

# Health, Wellbeing and Local Government Committee

## Committee Inquiry into Stroke services in Wales – Written evidence from Diabetes UK Cymru

July 2009

### Introduction

Diabetes mellitus is a serious metabolic condition in which too much glucose (sugar) occurs in the blood. It is one of the major underlying risk factors for stroke and poor outcomes following a stroke. In this paper, we have set out some of the current issues around diabetes and stroke, and the actions we believe are necessary to reduce the impact of diabetes-related strokes in Wales.

The Call for Evidence for this inquiry specifically requests submissions on “the prevention of stroke and the promotion of lifestyles that minimise the risk of stroke”. As Derek Wanless concluded in his *Review of Health and Social Care in Wales*, in the field of diabetes there is “scope for significant cost-savings through prevention, earlier diagnosis, and better management and secondary prevention after diagnosis.”<sup>1</sup> Diabetes UK would argue that many of these savings could be made in stroke services, with improved prevention and management of diabetes leading to reduced incidence of stroke and improved outcomes overall.

### The rising tide of diabetes

Currently, around 140,000 people in Wales have been diagnosed with diabetes,<sup>2</sup> and it is estimated that thousands more have the condition but don't yet know it.<sup>3</sup> By 2025, it is estimated that around a quarter of a million people in Wales will have diabetes – part of a UK total of over four million people.<sup>4</sup> A number of factors are contributing to this increase, but factors relating to lifestyle and weight gain are the most significant, with most people with Type 2 diabetes being overweight at the time of diagnosis.<sup>5</sup> As part of this growth of diabetes, we are now seeing the first cases of Type 2 diabetes (previously considered a condition of people over 40) in overweight children,<sup>6</sup> with around 20 cases in Wales at present.<sup>7</sup>

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<sup>1</sup> <http://wales.gov.uk/topics/health/publications/health/reports/wanless/?lang=en>

<sup>2</sup> <http://www.statswales.wales.gov.uk/TableViewer/tableView.aspx?ReportId=4111>

<sup>3</sup> <http://www.diabetes.org.uk/Documents/Reports/DiabetesintheUK-2009-01.pdf>

<sup>4</sup> <http://www.yhpho.org.uk/resource/item.aspx?RID=9907>

<sup>5</sup> [http://www.idf.org/Fact\\_Sheetsdiabetes\\_obesity](http://www.idf.org/Fact_Sheetsdiabetes_obesity)

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[http://www.diabetes.org.uk/en/About\\_us/Our\\_Views/Care\\_recommendations/Type\\_2\\_diabetes\\_in\\_children/](http://www.diabetes.org.uk/en/About_us/Our_Views/Care_recommendations/Type_2_diabetes_in_children/)

<sup>7</sup> Data from the Brecon Group: Welsh Paediatric Diabetes Interest Group

## Diabetes and stroke

According to the most recent National Diabetes Audit, almost 5,000 people with diabetes in Wales had a stroke during the 2007-2008 audit period.<sup>8</sup>

Recent evidence from a range of sources has also shown that:

- Within the first five years of diagnosis, people with Type 2 diabetes are twice as likely to have a stroke as the general population.<sup>9</sup>
- As well as a higher incidence of stroke, people with diabetes have a poorer prognosis after stroke,<sup>10</sup> and pre-existing diabetes in someone who has a stroke significantly increases the risk of death from stroke.<sup>11</sup>
- Hypertension and Type 2 diabetes increase stroke risk independently of each other, and in combination drastically increase that risk.<sup>12</sup>

## Diabetes management and stroke prevention

The National Service Framework (NSF) for Diabetes in Wales makes a number of commitments that are particularly relevant to the prevention and management of strokes in people with diabetes:

- **Standard 4:** “All adults with diabetes will receive high-quality care throughout their lifetime, including support to optimise the control of their blood glucose, blood pressure and other risk factors for developing the complications of diabetes.”
- **Standard 10:** “All young people and adults with diabetes will receive regular surveillance for the long-term complications of diabetes.”
- **Standard 11:** “The NHS will develop, implement and monitor agreed protocols and systems of care to ensure that all people who develop long-term complications of diabetes receive timely, appropriate and effective investigation and treatment to reduce their risk of disability and premature death.”<sup>13</sup>

People with diabetes need appropriate care, support and medication to achieve good blood glucose, blood cholesterol and blood pressure control. The United Kingdom Prospective Diabetes Study (UKPDS) showed that lowering raised blood glucose and blood pressure levels reduced the risk of heart disease, stroke and death from these and other diabetic complications. The UKPDS irrefutably showed that there must be a clear emphasis on achieving optimal blood pressure and blood glucose levels in people with

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8

[http://www.ic.nhs.uk/webfiles/Services/NCASP/audits%20and%20reports/7121\\_National%20Diabetes%20Audit\\_final.pdf](http://www.ic.nhs.uk/webfiles/Services/NCASP/audits%20and%20reports/7121_National%20Diabetes%20Audit_final.pdf)

<sup>9</sup> Jeerakathil T, Johnson JA, Simpson SH et al (2007). Short-term risk for stroke is doubled in persons with newly treated Type 2 diabetes compared with persons without diabetes: a population based cohort study. *Stroke* 38 (6); 1739–1743

<sup>10</sup> Kurukulasuriya LR, Govindarajan G, Sowers J, Stroke prevention in diabetes and obesity. *Expert Review of Cardiovascular Therapy* 4(4):487-502, 2006 Jul.

<sup>11</sup> Hu G, Jousilahti P, Sarti C, Antikainen R, Tuomilehto J, The effect of diabetes and stroke at baseline and during follow-up on stroke mortality. *Diabetologia* 49(10):2309-16, 2006 Oct.

<sup>12</sup> Hu G, Sarti C, Jousilahti P, Peltonen M, Qiao Q, Antikainen R, Tuomilehto J. The impact of history of hypertension and type 2 diabetes at baseline on the incidence of stroke and stroke mortality. *Stroke* 36(12):2538-43, 2005 Dec.

<sup>13</sup> <http://www.wales.nhs.uk/sites3/Documents/440/nsf-diabetes-in-wales-deliv2.pdf>

diabetes from the time of diagnosis. Effective therapy to attain these will reduce the risk of diabetes complications such as stroke.<sup>14</sup>

Appropriate pharmaceutical prescribing is one key element of this, but self-management of diabetes by people with the condition is also crucial. In order to achieve this, people with diabetes need access to the best support and information. One of the most effective options is a formal course of structured diabetes education.<sup>15</sup> In 2003, the National Institute for Clinical Excellence (NICE) recommended that “structured patient education [be] made available to all people with diabetes at the time of initial diagnosis and then as required on an ongoing basis, based on a formal, regular assessment of need.”<sup>16</sup> A number of structured diabetes education courses are available in Wales.<sup>17</sup> However, Assembly Government statistics published in October 2008 showed that since April 2006 less than 2% of people with diabetes in Wales had take part in such course,<sup>18</sup> and clearly more work is needed to ensure both the availability of suitable courses and improved take-up of the courses provided.

Looking even earlier in the progression of diabetes, to the period prior to diagnosis, Diabetes UK is keen to encourage lifestyle modification to reduce people’s risk of developing diabetes and a range of related vascular conditions, including stroke. Standard 1 of the Diabetes NSF for Wales states that “the NHS will develop, implement and monitor strategies to reduce the risk of developing Type 2 diabetes in the population as a whole and to reduce the inequalities in the risk of developing Type 2 diabetes.”<sup>19</sup> Work to realise this objective should include specific interventions targeted at people most at risk of Type 2 diabetes in terms of:

- Age – all people aged over 40, and black and Asian people aged over 25 are at risk of Type 2 diabetes.<sup>20</sup>
- Ethnic background and family history of diabetes – Type 2 diabetes is up to six times more common in people of South Asian descent and up to three times more common among people of African and African-Caribbean origin.<sup>21</sup>
- Weight and waist circumference.<sup>22</sup>
- A link has also been shown between Type 2 diabetes and deprivation, with the most deprived people in the UK two-and-a-half times more likely than the average to have diabetes at any given age.<sup>23</sup>

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14

[http://www.diabetes.org.uk/en/About\\_us/Our\\_Views/Position\\_statements/UKPDS\\_Implications\\_for\\_the\\_care\\_of\\_people\\_with\\_Type\\_2\\_diabetes/](http://www.diabetes.org.uk/en/About_us/Our_Views/Position_statements/UKPDS_Implications_for_the_care_of_people_with_Type_2_diabetes/)

<sup>15</sup> [http://www.diabetes.nhs.uk/Plone/downloads/Factsheet\\_Structured\\_Education\\_Support.pdf](http://www.diabetes.nhs.uk/Plone/downloads/Factsheet_Structured_Education_Support.pdf)

<sup>16</sup> <http://www.nice.org.uk/nicemedia/pdf/60PatienteducationmodelsA4summary.pdf>

<sup>17</sup> <http://www.wales.nhs.uk/documents/diabetes-consensus-guidelines.pdf>

<sup>18</sup> Welsh Assembly Government presented at a Diabetes UK seminar in Llandrindod Wells, 22 October 2008

<sup>19</sup> <http://www.wales.nhs.uk/sites3/Documents/440/nsf-diabetes-in-wales-deliv2.pdf>

<sup>20</sup> [http://www.diabetes.org.uk/Guide-to-diabetes/Introduction-to-diabetes/Causes\\_and\\_Risk\\_Factors/](http://www.diabetes.org.uk/Guide-to-diabetes/Introduction-to-diabetes/Causes_and_Risk_Factors/)

<sup>21</sup> [www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/Browsable/DH\\_4096591](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/Browsable/DH_4096591)

<sup>22</sup> [http://www.diabetes.org.uk/Measure\\_Up\\_-\\_are\\_you\\_at\\_risk\\_of\\_diabetes/](http://www.diabetes.org.uk/Measure_Up_-_are_you_at_risk_of_diabetes/)

<sup>23</sup> [www.ic.nhs.uk/webfiles/publications/healthsurvey2004ethnicfull/HealthSurveyforEnglandVol1\\_210406\\_PDF.pdf](http://www.ic.nhs.uk/webfiles/publications/healthsurvey2004ethnicfull/HealthSurveyforEnglandVol1_210406_PDF.pdf)

There is firm evidence from Finland,<sup>24</sup> the USA<sup>25</sup> and China<sup>26</sup> that intensive programmes working with people at high risk of diabetes can halve their chances of developing the condition. In spite of their proven effectiveness, very few programmes of this type currently exist in Wales.

More generally, Diabetes UK is pressing for improvements to our environment that will help all of us to live healthier lives and avoid illness. At present, we live in an environment that has been described as being “obesogenic” and “diabetogenic”, in that it tends to promote weight gain, to make healthy living more difficult, and therefore to increase people’s risk of developing Type 2 diabetes. Our physical environment can have obvious effects on our lifestyle, and number of studies have shown that people are more likely to live healthy lives if the layout of their neighbourhoods makes walking and cycling more appealing options, and if facilities such as shops and schools can be more easily reached on foot or by bike than by car. For example, one study in the USA has shown that people who live in neighbourhoods where there is a good mix of shops and other businesses within walking distance are around 35% less likely to be obese.<sup>27</sup>

There are also strong arguments for ensuring sufficient facilities for children and adults to be physically active, both indoors and outside, and for ensuring that walking and cycling are safer options, by planning roads and pavements to slow and control motor vehicle traffic. We very much welcome, therefore, the attention given in the current consultation document *Climbing Higher: Creating an Active Wales* to the possibilities for using town planning procedures to make more of our neighbourhoods more “walkable” and “bikeable”.<sup>28</sup>

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<sup>24</sup> <http://www.cdc.gov/diabetes/news/finnish.htm>

<sup>25</sup> <http://diabetes.niddk.nih.gov/dm/pubs/preventionprogram/>

<sup>26</sup> Pan X, Li g, Hu Y, Wang J, Yang W, An Z. Effects of diet and exercise in preventing NIDMM in people with impaired glucose tolerance. The Da Qing IGT and Diabetes Study. *Diabetes Care* 1997; 20: 537-544.

<sup>27</sup> <http://www.activelivingresearch.org/files/transportationrevised021105.pdf>

<sup>28</sup> <http://wales.gov.uk/docs/phhs/consultation/physicalactivity/090505climbinghigher.pdf>