
or two you could encourage someone to look into what they have just seen. If this was a few questions about the common symptoms for diabetes you could encourage people to get checked for diabetes. Although raising awareness could be a good thing, it could potentially become more of a hindrance than a help. What if the appeal caught too many people’s attention and what if they all thought they had diabetes? If this was the case then they would all want to get checked out to ensure they didn’t have Diabetes. This could create a lot of unneeded tests which could have negative financial implications for the NHS. This added cost could outweigh the benefits of helping a select few number of people.

If a campaign like this was going to be put into effect it would need to be methodically planned out to ensure an effective campaign only appealing to the people that are most at risk.

**Diabetes type 2 and social media**

The greatest benefits of social media are likely to apply to people with type 2 diabetes rather than type 1, as a much greater strategy could be put into place to utilise it. Campaigns that gain a lot of coverage in a short space of time are said to be ‘viral’ campaigns, and these rely heavily on social media users sharing information with one another. This type of campaign would raise considerable awareness of diabetes type 2 sufferers.

Living an unhealthy lifestyle can be a huge factor that can affect someone’s chances of developing diabetes type 2. Living in our westernised ways, living unhealthily is a very easy thing to achieve. This is mainly due to two very damaging reasons:

1. **Fast food.** Fast food is readily available and extremely cheap, much cheaper than healthier options. This means it appeals to buyers as it’s an easy “meal” and in our society that’s all we want.
2. **Lack of knowledge.** Although food now has labels telling you exactly what you are eating it can be very complicated to understand, awash with numbers, percentages and decimals.

These two factors can lead to monumental problems with weight and unhealthy lifestyles, contributing to an increased chance of developing diabetes type 2. So now the question could be raised “could social media do anything?” I believe that with the right direction it could have colossal impacts.

Social media can help in the most important way by contributing to changing the population’s lifestyles. To make a change: the whole population’s perception of “normal” needs to change to a fitter, healthier person eating less fatty foods and more healthy foods instead.

This “social revolution” could be carried out only by the means of social media and produce monumental results as people listen to other people, and eventually the government would listen to the public and take action.

In the UK, the cost per calorie is dangerously cheap. McDonalds frequently advertise cheap high calorie foods, some as little as 99p; a very appealing idea to many people. Due to this, people often perceive these foods as a good option to
have for breakfast, lunch and dinner regardless of how unhealthy it is, because it is easy to have. This “social revolution” could take place across all social media sites campaigning and rallying the government into raising the cost per calorie. This would mean you could no longer go out and buy a high calorie cheese burger for less than fruit and vegetables. This would lead to 2 key things:

- People would stop buying the fast food.
- As the demand stops fast food companies would need to think of healthier options.

This all means that people would be eating a lot less fatty foods, limiting their risk of developing diabetes type 2. Fast food companies would need to look down other avenues on how to provide food at a much lower calorie rate. Or they could completely change their image and become more like Freshii.

On Instagram, a popular form of social media, a fast food company has a page, “@freshii” but it’s not your regular form of fast food. Freshii deals in healthy food options instead of your regular burgers and fries. Freshii gains a lot of publicity due to social media and they go on to donate some of their proceeds to create vegetable gardens and other healthy concepts throughout the world with the help of Feed the Children. But there is one problem, they aren’t in Britain. Even though they aren’t in Britain they have changed people’s perceptions of a good meal in different parts of the world such as parts of America, for instance Chicago. People go to these places and flood social media sights; such as Instagram, with their “amazing” healthy food from Freshii. More people then go and buy Freshii food. This all combines to change people’s perceptions of “healthy food”. Ultimately, this could lead to people straying away from the stereotypical fatty fast food outlets into healthier options. Due to the increased healthy eating the chances of being diagnosed with Diabetes type 2 decrease significantly all due to publicity from social media.

An additional key issue associated with fast food outlets is the options to “go large” or even “supersize”. This means that by a simple option you can get even more food, full of calories just because you think it’s a good deal. Social media could change this. Something like a Facebook page could expose how bad all these options actually are for you. If this was in place it could discourage many people from “supersizing” or even having the fast food at all. If this campaign wasn’t effective then the public could set up campaigns through the help of social media to push the government into potentially banning these larger options due to the side effects associated with the increases calorie intake. This could lead to a huge decrease in obesity and morbid obesity levels in the UK alone and as diabetes type2 can be closely linked to obesity levels, there should also be a decrease in people diagnosed with type 2.

Social media could also push the government to change the funds being spent on the treatment of obesity and diabetes type 2 to be spent on the prevention instead. This would not only make a much healthier nation but also decrease the number of people suffering from diabetes type 2. The money could be spent more on things such as lowering gym memberships and making weight loss support, such as Weight Watchers, more available to everyone by yet again lowering the price. These costs need to be lowered as, although it’s easy enough to say you’re going
to lose weight without support, it’s not an easy road to go down alone and many people fail when trying to lose weight unaided. This change in funding could ultimately lead to great savings for the NHS along with decreased numbers of people with diabetes type 2 if they stuck to plans to help them lose weight.

One of the biggest factors social media could do is change the perception of one of, if not the greatest, factor that affects obesity and diabetes type 2. People just see eating high calorie fast and readymade food as normal. Due to this, people don’t see the real need to change their diets or even see the health risks they’re putting themselves through. The entire population’s perception needs to change before anything can be done and social media could fit perfectly into achieving this. The government’s support can make a great difference in health, as seen with the smoking ban in public. The smoking ban was taken on in the UK first by Scotland in March 2006; England was the last to take it on in July 2007. The ban stopped smoking in workplaces and enclosed public spaces and lead to hugely beneficial consequences for the health of the nation.

When the ban first took place it showed that many adults were in favour of the ban and in a poll 5 years later 78% of adults still are in favour of it. This shows that with the support of the public anything can be put in place. This gained so much support as the health implications became clear and non-smokers didn’t like second hand smoke leading to the decision for the ban. Since the ban, the risk of second hand smoke to children has decreased by 70%.

Since the ban, people’s perceptions have changed immensely. Previously, people would smoke as their parents, friends, aunts, uncles all would so it was considered the normal thing to do. Now it is seen as something not to do as people know the real consequences of their actions and it’s seen as quite an antisocial thing to participate in. The graph to the right shows that there has been a decline in numbers of people who smoked before the ban and the trend is expected to carry on.

All this evidence shows how influential government strategies can be in changing the perception of the nation, and if this effect can be shown to do with smoking who’s to say it can’t have the same effect with obesity, unhealthy food and diabetes type 2? If the government became more critical and more controlling over the fast food industry it could push people away from buying it, this would therefore reduce the risk of obesity and in turn reduce the risk of diabetes type 2.

**Conclusion**

In conclusion I believe that social media would not have the same effects on Diabetes type 1 as it could with Diabetes type 2. Social media would only contribute to the spreading of data and factual information for diabetes type 1 and the creating support groups for sufferers to use. Although these factors can help, the chances are that no huge breakthroughs will ever be produced due to it.
Overall, I believe that the greatest advancements can be made to do with diabetes type 2. Social media could have a great impact on limiting people’s risk of being diagnosed with diabetes type 2. If people were to show discontent about obesity rates and diabetes type 2, the government would need to look into things to change and overall make the population happy.

A problem could arise if another campaign ran alongside this one to keep things the way they are. This could separate people’s views meaning nothing would ever be achieved. This would potentially result in no chance of lowered diabetes type 2 levels or people wanting to lead healthier lives.

Another problem is that for a campaign to run, it would need public support. A way to get this would be to create more figures to discuss, especially relating to money. If money could be shown on the savings that could be made from reduced treatments for diabetes type 2 on the NHS not only would the public want this to occur but also the government.

Something needs to be done to combat the rising diabetes type levels and obesity rates. A campaign needs to be put in place to raise the cost per calorie and lower the cost for healthy lifestyles. Without this, diabetes type 2 could become a pandemic, threatening the lives of millions. A social media movement could provide the means to put this campaign to effect.

Sources

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