

## About Health Exchange

Our approach to healthy living helps people identify the changes to their lifestyle they want to make, based on their health needs and own priorities, and then supports them in making those changes part of their daily lives.

Our mission is twofold:

- **To enable everyone to have the capability and confidence to exercise a choice for positive health and wellbeing**
- **To shape the design and development of health and wellbeing services**

We achieve this by providing a range of easily-accessible, locally-based services and guidance through our website, social media and texts.

A guiding principle of our approach is to work with local individuals as assets based within their communities. We do this by training local people, situated within local communities, to promote the services that people need. This creates trust in the services and helps overcome the natural barriers such as those arising from language and culture.

For more information visit [WWW.HEALTHEXCHANGE.ORG.UK](http://WWW.HEALTHEXCHANGE.ORG.UK)

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All the images in this document are supplied by an image library – they are not photos of the people mentioned.

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## A healthy intervention

Articulating the value of early support



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# Health Exchange

Health Exchange has been promoting health and wellbeing and tackling health inequalities since 2007. Our mission is to support people in Birmingham, the wider West Midlands, Worcestershire and Solihull to make informed lifestyle choices that improve their health and wellbeing.

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NEF Consulting is a social enterprise founded and owned by the New Economics Foundation (NEF) to help public, private, and third sector organisations put its ideas into practice.

Health Exchange was born out of a belief that the best expert on your health is **you**. We develop tools and solutions **with you**, that work **for you**, so that you become advocates for wellbeing within your families and within your communities. Having successfully supported thousands of people in the past eight years, we know that that this approach creates long-term behaviour change.

This report presents five individuals who have benefited from Health Exchange's services. It demonstrates the value of our practical support which responds to people's individual health and wellbeing needs.

Understanding our impact is how critical to delivering services that matter to you, so we asked NEF Consulting to do an independent economic analysis of our work. This report demonstrates our value by presenting the economic benefits our work could achieve. Our services generate a range economic savings from £300 to £7,200 per person, compared to per person cost of delivery of £70-£113.

We are at the beginning of a new relationship between formal health providers and communities in which we all need to take greater control of our own health and wellbeing. By building upon each other's assets and strengths we believe that we can, together, create sustainable, healthy communities.

## Case Study 1

# Health Trainer (Dudley)



**Mr Dennis, at 50 years old, had multiple health issues and was searching for ways to increase exercise, lose weight and eat more healthily. This led him to the Health Trainer Service (Dudley).**

Mr Dennis suffered from Irritable Bowel Syndrome (IBS) and was diagnosed as a borderline diabetic, with both conditions causing him physical pain.

Mr Dennis referred himself to the Health Trainer service in Dudley. He set a year-long target to reduce unhealthy snacks by three portions per day, and increase light exercise by two ten-minute sessions per week. A Health Trainer was allocated to Mr Dennis for one-to-one advice and support in order to help him achieve these goals. Following an initial assessment, the Health Trainer provided regular checks on height, weight, BMI and blood pressure. A plan for light-touch intervention was mapped out to enable the client to achieve lifestyle changes, including a personal health plan and behaviour change diaries.

Following Health Trainer support, Mr Dennis was able to reduce consumption of unhealthy foods, feel fitter and happier. He reported significant improvements in perception of his general health, confidence in achieving his goals and personal well-being. Mr Dennis was reporting fewer symptoms of illness and was able to reduce his medication. Having achieved his goals, Mr Dennis signed off from the service four months earlier than expected.

## Economic impact of support

### Avoided direct costs of managing IBS

Mr Dennis was able to reduce his medication and was feeling in better general health. If Mr Dennis had continued with his previous lifestyle, it is possible he would have required more medication and more medical consultations to manage his IBS. The average, direct economic cost of managing IBS (including medication, in-patient and out-patient costs) has been estimated to be £90 per year per patient. We assume that half of this cost was avoided, resulting in a saving of £45.

### Avoided/delayed costs associated with physical inactivity

Without support from the Health Trainer service, Mr Dennis would have continued to lead an unhealthy lifestyle and would not have met the government's physical activity

recommendations. The NHS has previously estimated that physical inactivity cost Britain £8.2 billion annually, excluding the contribution of physical inactivity to obesity. With 39% of men and 29% of women meeting physical activity recommendations in the England, this represents an average annual cost of £307 (calculated using population statistics from the Office of National Statistics).

It is difficult to predict whether Mr Dennis' lifestyle changes would have continued in the medium to longer term. We therefore conservatively assume that between one and three year's interaction with State services (resulting from physical inactivity) will have been delayed or avoided (£307 - £921). Given the strong relationship between physical inactivity and diet, costs associated with poor diet have not been estimated to avoid double counting.

### Summary of avoided economic costs

Benefits	Lower Value	Upper Value	Assumption
<b>Avoided direct costs of managing IBS</b>	£45	£45	Half the average costs of managing IBS
<b>Avoided/delayed costs associated with physical inactivity</b>	£307	£921	Between one and three year's associated costs avoided/delayed
<b>TOTAL</b>	<b>£352</b>	<b>£966</b>	

**It cost £113 for us to support Mr Dennis.**

- 1 Inadomi, J. M., Fennerty, M. B. & Bjorkman, D. (2003). The Economic Impact of Irritable Bowel Syndrome. *Alimentary Pharmacology & Therapeutics*, 18(7)
- 2 NorthWest Public Health Observatory (2011), A review of the cost-effectiveness of individual level behaviour change interventions. Retrieved from <http://www.nwph.net/nwpho/Publications/HEALTH%20CHOICES%20.pdf> [accessed 04/2014]
- 3 The NHS Information Centre (2012), Statistics on obesity, physical activity and diet: England, 2012. Retrieved from <http://www.hscic.gov.uk/catalogue/PUB05131/obes-phys-acti-diet-eng-2012-rep.pdf> [accessed 04/2014]
- 4 ONS, Population Estimates for UK, England and Wales, Scotland and Northern Ireland, mid 2004. Retrieved from <http://www.ons.gov.uk/ons/rel/pop-estimate/population-estimates-for-uk--england-and-wales--scotland-and-northern-ireland/2004/index.html> [accessed 04/2014]

## Case Study 2

# Health Trainer (Birmingham)



**Ms Bibi, 45, has lived by herself since the death of her husband. With no children and a family that lives far away, she found herself often lonely and without a support network**

Ms Bibi was on Job Seeker's Allowance. She found it difficult to speak to employment advisors given her level of English. Her religious beliefs discouraged her from working with males and from removing her veil. She felt isolated and had previously been on anti-depressants.

Ms Bibi was referred to Health Exchange by her GP for weight loss. She was assigned to a Health Trainer who, in

order to meet her goals, formulated a plan of action over a couple of sessions. This included increasing fruit and vegetable intake to five portions a day and increasing moderate exercise.

The Health Trainer became increasingly aware of other issues Ms Bibi was facing, and offered advice and support in these areas – notably her confidence in speaking English and finding employment that was compatible with her needs. Suggestions included looking into volunteering, fostering and self-employment. She was given guidance on using websites, including advice on how to register as a representative on the Avon. A Bengali-speaking Health Trainer was allocated to help with her with her English.

At the end of the sessions Ms Bibi had lost weight (reducing her BMI from 31.4 to 30.3) and was incorporating more fruit and vegetables in her diet. She gained work as a domestic carer for people in her community, and with her new-found confidence in her ability to speak English, now sells Avon beauty products in her college. These activities have increased Ms Bibi's opportunities to use her English through interacting with a range of different people. She has been happier following the session and has not returned to anti-depressants.

## Economic impact of support

### Avoided prescription costs

On completion of the Health Trainer programme, Ms Bibi felt more positive and no longer required anti-depressants. A course of anti-depressants usually lasts for a minimum of 6 months at a cost of £73. However, for those with a history of depression, a 2-year course may be recommended, which would incur a cost of £292. In addition, the cost of administering anti-depressants across the UK has been estimated to be £146 per patient annually.

### Avoided costs of counselling and other psychiatric services

Had Ms Bibi not been referred to Health Exchange she might have required additional support to manage her depression. Counselling services cost, on average, £58 per consultation. Given that counselling on the NHS generally consists of 6 to 12 hour-long sessions, use of these sessions indicate cost savings of between £348 and £696.

### Avoided or delayed costs associated with an unhealthy lifestyle

Ms Bibi improved her diet and was able to lose weight with support from Health Exchange. It is possible that an unhealthy lifestyle may have persisted without this support. The NHS has previously estimated that physical inactivity cost Britain £8.2 billion annually, excluding the contribution of physical inactivity to obesity. With 39% of men and 29% of women meeting physical activity recommendations in the England, this represents an average annual cost of £307 (calculated using population statistics from the Office of National Statistics). We therefore assume that between one and three years interaction with State services (resulting from physical inactivity) will have been delayed or avoided (£307 - £921).

### Avoided benefits payments as a consequence of moving into employment

Ms Bibi managed to gain employment following the intervention. While there are many other factors that influenced this, support via Health Exchange was an important step in helping her gain the

confidence and skills to achieve this goal. Ms Bibi may have continued to receive Jobseeker's Allowance (£72.40 per week) for another six months (£1882.40). Potential savings via increased tax and national insurance contributions have not been referenced as these are likely to be small.

### Summary of avoided economic costs

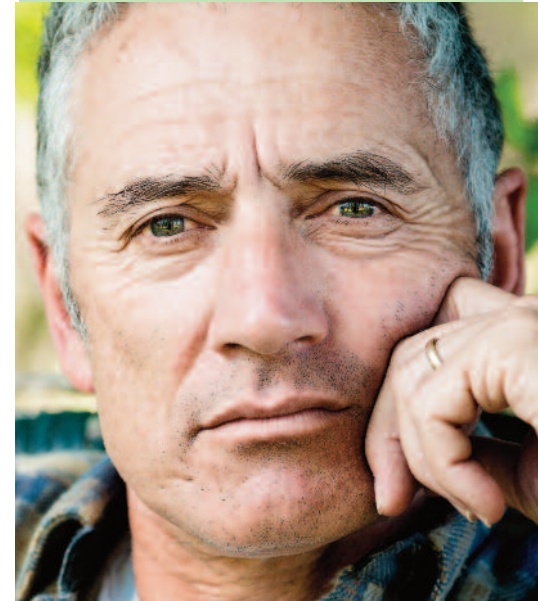
Benefits	Lower Value	Upper Value	Assumption
<b>Avoided prescription costs</b>	£73	£292	Course of anti-depressants avoided (between 6 and 24 months)
<b>Avoided costs of counselling and other psychiatric services</b>	£348	£696	Counselling sessions avoided (between 6 and 12 sessions).
<b>Avoided or delayed costs associated with an unhealthy lifestyle</b>	£307	£921	One and three year's interaction with the State.
<b>Avoided benefits payments as a consequence of moving into employment</b>	£0	£1882	6 months JSA avoided
<b>TOTAL</b>	<b>£728</b>	<b>£3,791</b>	

### It cost £98 for us to support Ms Bibi.

- 1 NHS, Antidepressants – Dosage [webpage]. Retrieved from <http://www.nhs.uk/Conditions/Antidepressant-drugs/Pages/Dosage.aspx>
- 2 Thomas, C. M. & Morris, S. (2003). "Cost of depression among adults in England in 2000", The British Journal of Psychiatry, Vol. 183. Unit costs range from £41.10 to £250.60.
- 3 NHS, Antidepressants – Dosage [webpage]. Retrieved from <http://www.nhs.uk/Conditions/Antidepressant-drugs/Pages/Dosage.aspx>
- 4 Thomas, C. M. & Morris, S. (2003)
- 5 PSSRU (2013), Unit costs of health & social care 2013, The University of Kent publications
- 6 <http://www.nhs.uk/Conditions/stress-anxiety-depression/Pages/types-of-therapy.aspx>
- 7 NorthWest Public Health Observatory (2011), A review of the cost-effectiveness of individual level behaviour change interventions. Retrieved from <http://www.nwph.net/nwpho/Publications/HEALTH%20CHOICES%20.pdf> [accessed 04/2014]
- 8 The NHS Information Centre (2012), Statistics on obesity, physical activity and diet: England, 2012. Retrieved from <http://www.hscic.gov.uk/catalogue/PUB05131/obes-phys-acti-diet-eng-2012-rep.pdf> [accessed 04/2014]
- 9 ONS, Population Estimates for UK, England and Wales, Scotland and Northern Ireland, mid 2004. Retrieved from <http://www.ons.gov.uk/ons/rel/pop-estimate/population-estimates-for-uk--england-and-wales--scotland-and-northern-ireland/2004/index.html> [accessed 04/2014]
- 10 GOV.UK, Jobseeker's Allowance – What you'll get [webpage]. Retrieved from <https://www.gov.uk/jobseekers-allowance/what-youll-get>

## Case Study 3

# Feel Good Wellbeing



**Mr Andrews is a married father of two who had moderate to severe levels of depression. Marriage struggles, ill health in the family, pressures of work and an unknown iron deficiency lead him to Health Exchange's Feel Good Wellbeing service.**

Mr Andrews had previously been prescribed Citalopram, an antidepressant, by his GP but decided to stop taking them after one month. The reason for the prescription was triggered by the severe ill health of his youngest child. When his wife returned to

work after maternity leave they struggled to manage, leading to Mr Andrews collapsing at work.

Mr Andrews referred himself to the Feel Good Wellbeing service for support. He was assigned to a Wellbeing Practitioner and assessed using the Health Exchange's tools and NHS questionnaires. The practitioner's assessment showed a long list of depressive symptoms including poor sleep, lack of engagement and a feeling of hopelessness. This had an impact on his ability to manage family responsibilities, nurture his marriage and spend time with his children.

A plan of action was set up to address Mr Andrews' needs with two activities over six sessions – cognitive restructuring to dispel unhealthy thought processes, and problem solving to encourage him to organise ways to manage his family and work life. Mr Andrews was also encouraged to visit his GP.

Mr Andrews was found to have low iron in his blood, the cause of his collapse at work, and now takes iron tablets with a positive effect on his health. He showed improvement in psychometric measures of well-being, feeling more positive about his personal and work life and his family. His productivity and performance at work has improved.

## Economic impact of support

### Avoided prescription costs

Mr Andrews had been prescribed anti-depressants in the past. In the absence of support from Health Exchange it is possible that he would have been prescribed them again. The cost of administering anti-depressants across the UK has been estimated to be £146 per patient annually. A course of anti-depressants usually lasts for a minimum of 6 months at a cost of £73. However, for those with a history of depression, a 2-year course may be recommended, which would incur a cost of £292. We consider some of these costs would have been avoided in the absence of the intervention.

### Avoided costs of counselling and other psychiatric services

It is probable that without support from Health Exchange, Mr Andrew's initial symptoms would have worsened, to the extent that he would have required additional intervention. A 'talking therapy', such as counselling or Cognitive Behaviour Therapy (CBT), might be prescribed. A CBT session costs £91, with a course of treatment typically lasting 10-15 sessions. This implies a total cost saving of between £910 and £1,365.

### Avoided costs to his employer

It is likely that Mr Andrews' mental health would have continued to affect his performance and productivity at work. The Sainsbury Centre for Mental Health estimates that reduced productivity at work accruing to mental health costs employers £605 per average employee. The equivalent estimate for sickness absence is £335 per average employee. This implies a potential cost saving of £940 to his employer.

### Summary of avoided economic costs

Benefits	Lower Value	Upper Value	Assumption
<b>Avoided prescription costs</b>	£73	£292	Course of anti-depressants avoided (between 6 and 24 months)
<b>Avoided costs of counselling and other psychiatric services</b>	£910	£1,365	CBT sessions avoided (between 10 and 15 sessions).
<b>Avoided cost to employer</b>	£0	£940	Reduced productivity and absenteeism avoided
<b>TOTAL</b>	<b>£983</b>	<b>£2,597</b>	

**It cost £72 for us to support Mr Andrews.**

- 1 Thomas, C. M. & Morris, S. (2003). "Cost of depression among adults in England in 2000", The British Journal of Psychiatry, Vol. 183. Unit costs range from £41.10 to £250.60.
- 2 NHS (n.d.), Antidepressants – Dosage [webpage]. Retrieved from <http://www.nhs.uk/Conditions/Antidepressant-drugs/Pages/Dosage.aspx>
- 3 Thomas, C. M. & Morris, S. (2003)
- 4 NHS (n.d.), Antidepressants – Dosage [webpage]. Retrieved from <http://www.nhs.uk/Conditions/Antidepressant-drugs/Pages/Dosage.aspx>
- 5 PSSRU (2013), Unit costs of health & social care 2013, The University of Kent publications
- 6 Patient.co.uk, Cognitive Behaviour Therapy (CBT) [webpage]. Retrieved from <http://www.patient.co.uk/health/cognitive-behavioural-therapy-cbt-leaflet>
- 7 The Sainsbury Centre for Mental Health, Mental Health at Work: Developing the business case

## Case Study 4

# Living Well Taking Control: Pre-Diabetes



**Mrs Kaur, 43, was a recent graduate who lived with her husband. Unemployed, she spent some of her time on housework and childcare. Mrs Kaur was classified as pre-diabetic and referred to the Living Well Taking Control: Pre-Diabetes service by her GP.**

Mrs Kaur would sometimes go a day without eating in order to lose weight and

felt often lonely. Her mother and husband are both diabetic, however, she felt unaware of, and unprepared for her long-term condition. She has lived with moderate pain and discomfort, and suffered from mild anxiety and depression.

Mrs Kaur was referred to the Living Well Taking Control Pre-Diabetic service by her GP.

Upon assessment, Mrs Kaur's blood sugar levels classified her as borderline diabetic, and her Body Mass Index (BMI) was also extremely high. After initial advice and support, she managed to lose 4lbs in one week. Mrs Kaur now avoids processed foods and has encouraged her husband to do the same in his diet. Previously, she had never really considered incorporating moderate exercise into her life but now, instead of driving her car everywhere, she walks. As her understanding of food has improved she no longer feels the need to stop eating completely in order to lose weight. She is now keen to share what she has learned on the course with people in her community.

## Economic impact of support

### Prevention or delay in development of type 2 diabetes

In the short term Mrs Kaur has made changes to her lifestyle that, if sustained, would reduce the risk of her developing type 2 diabetes.

It is possible that support from Health Exchange postponed or prevented Mrs Kaur from developing type 2 diabetes. Average annual inpatient costs for type 2 diabetes are estimated to be £2,552 per patient, with average annual outpatient costs (excluding drugs) of £367 per patient, and annual

drugs costs of £798 per patient . Preventing or delaying the development of type 2 diabetes can therefore save £3,717 per year in treatment costs.

**Avoided complications from development of type 2 diabetes**

Complications arising from diabetes (such as cardiovascular disease) are likely to lead to hospitalisation and treatment for other conditions. Annual inpatient care for short and long term complications of diabetes cost between £1,800 and £2,500 per patient , while outpatient and medication costs are between £300 and £370 per patient per year. It is likely that support from Health Exchange contributed to reduced risk of such complications occurring in the medium term.

**Avoided costs of counselling and other psychiatric services**

Mrs Kaur had suffered from mild anxiety and depression before support from Health Exchange. Evidence linking physical activity to improved mood and reduced symptoms of depression suggest that Mrs Kaur would have experienced better mental health as well as improved physical health. The avoided cost of counselling services to manage symptoms of depression and anxiety is an average £58 per consultation . Counselling on the NHS generally consists of 6 to 12 hour-long sessions , which would imply cost savings of between £348 and £696. savings of between £348 and £696.

**Summary of avoided economic costs**

Benefits	Lower Value	Upper Value	Assumption
<b>Prevention or delay in development of type 2 diabetes</b>	£3,717	£3,717	Treatment for type 2 diabetes avoided
<b>Avoided complications from development of type 2 diabetes</b>	£2,100	£2,870	Complications from type 2 diabetes avoided
<b>Prevention of worsening mental health</b>	<b>£348</b>	£696	Prevented need for counselling services
<b>TOTAL</b>	<b>£6,165</b>	<b>£7,283</b>	

**It cost £78 for us to support Mrs Kaur.**

1 See: Norris, S. L., Zhang, X., Avenell, A., Gregg, E., Bowman, B., Schmid, C. H., Lau, J. (2005), Long term effectiveness of weight-loss interventions in adults with pre-diabetes: A review. American journal of preventative medicine, 1 January 2005, vol 28, issue 1, pages 126 - 139  
 2 Kanavos, K., van den Aardweg, S., & Schurer, W. (2012). Diabetes expenditure, burden of disease and management in 5 EU countries, LSE Health, London School of Economics  
 3 Diabetes.co.uk, Cost of diabetes complications, Retrieved from www.diabetes.co.uk/cost-of-diabetes [accessed April 2014]  
 4 Diabetes.co.uk  
 5 http://www.c3health.org/wp-content/uploads/2009/09/C3-review-of-physical-activity-and-health-v-1-20110603.pdf  
 6 PSSRU (2013), Unit costs of health & social care 2013, The University of Kent publications  
 7 http://www.nhs.uk/Conditions/stress-anxiety-depression/Pages/types-of-therapy.aspx

Case Study 5

**Living Well Taking Control: Managing Diabetes**



**Mr Dowling is 63 years old and retired. He was diagnosed as Type 2 Diabetic by his GP and referred to the Health Exchange’s Living Well Taking Control: Managing Diabetes service.**

Mr Dowling’s only form of exercise was taking his dog for walks. He frequently experienced dizzy spells and felt tired most of the time. He was taking tablets to manage his condition but had not been asked to make any dietary changes. He was consequently referred to Health Exchange’s Living Well Taking Control: Managing Diabetes course by his GP.

The Managing Diabetes course consists of four informal and informative group sessions over 4 weeks. Within this, content varies from eating habits to exercise in order to show diabetic patients ways in which they can change their lifestyle and control their diabetes.

Mr Dowling was given a food diary to record and assess the food and drink he was regularly consuming. However, the course leader noticed that he looked unwell. Analysis of blood sugar levels proved Mr Dowling's initial diagnosis of high blood sugar levels to be incorrect and he is now classified as pre-diabetic.

Mr Dowling showed a continuous improvement in his health following this diagnosis. He no longer takes tablets and has a machine to regularly check his blood sugar levels. His consumption of unhealthy foods (particularly those high in sugar) has reduced, as has his alcohol intake. The support has helped Mr Dowling to manage his condition and undertake his day-to-day activities.

## Economic impact of support

### Avoided medication costs

Had he not been referred to Health Exchange it is probable that Mr Dowling would have continued to be prescribed drugs. The London School of Economics estimates the total cost of providing drugs for type 2 diabetes as £798 per patient per year (excluding outpatient costs).

### Avoided GP consultation costs

Without support from Health Exchange, Mr Dowling would have required additional GP consultations at a cost of £192 per hour of patient contact. Estimating one to two hours of additional consultation time (£192 - £384), these are short-term costs, over and above the medium-term costs outlined.

### Prevention or delay in developing type 2 diabetes

While it is difficult to predict the long term impact of Health Exchange's support on Mr Dowling's health, it is clear that mismanagement of his condition would have increased the risk of developing type 2 diabetes. Average annual inpatient costs for type 2 diabetes are estimated to be £2,552 per patient, with average annual outpatient costs (excluding drugs) of £367 per patient.

### Avoided complications from development of type 2 diabetes

It is likely that support from Health Exchange contributed to a reduced risk of complications from the development of type 2 diabetes. Annual inpatient care for short and long term complications of diabetes cost between £1,800 and £2,500 per patient, while outpatient and medication costs are between £300 and £370 per patient per year.

## Summary of avoided economic costs

Benefits	Lower Value	Upper Value	Assumption
<b>Avoided medication costs</b>	£798	£798	Average drugs cost for type 2 diabetes patients (25% - 100% cost assumed)
<b>Avoided GP consultation costs</b>	£192	£384	Between one and two hours GP consultation avoided
<b>Prevention or delay in developing type 2 diabetes</b>	£2,919	£2,919	Type 2 diabetes developed
<b>Avoided complications from development of type 2 diabetes</b>	£2,100	£2,870	Complications from type 2 diabetes avoided
<b>Total</b>	<b>£6,009</b>	<b>£6,971</b>	

**It cost £70 for us to support Mr Dowling.**

- 1 Kanavos, K., van den Aardweg, S., & Schurer, W. (2012). Diabetes expenditure, burden of disease and management in 5 EU countries, LSE Health, London School of Economics
- 2 PSSRU (2013), Unit costs of health & social care 2013, The University of Kent publications
- 3 See: Norris, S. L., Zhang, X., Avenell, A., Gregg, E., Bowman, B., Schmid, C. H., Lau, J. (2005), Long term effectiveness of weight-loss interventions in adults with pre-diabetes: A review. American journal of preventative medicine, 1 January 2005, vol 28, issue 1, pages 126 - 139
- 4 Kanavos, K., van den Aardweg, S., & Schurer, W. (2012)
- 5 Diabetes.co.uk, Cost of diabetes complications, Retrieved from [www.diabetes.co.uk/cost-of-diabetes](http://www.diabetes.co.uk/cost-of-diabetes) [accessed April 2014]
- 6 Diabetes.co.uk