

Diabetes follow-up:

What are the PHO Performance Programme goals and how are they best achieved?




Supporting the PHO Performance Programme

What are the goals?

The PHO Performance Programme was launched in January 2006 in order to:

- Encourage and reward improved performance by PHOs in line with evidence based guidelines
- Measure and reward progress in reducing health inequalities amongst high need populations

Performance based payments are made to PHOs to improve key indicators which are reviewed annually. Individual PHO indicators are adjusted to take into account factors such as age and ethnicity which may vary from region to region. Those indicators which are currently funded are shown in Table 1.¹

 See “BPJ 36 (Jun, 2011), BPJ 37 (Aug, 2011) and BPJ 38 (Sep, 2011) for previous articles in this series.

Diabetes follow-up

The purpose of the diabetes follow-up indicator is to determine what proportion of the population estimated to have diabetes has had an annual diabetes review.¹

Annual diabetes review

An annual review for people with diabetes includes assessment of:²

- HbA_{1c}
- Blood pressure
- Fasting lipids
- Microalbuminuria
- Feet
- Retinal health
- Follow-up care plan

An annual review can be scheduled for a specific consultation, or data can be collected over a series of visits.


 N.B. It was recently announced that the Ministry of Health’s “Get Checked” programme, which encouraged free annual diabetes reviews, is due to cease. The Ministry of Health is expected to release further details shortly, including possible replacement services.

Table 1: Funded PHO Performance Indicators for the period commencing 1 January, 2011

Chronic conditions	Cervical cancer screening Breast cancer screening Ischaemic cardiovascular disease detection Cardiovascular disease risk assessment Diabetes detection Diabetes follow-up after detection Smoking status
Infectious disease	Influenza vaccine in people aged over 65 years Age appropriate vaccinations for children aged two years
Financial	GP referred laboratory expenditure GP referred pharmaceutical expenditure

Targets and funding

The PHO performance indicator and target for diabetes follow-up* is: For 80% of enrolled patients aged between 15 and 79 years expected to have diabetes, to have had an annual diabetes review.¹

Diabetes follow-up accounts for 9% of a PHO's performance payment, with 6% allocated for achieving the target in the total population and 3% for achieving the target in the high needs population (Māori and Pacific peoples and people living in New Zealand Deprivation Decile 9 or 10 socioeconomic areas).¹

How is the indicator calculated?

The number of enrolled people in the PHO with a record of a diabetes review during the reporting period (numerator), is divided by the number of enrolled people in the PHO who would be expected to have been diagnosed with diabetes (denominator). The estimated prevalence of diabetes within a PHO is taken from a national calculation of diabetes prevalence, which is then adjusted to take into account individual PHO differences in age, gender and ethnicity. The national diabetes prevalence data estimate is calculated from the number of people in New Zealand who have had diabetes related health service contact and the number of people in New Zealand either enrolled with a PHO, or who have had contact with the New Zealand health service from the 1st July 2009 to 30th June 2010.¹

Conditions defined as diabetes

For the purposes of the indicator, diabetes is defined as:¹

- Type 1 diabetes
- Type 2 diabetes
- Diabetes that may be either type 1 or 2, but is clinically indeterminate


N.B. Gestational diabetes is excluded

*Originally printed as 'diabetes detection' in error.

How to achieve the target

Diabetes detection

Effective diabetes follow-up relies on sound diabetes detection programmes. Practice wide awareness of the risk factors, symptoms and different diabetes detection methods all assist in maximising diabetes detection.


 For further information see: "Diabetes Detection", BPJ 37 (Aug, 2011).

Increasing uptake of the annual diabetes review

Strategies to increase the number of people with diabetes who receive annual follow-ups include:

Send out follow-up letters: An invitation letter including a laboratory form for HBA_{1c}, fasting lipids and microalbuminuria tests is a good way to motivate patients and has the advantage of allowing patients to choose a time that suits them.

Create a PMS alert: Recall alerts can be created for patients overdue for an annual assessment.

 For further information see: "Detecting diabetes", Best Tests (Sept, 2008).

Create a diabetes register: An electronic diabetes register allows analysis of a practice's population, which can highlight patients overdue for review and those not achieving treatment targets.

Elect a chronic conditions "champion": Allocate specific roles for members of the primary care team to oversee aspects of the diabetes programme and patient recall.

Promote patient awareness: High visibility posters, leaflets and advertising in the practice may encourage patients to attend annual assessments.

Text alert reminders: Text alerts are a simple, cheap and non-intrusive way to remind patients when their annual assessments are due.

Take any opportunity that arises: Discuss testing during any consultation, when time permits.

The benefits of follow-up

Regular diabetes follow-up allows for assessment of glycaemic control and earlier detection of, and intervention for, diabetes related complications. It also creates an opportunity to regularly review and assess individual treatment plans and enable specialist support if required. Additionally, the information gained from diabetes follow-up provides up to date data for diabetes registers, which in turn drives improvements in diabetes service delivery.

A focus on follow-up

The diabetic foot

Foot ulceration is a common complication of diabetes, which, if not detected early, can ultimately result in amputation. The peripheral neuropathy and peripheral arterial disease which cause this complication can be delayed through strategies targeting; glycaemic control, reduction of hypertension and blood lipid levels, smoking cessation and weight management. Other factors which increase the risk of a person with diabetes developing foot complications include:³

- Previous foot ulceration
- Co-existing abnormalities of the foot
- Plantar callus
- Smoking
- Age over 70 years
- Pacific or Māori ethnicity
- Long duration, or poor control of diabetes
- Retinopathy or other diabetic complications
- Renal impairment
- Wearing inappropriate footwear

- Inability to maintain foot hygiene and prevent trauma
- Living in a lower socioeconomic area

People with diabetes should have their feet checked at least once every year, or more regularly (every three to six months) if there is an increased risk of complications developing. Patients should also be encouraged to check their own feet, or to enlist the help of a family member. Treatments which reduce foot pressure, including callus debridement, shoe inserts and specialised footwear all reduce the risk of ulceration.²

There are two broad types of “diabetic foot”:⁴

- **Neuropathic feet** which are generally warm, dry and numb with a detectable pulse. The most common complications are neuropathic joints and neuropathic ulcers which occur mainly on the soles. Minor lesions, such as blisters, can develop into chronic ulcers which progress due to a lack of sensitivity in the foot.
- **Neuro-ischaemic feet** are frequently cold with no detectable pulse. Complications may include those described above and intermittent limping, pain at rest and gangrene. Ulcers from pressure damage are generally found on the edges of the feet.


Foot checks should begin as soon as a person has a confirmed diagnosis of diabetes and should include a visual inspection for: redness, swelling, ulceration, deformity, tinea pedis, vulnerable pressure sites, poor self-care (lack of cleanliness and untrimmed nails) and skin abrasions. The foot should be checked to see if joint movement is fixed or flexible. Ask the patient if they have trouble walking or experience pain (burning or tingling) and what the normal temperature of the foot is. Peripheral neuropathy can be assessed with a monofilament (touch pressure-testing) and by testing vibration sensation with a biothesiometer or tuning fork. Peripheral circulation can be checked through palpation of pedal pulses. Evidence of neuropathy and an absence of pedal pulse elevate the risk of ulceration, while additional skin changes and deformity place a person at

high risk of ulceration. It is important to remind people with diabetes of the importance of appropriate footwear and foot hygiene at every opportunity.^{4,5}

Diabetic foot ulcers should be cleaned, debrided (if appropriate) and covered with a dressing able to absorb any exudate without plugging the lesion. Pain management should be given where appropriate. The foot should be rested and therapeutic footwear worn while the lesion is healing. Regular assessments should be made until the ulcer heals, followed by checks every one to three months. Urgent referral (within 24 hours) should occur if:

- An ulcer shows no sign of healing or becomes necrotic
- Significant swelling or discolouration of any part of the foot is present
- There is suspicion of bone or joint complications

If the wound appears infected, oral antibiotics can be prescribed initially. Infected foot ulcers are often colonised by a variety of organisms, therefore a broad spectrum antibiotic such as amoxicillin clavulanate is appropriate.⁶ Refer to a podiatrist or vascular specialist if complications develop, or if there are any concerns. Patients with extensive infection, or who are systemically unwell should be referred to hospital for IV antibiotic treatment. It is important to refer the patient for radiological assessment if osteomyelitis is suspected.

 For further information see: “Screening and management of the ‘diabetic foot’”, BPJ 31 (Oct, 2010)

Diabetic retinopathy

Loss of vision due to diabetic retinopathy is a preventable complication that affects many adults with diabetes in New Zealand. Primary care plays an important role in ensuring that people with diabetes receive regular retinal screening and prompt treatment before visual deterioration begins. Estimates suggest that 30% of people with diabetes

have some degree of retinopathy, with 10% having sight-threatening retinopathy.⁷ The longer a person has diabetes, the greater the chance they will develop retinopathy.

Diabetic retinopathy is generally asymptomatic, until it reaches an advanced stage which is often beyond treatment. Early detection and prevention are the key responsibilities of primary care and are best achieved through:


- Ensuring retinal screening occurs at least every two years
- Improving glycaemic control and reducing high blood pressure and lipids

A referral for retinal screening should be made at the time a diagnosis of diabetes is confirmed. Screening should occur more frequently for people showing early signs of retinopathy. As diabetic retinopathy can progress rapidly during pregnancy, women with diabetes who are pregnant should be screened in the first trimester of their pregnancy. The goals of screening are to identify people with early microvascular disease to allow optimal management of risk factors, and to refer those with significant retinopathy to specialist care.

DHBs have individual arrangements with local retinal screening providers – contact your local DHB for details.

Managing the risk of retinopathy in people with diabetes can be achieved by:

- Maintaining good glycaemic control with an individualised HbA_{1c} target
- Reducing blood pressure to $\leq 130/80$ mm Hg³
- Reducing blood lipid levels towards a total cholesterol target of < 4.0 mmol/L⁸
- Smoking cessation, exercise and a healthy diet

 For further information see: “Screening for diabetic retinopathy in primary care”, BPJ 30 Aug, 2010).

References

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