

Diabetes in England

Dr Rowan Hillson MBE

National Clinical Director for Diabetes

I strongly believe that...

- Everyone with diabetes deserves the highest standards of personalised diabetes care, no matter where, when or by whom it is delivered.
- People providing diabetes care must be trained in diabetes and must know the boundaries of their knowledge.
- They must have opportunities to extend these boundaries and to update.
- People with diabetes and professionals must have ready access to specialist diabetes expertise.



Diabetes is rising to the top of the agenda

- NSF for diabetes continues – delivery started 2003
- NICE Quality Standard for Diabetes in Adults 2011
- NICE Quality Standard for Diabetes in Children in development
- NHS Operating Framework 2011 – 2012
- National Diabetes Audit expanded and funded for 3 more years - MANDATORY
- National Audit Office review – report Summer 2012
- Ministerial interest
- Parliamentary questions

The size of the problem. APHO prevalence model

People with diabetes >16 yrs in England - estimate

2010

3.1 million (2.2 – 4.5 million)

7.4% (5.3 – 10.8%)

822,000 adults with undiagnosed diabetes

2030

4.6 million

9.5% (6.7 – 14.1%)

www.yhpho.org.uk/resource/view.aspx?RID=81090

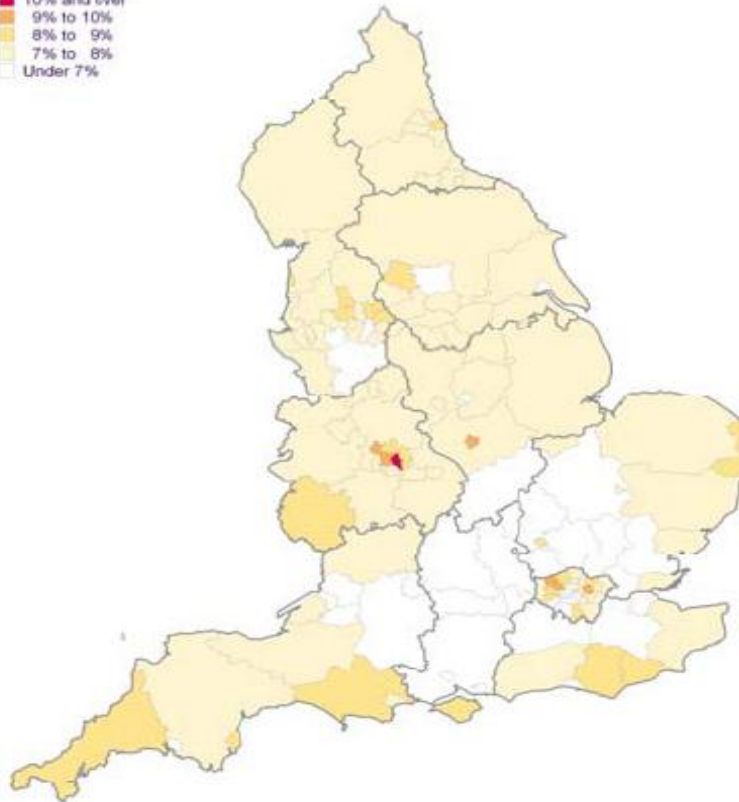
Estimate Prevalence >16 yrs by PCT 2010 and 2030

www.yhpho.org.uk/resource/view.aspx?RID=81090

Diabetes prevalence model by Primary Care Trust

Diabetes Prevalence 2010

- 10% and over
- 9% to 10%
- 8% to 9%
- 7% to 8%
- Under 7%



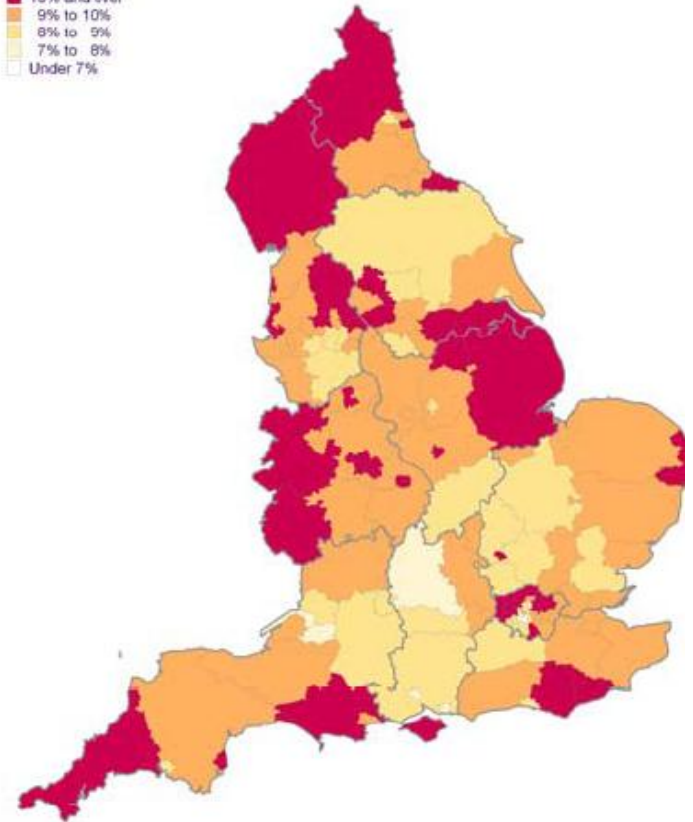
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Diabetes prevalence model by Primary Care Trust

Diabetes Prevalence 2030

- 10% and over
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NICE Quality Standard for Diabetes

The Quality Standard for diabetes in adults requires that services should be commissioned from and coordinated across all relevant agencies encompassing the whole diabetes care pathway. An integrated approach to provision of services is fundamental to the delivery of high quality care to people with diabetes.

The QS supports the NSF for Diabetes and locally agreed pathways of care.

www.nice.org.uk/guidance/qualitystandards/diabetesinadults/diabetesinadultsqualitystandard.jsp

NICE quality standard for diabetes in adults

1 People with diabetes should:

- Receive structured educational programme
- Receive personalised advice on nutrition and physical activity from an appropriate trained HCP or as part of a structured educational programme
- Participate in annual care planning

NICE Quality Standard. 2 People with diabetes should

- Agree with their HCP a documented personalised HbA1c target, usually between 48 and 58 mmol/mol (6.5 and 7.5%) and receive an ongoing review of treatment to minimise hypoglycaemia
- Agree with their HCP to start, review and stop medications to lower blood glucose, blood pressure and blood lipids in accordance with NICE guidance
- Trained HCPs initiate and manage therapy with insulin within a structured programme that includes dose titration by the person with diabetes

NICE QS. 3 People with diabetes

- Of childbearing age are regularly informed of the benefits of preconception glycaemia control and of any risks, including medication that may harm an unborn child. Women planning pregnancy are offered preconception care, and those not planning pregnancy are offered advice on contraception
- Receive an annual assessment for the risk and presence of complications of diabetes, and these are managed appropriately
- Are assessed for psychological problems, which are then managed appropriately

NICE QS. 4 People with diabetes:

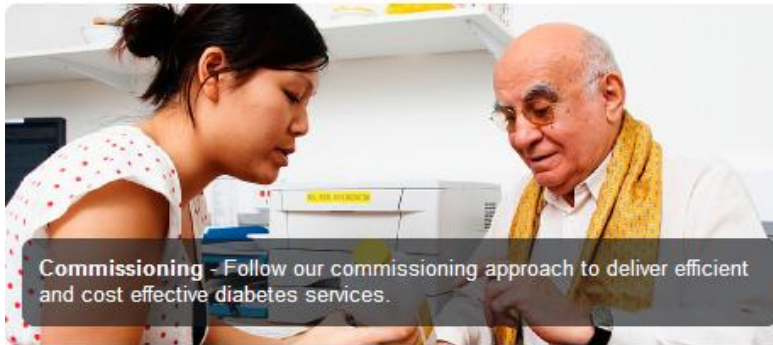
- With or at risk of foot ulceration receive regular review by a foot protection team in accordance with NICE guidance. And those with a foot problem requiring urgent medical attention are referred to and treated by a multidisciplinary foot care team within 24 hours.
- Admitted to hospital are cared for by appropriately trained staff, provided with access to a specialist diabetes team, and given the choice of self-monitoring and managing their own insulin
- Admitted to hospital with DKA receive educational and psychological support prior to discharge and are followed up by a specialist diabetes team
- Who have experienced hypoglycaemia requiring medical attention are referred to a specialist diabetes team

NHS Diabetes

www.diabetes.nhs.uk

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Commissioning - Follow our commissioning approach to deliver efficient and cost effective diabetes services.

- Commissioning
- Quality improvement
- In your area
- Networks
- Information & data
- Safe use of insulin

NHS Diabetes is a service improvement team working with managers, commissioners and providers of diabetes services to improve the quality of care for people with diabetes.

This website is an interactive resource set up to enable people to source support, guidance, resources, diabetes information and data from their desk. We have a team of experts in commissioning, networks and safety, information and data on hand to support you with commissioning and service improvement. Please contact our team with your questions through the 'Ask a question?' button found on each page.

NHS Diabetes plays a vital role in improving the services and quality of care received by people with diabetes and have one simple but crucial aim; to embed safe, evidence-based examples of 'what works' leading to better outcomes for patients.

We are leading the way for long-term conditions. We enable delivery of the NHS Outcomes Framework and NICE Clinical

Diabetes care areas - click here to navigate to a care area page



Become a Member of NHS Diabetes

Hot topics / Quick links

Latest news

29 Sep 2011



Sanofi has announced a temporary interruption to supply to a number of its APIDRA insulin preparations.

[Find out more >](#)

23 Sep 2011



NHS Diabetes reacts to BBC News story on 'Designer diabetes drugs'. National Clinical Director for Diabetes, Rowan Hillson, has insisted that drugs

National Diabetes Information Service

www.diabetes-ndis.org



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Recent releases

Variation in Inpatient Activity: Diabetes

Diabetes with kidney disease key facts

NDIS training material

Diabetes Patient Experience Project (DPEP)

NDIS news

NICE quality standards for diabetes

GP practice profiles

NDIS Events

Diabetes UK Annual Professional Conference, 30th March - 1st April 2011, London

Diabetes Health Intelligence Hub and Spoke Network

Welcome to NDIS

Welcome to the National Diabetes Information Service (NDIS), where you can find a comprehensive range of diabetes data, tools and information via one web portal. NDIS provides people with diabetes, providers of diabetes care and health commissioners, with information to aid decision making and improve services.

If you have any queries, suggestions, or would like to receive our email update please contact us at info@diabetes-ndis.org



TOOLS AND DATA

Online tools from a range of organisations for presenting key data and indicators, undertaking needs assessment and more.

[read more](#)



RECENTLY PUBLISHED

NEW Variation in Inpatient Activity (VIA: Diabetes) allows users to compare information on inpatient activity for those with/ without diabetes.

[read more](#)



REPORTS

Key reports and publications on diabetes health intelligence topics.



COMING SOON

Diabetes specific GP practice profiles are currently being developed through the NDIS partnership



NHS Operating Framework 2011 - 2012

- 4.47 All people with diabetes should be offered screening for early detection and, if needed, treatment of retinopathy.
- NHS Commissioners and providers must do more to ensure insulin pumps are available for those people with diabetes that meet the criteria recommended by NICE.
- 4.48 PCTs should be commissioning the relevant structured patient education to support people newly diagnosed with diabetes and at appropriate points in their life as their condition progresses
- 4.49 NHS providers should consider the overall management of inpatients with diabetes in order to reduce their length of stay, improve their experience of care, ensure they do not develop diabetic foot complications whilst in hospital, and that their blood glucose is managed safely. This is particularly relevant to the safe administration of insulin by healthcare professionals
- http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_122738

WHO HbA1c for the diagnosis of diabetes YES

- HbA1c can be used as a diagnostic test for diabetes providing that stringent quality assurance tests are in place and assays are standardised to criteria aligned to the international reference values, and there are no conditions present which preclude its accurate measurement.
- An HbA1c of 48 mmol/mol (6.5%) is recommended as the cut point for diagnosing diabetes. A value of less than 48 does not exclude diabetes diagnosed using glucose tests.
- http://www.who.int/diabetes/publications/report-hba1c_2011.pdf

National diabetes audit 2009/10 England

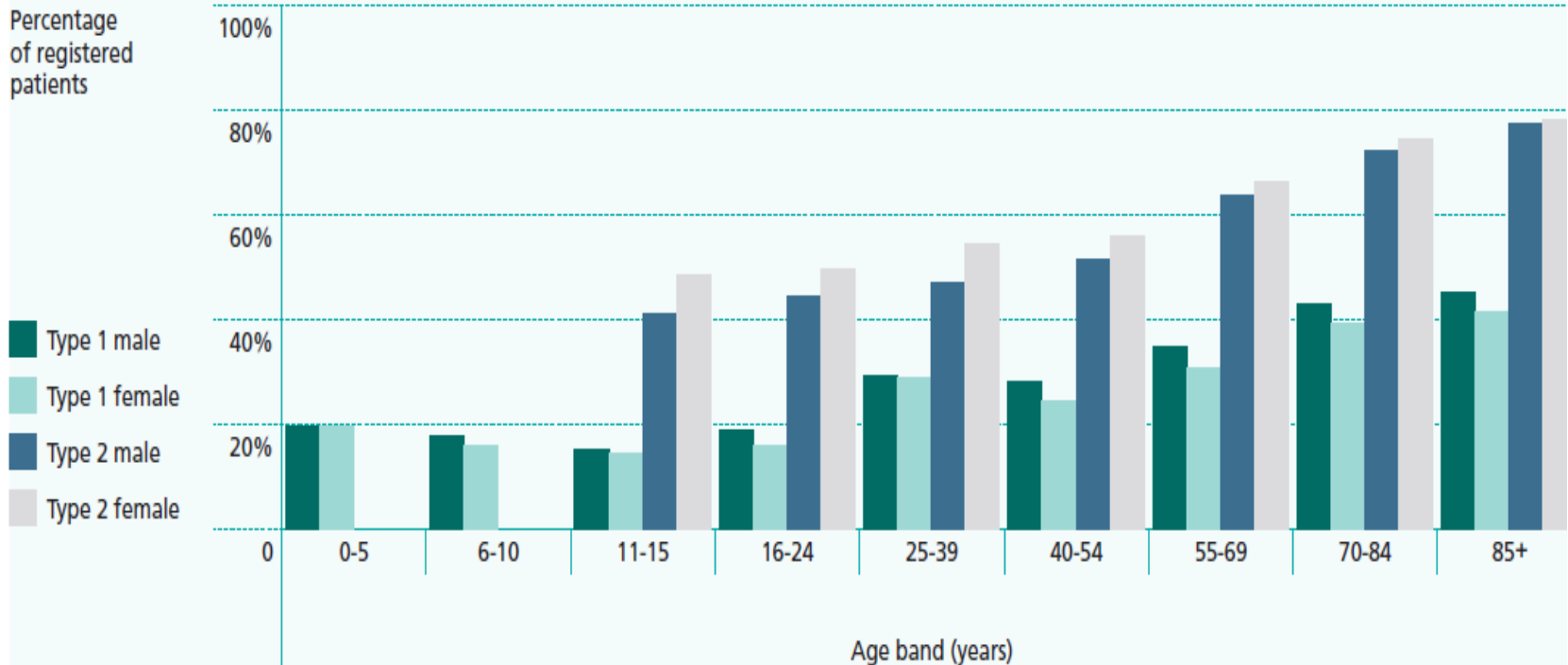
1,929,985 people	Type 1	Type 2
All care processes	31.9%	52.9%
HbA1c	87.0%	92.6%
Foot Risk	67.8%	85.2%
BP	86.6%	95.4%
Urinary Microalbumin	54.4%	73.7%

National diabetes audit 2009/10 England

	Type 1	Type 2
HbA1c ≤ 58	28.2%	66.5%
Cholesterol < 4	30.2%	40.9%
BP to NICE target	63.3%	49.5%

National Diabetes Audit 2009/2010 HbA1c

Figure 8
HbA1c \leq 7.5 per cent (59mmol/mol) target achievement by gender and diabetes type



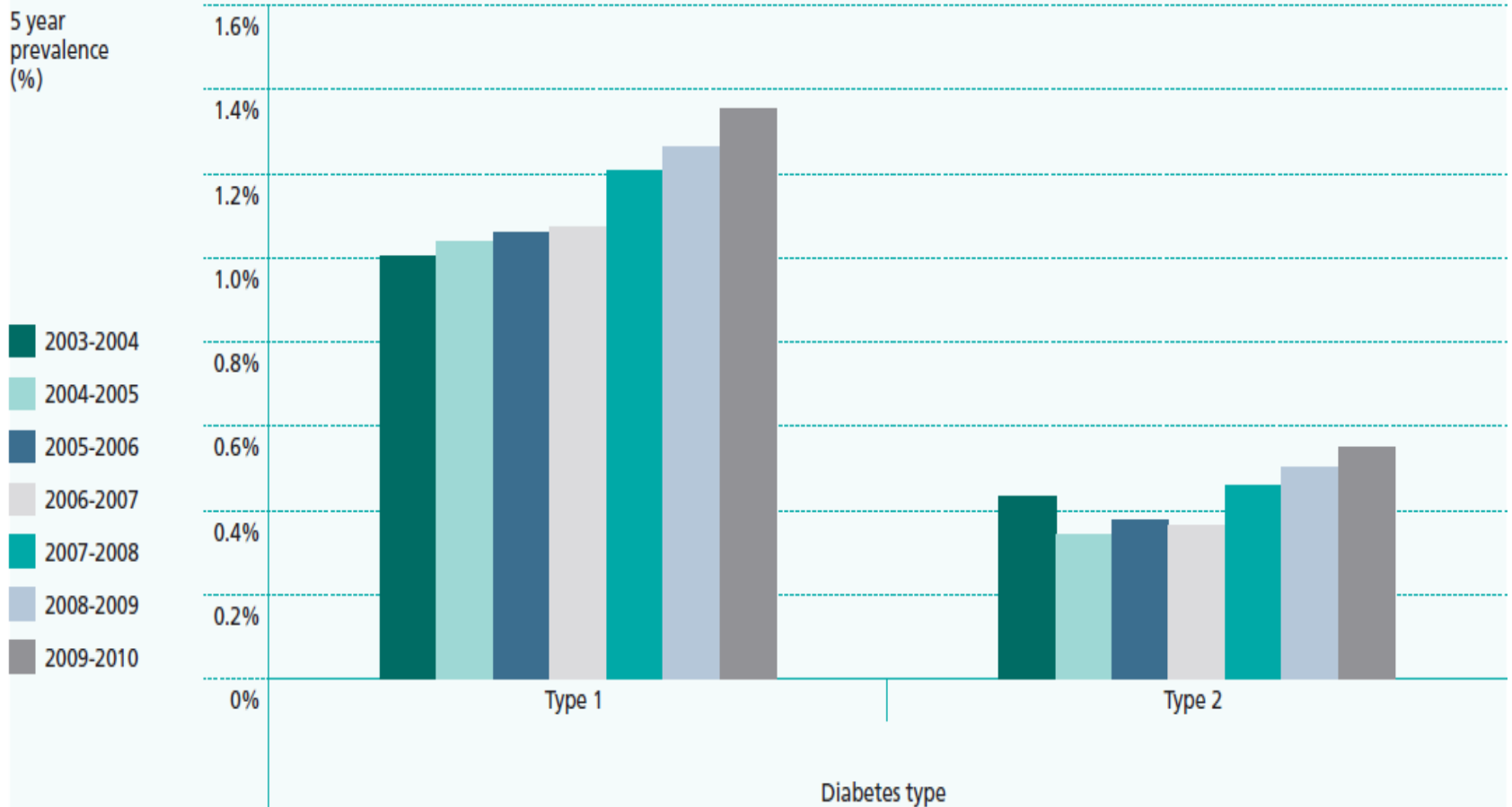
National Diabetes Audit 2009/10. Cholesterol

Age	Cholesterol < 5
All	T1 73% T2 78%
>55 years	80%
16-40 Years	63%

NDA 5 year prevalence of End Stage Kidney disease T1 3,000, T2 11,500 patients in England

Figure 17

'5 year prevalence' of end stage kidney disease treatment over the 7 audit years by diabetes type



Prescribing for diabetes in England 2010/11

Primary care. Glucose lowering and glucose monitoring drugs used in diabetes (BNF 6.1)

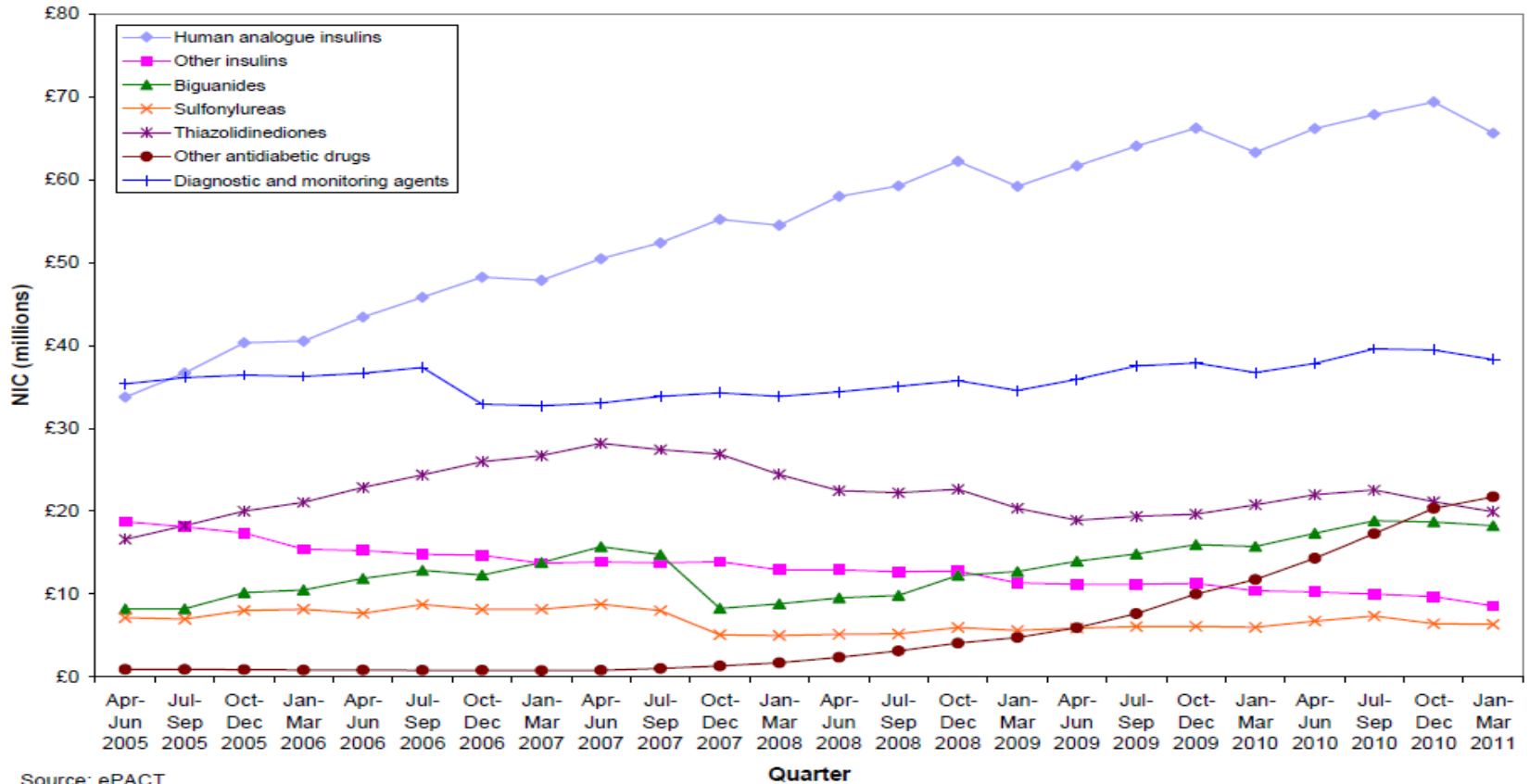
Financial Year	NIC (millions)	Change in NIC on previous year (millions)	% change on previous year
2005/6	£513.9	£55.4	12.1
2006/7	£572.4	£58.5	11.4
2007/8	£590.7	£18.3	3.2
2008/9	£599.3	£8.6	1.5
2009/10	£649.2	£49.9	8.3
2010/11	£725.1	£75.9	11.7

Source: ePACT

<http://www.ic.nhs.uk/pubs/prescribingfordiabetes05-11>

Costs of different categories

Figure 6: Net Ingredient Cost of different categories of Drugs used in diabetes (£ 6.1), April 2005 – March 2011



Source: ePACT

Diabetes Community Health Profiles

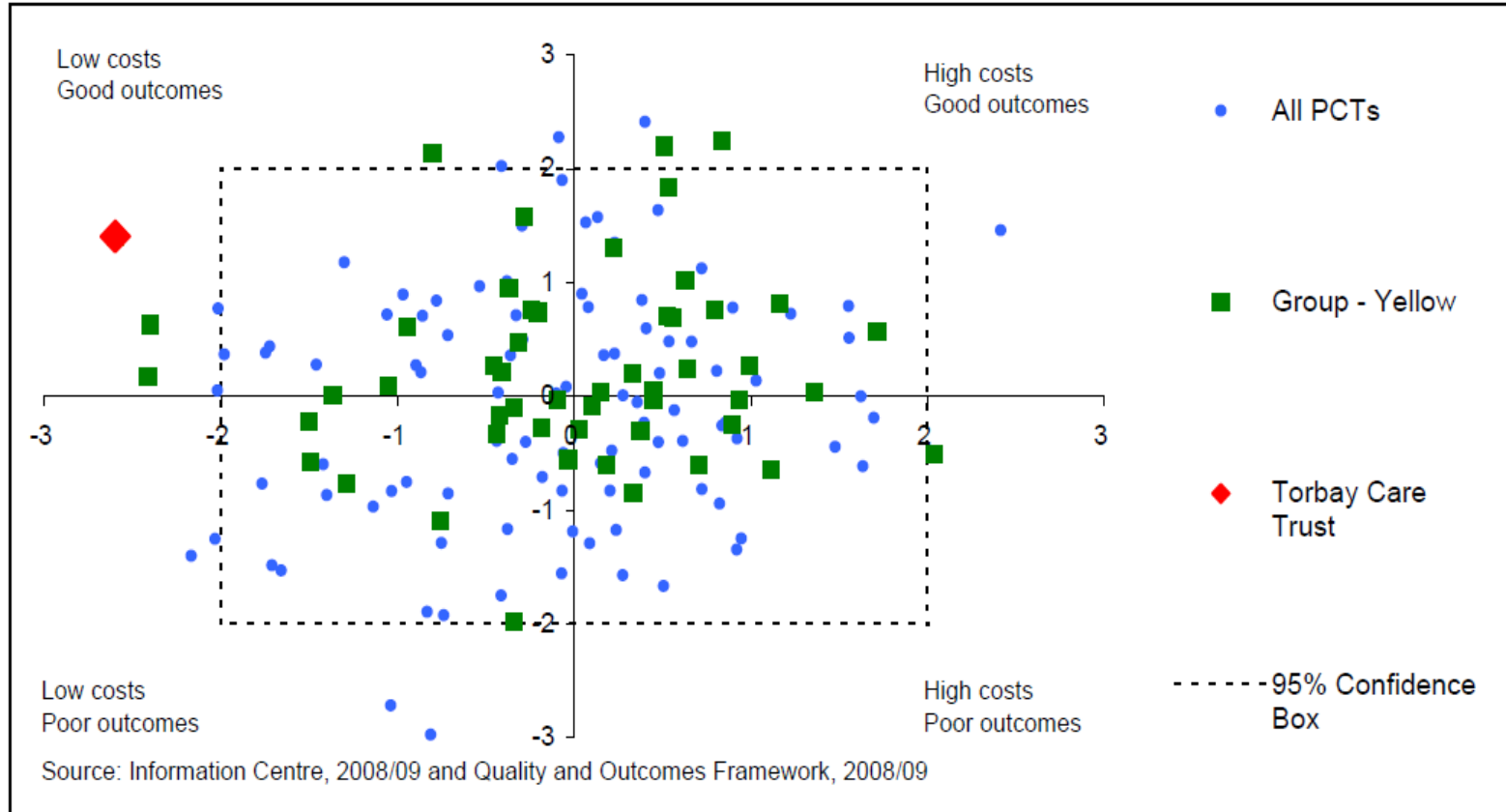
Torbay Care Trust

yhpho.york.ac.uk/diabetesprofiles/default.aspx



Spending on Diabetes Prescriptions and HbA1c Outcomes for 2008/09

The chart below shows the standardised Net Ingredient Cost (NIC) of all prescriptions for items to treat and monitor diabetes per patient diagnosed with diabetes between April 2008 and March 2009 against the standardised proportion of people with a HbA1c measurement of 7.5 or less for 2008/09.



Insulin pump therapy (all ages)

- NICE TA151



- There should be 21700 pump users in England
- There are fewer than this – how many?
- ABCD/Diabetes UK/JDRF audit + NHS Diabetes
- NTAC guidance How to why to

www.technologyadoptioncentre.nhs.uk/Continuous-Subcutaneous-Insulin-Infusion/executive-summary.html

Safe use of insulin

http://www.diabetes.nhs.uk/safe_use_of_insulin/

The screenshot shows a BBC News article from March 27, 2009. The article title is "CPS to review insulin death case". The sub-headline reads: "A file on a nurse who mistakenly gave a diabetic woman, aged 85, a lethal dose of insulin is to be reopened." The main text states that Margaret Thomas, an 85-year-old woman from Pontnewynydd, Pontypool, died six hours after receiving a lethal dose of insulin from community nurse Joanne Evans. The Cardiff inquest heard that Ms Evans injected 10 times too much insulin using the wrong syringe. Coroner Mary Hassell ruled that Mrs Thomas was unlawfully killed. The article concludes that the Crown Prosecution Service (CPS) will review the case.

BBC Low graphics Help Search

NEWS **LIVE** BBC NEWS CHANNEL

Page last updated at 15:36 GMT, Friday, 27 March 2009

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CPS to review insulin death case

A file on a nurse who mistakenly gave a diabetic woman, aged 85, a lethal dose of insulin is to be reopened.

Margaret Thomas from Pontnewynydd, Pontypool, died six hours after community nurse Joanne Evans's injection, the Cardiff inquest heard.

Ms Evans injected 10 times too much insulin using the wrong syringe. Coroner Mary Hassell ruled that Mrs Thomas was unlawfully killed.

The Crown Prosecution Service (CPS) said it would look again at the case.



Margaret Thomas collapsed and died six hours after the injection

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Safe use of insulin courses


http://www.diabetes.nhs.uk/safe_use_of_insulin/

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Diabetes care areas - [click here to navigate to care area page](#)

Ask a question 

Was this page useful?





Yes 

No 

Safe use of insulin





A 2010 Rapid Response Report published by the National Patient Safety Agency (NPSA) showed that over 5,000 patient safety incidents were reported between 2003 and 2009 in England and Wales. This emerged in a 2010 Rapid Response Report published by the National Patient Safety Agency (NPSA). The figures included one death and one case of severe harm that occurred after clinicians misinterpreted the abbreviation of the term 'unit'. A further three deaths and 17 other incidents occurred between January 2005 and July 2009 where an intravenous syringe was used to measure and administer insulin.

Our online e-learning modules

-  [Safe Use of Insulin](#) – launched in June 2010
-  [Intravenous Insulin Infusions](#) – launched in September 2011
-  [Safe Management of Hypoglycaemia](#) – launching in Spring 2012
-  [Safe Use of Oral Anti-Hyperglycaemic Agents](#) – launching in Spring 2012

The III e-learning module is now available 

Other pages you may find interesting:

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-  [Commissioning](#)
-  [Quality improvement](#)
-  [Information and data](#)

Diabetes and pregnancy (CEMACH)

Women with established diabetes have:

- **5 x more stillbirths**
- **3 x more neonatal deaths**
- **2 x congenital malformations**

than non-diabetic women



www.cmace.org.uk/Publications/CEMACH-Publications/Maternal-and-Perinatal-Health/Diabetes-in-Pregnancy.aspx

Obstetric and perinatal outcomes in pregnancies complicated by Type 1 and Type 2 diabetes. Murphy et al DOI: 10.1111/j.1464-5491.2011.03333.x

- 1390 infants. 1381 pregnancies
- 23 stillbirths. 10 neonatal deaths
- 52 (3.7%) infants with major malformation
- 77 (5.5%) serious adverse pregnancy outcomes (major malformation or perinatal death),
- 1st trimester - poor glycaemic control ↑risk of adverse outcome.
- HbA1c ≥ 86 mmol/mol (10%) ↑risk **7x** vs good glycaemic control

Comparisons with 2002-03 CEMACH data from these regions

- More T2 DM pregnancies (40% vs 26% 2008-09 vs 2002-03)
- 2007-08 stillbirth neonatal mortality and congenital malformation rates were not significantly different from 2002-03

Putting feet first

NICE CG119



Putting feet first


Commissioning specialist services for the management and prevention of diabetic foot disease in hospitals

This report is supported by:

Association of British Clinical Diabetologists
Foot in Diabetes UK
Joint British Diabetes Society
National Diabetes Inpatient Specialist Nurse Group
Primary Care Diabetes Society
Scottish Diabetes Foot Action Group
Society of Chiropodists and Podiatrists
The Vascular Society of Great Britain and Ireland
Welsh Endocrine and Diabetes Society



Diabetes foot care profile Lambeth

	Indicator	PCT no. (three Years)	PCT value	Eng. value	Diab. group value	Eng. PCT lowest	England range	Eng. PCT highest
Indicators Based on ALL Inpatient Footcare	Episodes of care in hospital for diabetic foot disease per 1,000 people aged 17+ with diabetes	572	16.3	17.6	15.6	8.3		27.1
	Number of days in hospital for diabetic footcare disease per 1,000 people aged 17+ with diabetes	7,981	226.8	184.1	192.2	57.3		293.1
	Average number of nights spent in hospital per episode of care for diabetic footcare diseases	-	14.0	10.5	12.3	6.0		15.3
	% of episodes of care for diabetic foot conditions accounted for by patients who had more than one inpatient stay	445	77.8%	78.8%	76.8%	58.9%		89.0%
	% of patients who had more than one episode of care for diabetic foot disease within the three years	149	54.0%	52.9%	51.0%	33.5%		68.7%
	% of patients who had more than four episodes of care for diabetic foot diseases within three years	35	12.7%	15.3%	13.6%	5.1%		26.2%
Indicators Based on Amputations Only	Amputations per 1,000 people aged 17+ with diabetes	83	2.4	2.7	2.2	1.0		5.7
	Number of days in hospital for amputations per 1,000 people aged 17+ with diabetes	2,260	64.2	55.9	57.3	20.4		112.2
	Major amputations per 1,000 people aged 17+ with diabetes	24	0.68	1.08	0.76	0.42		2.29
	Minor amputations per 1,000 people aged 17+ with diabetes	59	1.68	1.64	1.40	0.50		3.44

Delivery of diabetes care (NaDIA)

www.diabetes.nhs.uk/our_work_areas/inpatient_care/inpatient_audit_2010/



Diabetes

Specialist involvement is low

31.0%	of sites had no inpatient DSNs
29.8%	of sites had no inpatient dietetic provision for people with diabetes
26.8%	of sites had no inpatient podiatry service for people with diabetes

Delivery of Care (NaDIA)

Medication Errors (prescription & management)

37% Of charts had at least one medication error

26% Had one or more prescription errors

20% One or more management errors

Delivery of Care (NaDIA)

Harm from medication mismanagement

22.6% had mild hypoglycaemia 3.0-4.0 mmol/l

11.6% severe hypoglycaemia <3.0 mmol/l

2.4% 266 developed severe hypoglycaemia requiring injectable treatment

Patients with medication errors had twice the rate of severe hypoglycaemia (18.1 vs 7.9%)

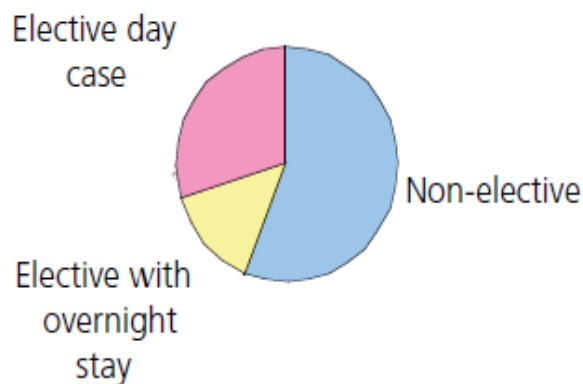
0.4% 44 developed ketoacidosis during their stay

Inpatient care for people with diabetes

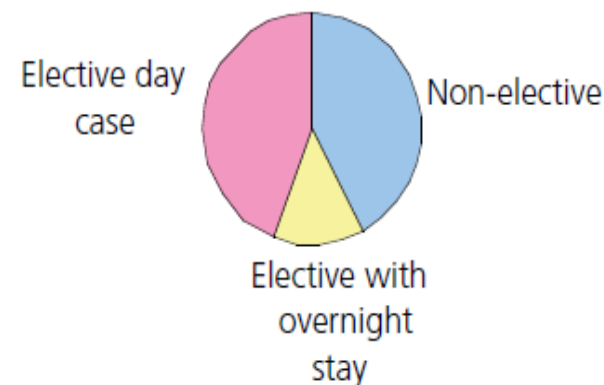
The economic case for change

Chart 1: Admissions in people with and without diabetes, by type, 2009-10 (Source: Hospital Episode Statistics, NHSIC)

Admissions with diabetes



Admissions without diabetes



- http://www.diabetes.nhs.uk/our_publications/reports_and_guidance/inpatient_and_emergency/

Inpatient care for people with diabetes

The economic case for change

- £2.3 - 2.5 billion/yr spent on inpatient care for people with diabetes
- 11% of total NHS expenditure on in-patient care
- 5.5% - prevalence diagnosed diabetes
- £573 – 686 million is excess expenditure on diabetes (on top of costs for people without recorded diabetes of same age & gender)

- 5,912,836 bed days
- 19.8% of all bed days.
- Mean LoS:
diabetes 7.8 days vs 4.8 days no diabetes recorded

Inpatient care for people with diabetes

The economic case for change

Unadjusted admissions and estimated expenditure for people with recorded diabetes, 2009-10 (2011-12 prices)

	Number of admissions with record of diabetes	Estimated average unit cost (tariff)	Estimated annual expenditure (tariff)	Estimated annual expenditure (tariff + 8.5%)
Non-elective admissions	609,452	£2,641	£1,609,736,111	£1,745,875,504
Elective ordinary admissions	150,362	£2,951	£443,660,069	£481,181,507
Elective day case admissions	327,608	£799	£261,646,664	£283,774,774
Total	1,087,422		£2,315,042,844	£2,510,831,784

Inpatient care for people with diabetes

The economic case for change

Estimated excess expenditure on inpatient care for people with diabetes, 2009-10

	Activity	Expenditure
Excess admissions	164,361 admissions	£434 million
Lower day case rate	41,906 fewer day cases	£9 million
Excess cost during admission		£129 million - £243 million
Total		£573 million - £686 million

Everyone with diabetes deserves the highest standards of personalised diabetes care

Thank you

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