

Clinical Effectiveness Bulletin

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NHS WALSALL PRIMARY CARE TRUST

Updating Health Professionals on Developments in Clinical Practice

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DM affects about 3 % of the population.

It is believed that as many as half of patients with diabetes remain undiagnosed.

Diabetes is three to six times more common in south Asians and two to three times more common in African Caribbeans.

The prevalence of diabetes increases with age affecting 10% of those aged over 65 years. DM affects more than 25% of south Asians over 60 years.

EFFECTIVE DIABETES MANAGEMENT IN PRIMARY CARE

Diabetes is a significant cause of morbidity and mortality in Walsall, with some 40 people dying from the disease each year. Around 9% of NHS funds are spent on treating diabetes, half of this being due to

hospitalisation due to complication. This issue of the Clinical Effectiveness Bulletin focuses on the support and interventions that primary care professionals can provide to address the more common prob-

lems associated with diabetes; blood glucose control, renal disease, diabetic retinal care and foot care and stresses the need for regular reviews of diabetics in primary care.

Practice diabetes registers

By 2006 all people with diagnosed diabetes should be identified in an up-to-date practice-based register.

This should be a collaborative effort involving primary care and

specialist services.

The register will provide the basis for call and recall, clinical care, prevention, continuous quality improvement, monitoring and clinical audit. All registers must

meet the requirement for confidentiality and security.

National Service Framework for Diabetes – Delivery Strategy. Department of Health, 2002.

Blood glucose control

Severe hypoglycaemia can adversely affect quality of life in patients treated with insulin, particularly the newly diagnosed.

Improvements in blood glucose control are associated with improvements in quality of life, providing there is no increase in hypoglycaemic symptoms.

Blood glucose monitoring

For each patient, a tar-

get HbA1c should be set between 6.5% and 7.5%, based on risk of vascular complications. HbA1c should be measured at 2–6-monthly intervals.

Evidence on the effectiveness of self-monitoring is equivocal and NICE recommend that it

- should not be considered as a stand-alone intervention but can be used in conjunc-

tion with appropriate therapy as part of integrated self-care.

- should be taught if the need is clear and agreed with the patient.

Guideline on the management of type 2 diabetes. Management of blood glucose. National Institute for Clinical Excellence, 2002.

Drug therapy for glucose control

Metformin	<ul style="list-style-type: none"> • Should be used in people who are overweight (BMI > 25) and whose blood glucose is inadequately controlled using lifestyle interventions • Should be considered for first-line or combination therapy for those who are not overweight. • is contraindicated in those with renal impairment and those at risk of sudden deterioration of renal function.
Insulin secretagogues (ISs) include the sulphonylureas and rapid-acting ISs (nateglinide and repaglinide).	<ul style="list-style-type: none"> • A generic sulphonylurea should normally be the IS of choice. These should be used in combination with metformin in overweight people when glucose control becomes unsatisfactory. • should be considered as an option for first-line therapy when metformin is not tolerated or is contraindicated or when people are not overweight. • Long-acting once-daily ISs may be useful where concordance with therapy is a problem. Rapid-acting ISs have a role in attaining tight glucose control in patients with non-routine daily patterns. Clinicians and patients should be aware of the risk of hypoglycaemia and be alert to it.
Rosiglitazone or pioglitazone (should be considered as alternatives)	<ul style="list-style-type: none"> • effective at reducing blood glucose when added to oral metformin or sulphonylurea for patients who have inadequate control of blood glucose. • Patients unable to take metformin and sulphonylurea, or whose blood glucose remains high despite this treatment, should be offered rosiglitazone or pioglitazone combination therapy as an alternative to injected insulin. • Combination of rosiglitazone or pioglitazone plus metformin is preferred to combination with sulphonylurea for obese patients.
α-glucosidase inhibitors	<ul style="list-style-type: none"> • Acarbose may be considered as an alternative glucose-lowering therapy in people unable to use other oral drugs.
Insulins	<ul style="list-style-type: none"> • should be offered to diabetics with inadequate blood glucose control on optimised oral glucose-lowering drugs. Clinicians and those using insulin should be aware of the risk of hypoglycaemia and be alert to it. • Local experience, patient preference and costs should inform the choice of insulin type and regimen as there is little research evidence in this area.

Guideline on the Management of type 2 diabetes. Management of blood glucose. National Institute for Clinical Excellence, 2002.

The cumulative incidence of microalbuminuria at 10 years disease duration is approximately 20-25%.

Management of diabetic nephropathy

Monitoring risk of renal complications

- Measure urinary albumin:creatinine ratio or albumin concentration annually
- Use a first morning

urine sample where practicable

- Use a laboratory or near-patient test specifically for microalbuminuria
- If microalbuminuria or

proteinuria present, repeat twice more

- Measure serum creatinine annually.

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Care for people with higher-risk urine albumin excretion

- Ensure good blood glucose control (HbA1c below 6.5–7.5%).
- Measure, assess and manage cardiovascular risk factors aggressively.
- Maintain blood pressure below 135/75 mmHg.
- Begin therapy with an appropriate ACE in-

hibitor for cardiovascular and renal protection. ACE inhibitors are the drug of first choice. To achieve target blood pressure, use combination therapy if ACE inhibitors alone are not fully effective. Combination therapy is likely to be necessary for most patients.

- Measure urine albumin and serum creatinine levels at

each visit.

- Refer for specialist opinion if serum creatinine greater than 150 µmol/l.

Guideline on the Management of type 2 diabetes. Renal disease—prevention and early management. National Institute for Clinical Excellence, 2002.

Eye care and screening for diabetic retinal disease

Screening

- Systematic annual screening for diabetic retinopathy should be provided for all diabetics including those registered blind or partially sighted. Those with existing diabetic retinopathy may require more frequent retinal examination.
- Type 2 diabetics should be screened from diagnosis.
- Type 1 diabetics should be screened from age 12 years. If onset of type 1 diabetes is post-puberty, screening should start three years after diagnosis.
- Risk of visual impairment can be reduced by maintaining good blood pressure control (at or below 140/80 mmHg), and

good blood glucose levels (preferably below HbA1c 6.5–7.5%)

Referral guidance

Prompt referral of suspected retinopathy is vital for visual impairment to be minimized.

Assess by ophthalmologist within 4 weeks if:

- there is unexplained drop in visual acuity
- There are hard exudates within 1 disc diameter of the fovea
- macular oedema is present
- there are unexplained retinal findings
- pre-proliferative or more advanced (severe) retinopathy is present

Assess by ophthalmologist within 1 week if:

- there is new vessel formation
- there is evidence of pre-retinal and/or vitreous haemorrhage
- rubeosis iridis is present.

Assess by ophthalmologist within 1 day if:

- there is sudden loss of vision
- there is evidence of retinal detachment.

Guideline on the management of type 2 diabetes. Retinopathy—screening and early management. National Institute for Clinical Excellence, 2002.

Data from Walsall's chronic disease management registers (99/00) show that there are 2,390 persons over the age of 65 with Type 2 diabetes and 653 with Type 1.

There are approximately 40,000 over 65s in Walsall. At the 10% prevalence in this age group, we should expect 4000 persons with diabetes. This does not account for minority ethnic groups which would make this expected figure even higher.

Diabetic retinopathy is the commonest cause of visual impairment in type 1 diabetes, but not type 2 diabetes. Diabetics have a twofold increased risk of cataract and the risk rises with poor glycaemic control

Foot care

Diabetic foot problems are a common complication of diabetes with prevalences of 23-42% for neuropathy, 9-23% for vascular disease and 5-7% for foot ulceration. Amputation rates are higher in patients with diabetes than non-diabetic patients.

All diabetics at annual review	Examine feet and lower legs for ulceration risk factors. Include: <ul style="list-style-type: none"> • Testing of foot sensation using a 10g monofilament or vibration palpation of foot pulses • Inspection of foot shape and footwear • Classify as: low current risk, at risk, high risk or ulcerated foot
Low (normal sensation, palpable pulses)	Set a management plan including footcare education with each person
<i>at risk</i> (neuro-pathy or absent pulses or other risk factor)	<ul style="list-style-type: none"> • If previous foot ulcer, deformity or skin change manage as high risk • Enhance foot care education and inspect feet 3 -6 monthly • Advise on appropriate footwear • Review need for vascular assessment
<i>high risk</i> (risk factor +deformity or skin changes or previous ulcer)	<ul style="list-style-type: none"> • Arrange review (1 -3 monthly) from specialised podiatry team. • At regular review, evaluate provision of intensified foot care education and frequent skin and nail care, specialist footwear and insoles • Review education/footwear/vascular status as for the at risk foot • Ensure special arrangements for those with disabilities or immobility
<i>ulcerated foot</i>	<ul style="list-style-type: none"> • Arrange urgently, foot ulcer care from a team with specialist expertise.
<p>Royal College of General Practitioners. Clinical guideline for Type 2 diabetes—the prevention and management of foot problems. www.rcgp.org.uk/clinspec/guidelines/diabetes/diab2.asp</p> <p>Williams and Airey,. The size of the problem: Epidemiological and economic aspects of foot problems in diabetes. In “The Foot in diabetes” 3rd ed. Boulton, AJM, Connor, H, Cavanagh, PR (Eds.) John Wiley & Sons, Chicester, 2000.</p>	

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