

The NHS diabetic retinopathy screening programme

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Screening

- Preventative screening can be defined as a process that either reduces the risk of a particular disease or condition or the outcomes of treatment in a healthy population.
- Unlike most health programmes, which are reactive in nature, screening proactively invites healthy people to undergo a test that identifies those who are at a higher risk of developing the disease or a condition in the future. It then offers information, further tests and appropriate treatment to reduce the future risk and/or further complications in those screened as medium or high risk individuals
- ***Screening has important ethical differences from clinical practice as the health service is targeting apparently healthy people, offering to help individuals to make better informed choices about their health***
- All screening programme can cause harm only some provide benefit.

“The primary purpose of a preventative screening programme is to reduce population risk of a condition or disease and/or improve outcomes of treatment at population level.”

Criteria

The disease

Is it an important health problem?

Is the natural history well understood?

Is there a long time between the presence of risk factors/sub-clinical disease to overt disease?

Does early intervention improve clinical/public health outcome?

Screening test

Is the test valid (sensitivity and specificity)?

Is the test simple, reliable and affordable?

Is the test acceptable to patient and staff?

Diagnosis and treatment

Is access to diagnostic facilities available and rapid?

Is treatment effective and accessible?

Is it cost-effective?

Is it sustainable?

Does benefit outweigh the harm?

National Screening Programmes

- In the UK, to ensure that screening that has the evidence to provide benefit are implemented, a National Screening Committee was set up.
- The NSC advises the Minister on which screening programmes to implement
- It advises DH on the cost of implementation
- It sets up the NHS service specification and quality assurance framework for each programme and monitors the programme

NSC: National screening programmes



NHS Fetal Anomaly Screening Programme



NHS Infectious Diseases in Pregnancy Screening Programme



NHS Linked Antenatal and Newborn Sickle Cell and Thalassaemia Screening Programme



NHS Newborn and Infant Physical Examination Screening Programme



NHS Newborn Blood Spot Screening Programme



NHS Newborn Hearing Screening Programme



NHS Abdominal Aortic Aneurysm Screening Programme



National Screening Programme for Diabetic Retinopathy

NHS Breast Screening Programme

NHS Cervical Screening Programme

NHS Bowel Cancer Screening Programme

<http://www.screening.nhs.uk>

National Diabetic Retinopathy Screening Programme

- The aim of the programme is to reduce the risk of sight loss amongst people with diabetes, by the prompt identification and effective treatment if necessary of sight threatening diabetic retinopathy, at the appropriate stage during the disease process.
- Systematic screening involves digital photography of the retina followed by a two- or three- stage image grading process to identify the changes of sight-threatening diabetic retinopathy in the retina.
- Screening is offered annually to people aged 12 or over with diabetes.

Epidemiology- the size of the problem in NW London

	No of practices	Diabetes Register size 17+ years (2009/10)	age specific prevalence	Screening database (12+ years)
Brent	70	18800	6.7	18240
Ealing	81	18878	6.5	18666
Hounslow	55	11938	6.0	12180
Harrow	38	13163	7.1	13278
Hillingdon	49	12022	5.7	12346
Hammersmith & Fulham	30	6167	4.1	5852
Kensington & Chelsea	43	5404	3.4	5349
Westminster	49	7567	3.6	8072
Outer London	293	74801	6.4	74710
Inner London	122	19138	3.7	19273
NW London sector	415	93939	5.1	93983
London	1512	358,400	5.3	

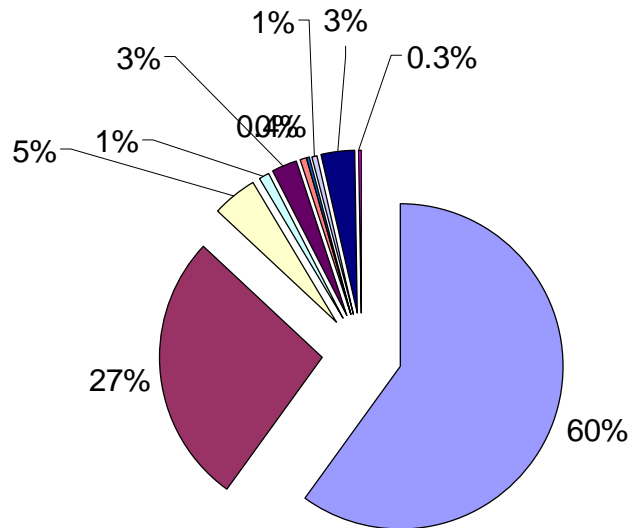
In NW London there are around 10,000 new registrants on the screening database

Risk Factors for Retinopathy

- Modifiable risk factors
 - Blood glucose
 - Cholesterol
 - Blood pressure
 - Smoking
- Un modifiable risk factors
 - Age, (age and duration)
 - Ethnicity
- Pregnancy

Screening results

Screening results: Proportion of screened in NW London



Of the total retinopathy, 75% is at early stage (non referable), which is an indication for early intervention and prevention in primary care

Primary care failsafe

- Diabetes registers upto date (patient contact details)
- 3rd DNA letter from GP
- Follow up from hospital DNA
- New patient details sent in a timely fashion

Future Developments: General Practice to Diabetic Retinal Screening (GP2DRS)

- The GP2DRS project has the objective of providing a framework for automating methods of sharing data between GP practices and screening programmes to aid the management of patient registers.

GP2DRS comprises 3 phases:

- Phase 1: from spring 2011, screening programmes will be able to access data from the General Practices for which they are responsible from a central database.
- Phase 2: from summer/autumn 2011, data can be sent automatically from the central database to local services' databases. This will use an automated tool to compare the data collated from GPs with the data stored in programme registers.
- Phase 3: from 2012 (tbc), local services will be able to transfer screening results from local services to the patient's GP.