



Gwasanaeth Sgrinio Retinopatheg Diabetig Cymru  
Diabetic Retinopathy Screening Service Wales



Swansea University  
Prifysgol Abertawe

# Prevalence of Diabetic Retinopathy Within the Hospital Eye Service in Four Local Health Boards in Wales.

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1.Diabetic Retinopathy Screening Service for Wales. 2.Diabetes Research Group, Swansea University

# Introduction

- The Diabetic Retinopathy Screening Service for Wales (DRSSW) is a community based mobile service, providing annual screening for all persons with diabetes in Wales over the age of 12 years.
- Exclusions from screening include:
  - 1) Temporary: persons under the care of a hospital eye service (HES) or dissenters,
  - 2) Permanent: persons confirmed medically unfit to undergo screening and/or blind (in both eyes).



# DIABETIC RETINOPATHY SCREENING SERVICE for WALES

Gwasanaeth Sgrinio Retinopathog Diabetig Cymru  
Diabetic Retinopathy Screening Service Wales

North Wales  
Screening Office



Mobile screening  
teams

- Standardised digital cameras (Canon DGi)
- Standardised image capture (2x45° retinal images)
- Centralised grading and administration
- Single standard grading protocol

Clinic  
details  
Emails

Clinic  
details  
Images  
Emails

Clinic  
details  
Emails

Clinic  
details  
Images  
Emails

Referrals  
from GP's

South Wales  
Screening Office and  
Grading Centre



Mobile screening  
teams

West Wales  
Screening  
Office



Grading Stations

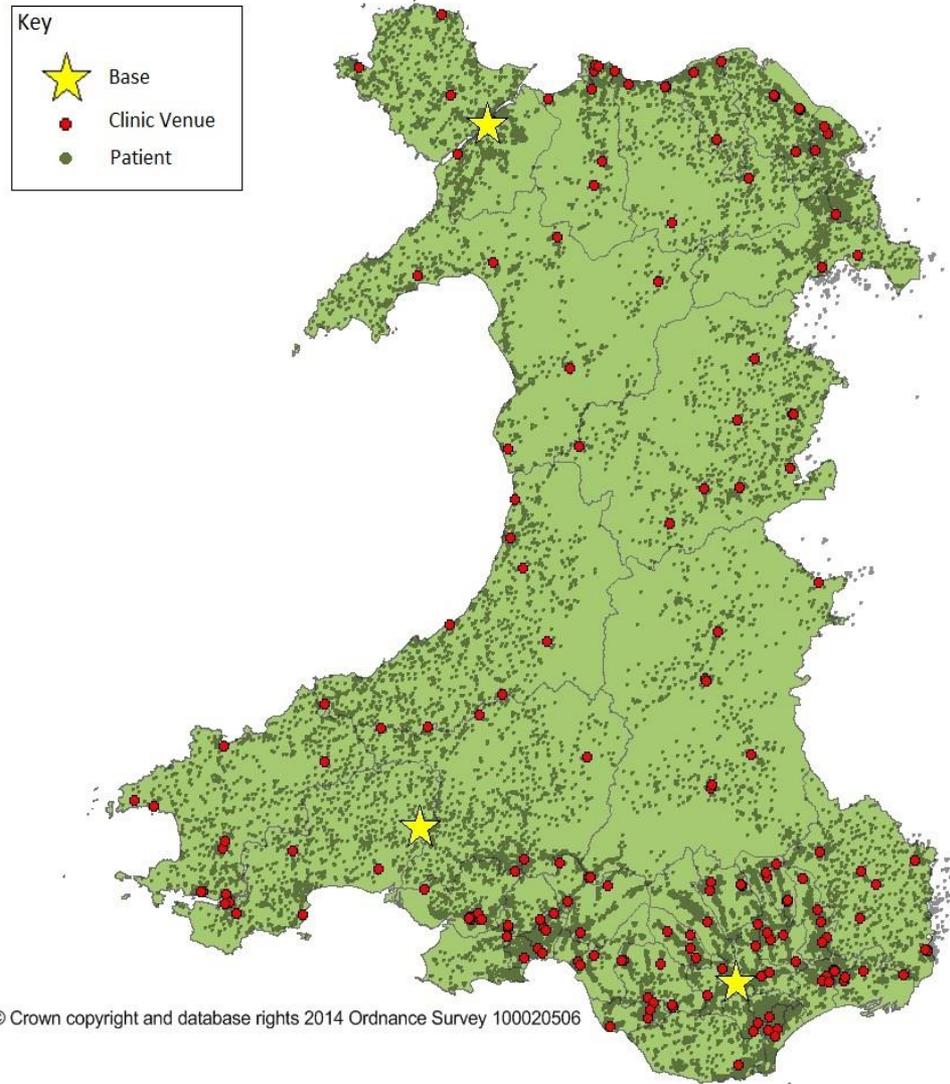


Admin Stations



Mobile screening teams

# The DRSSW service user population across Wales



# Introduction

- Previous research has shown that the prevalence of diabetic retinopathy (DR) within the DRSSW to be 32.4% and referable DR (RDR) to be 5% (Thomas et. al., 2104)
- However, this may be an underestimate of the true prevalence of DR, especially sight-threatening DR (STDR) in Wales. This is because the research did not include those who had not been screened by DRSSW and were under the care of the Hospital Eye Service (HES).
- Referable DR is defined as Pre-proliferative DR, Proliferative DR with or without exudative maculopathy and exudative maculopathy with background DR.

# Methods

- All persons with diabetes in Wales are notified to the DRSSW by their general practitioner.
- In May 2012 there were 182,195 persons with diabetes registered with the DRSSW.
- Of these, 18,729 (10.3%) persons were temporarily excluded because they were known to be under the care of the HES: 14,734 (8.1%) had previously been screened by the DRSSW at least once and 3,995 (2.1%) had never previously been screened by DRSSW.

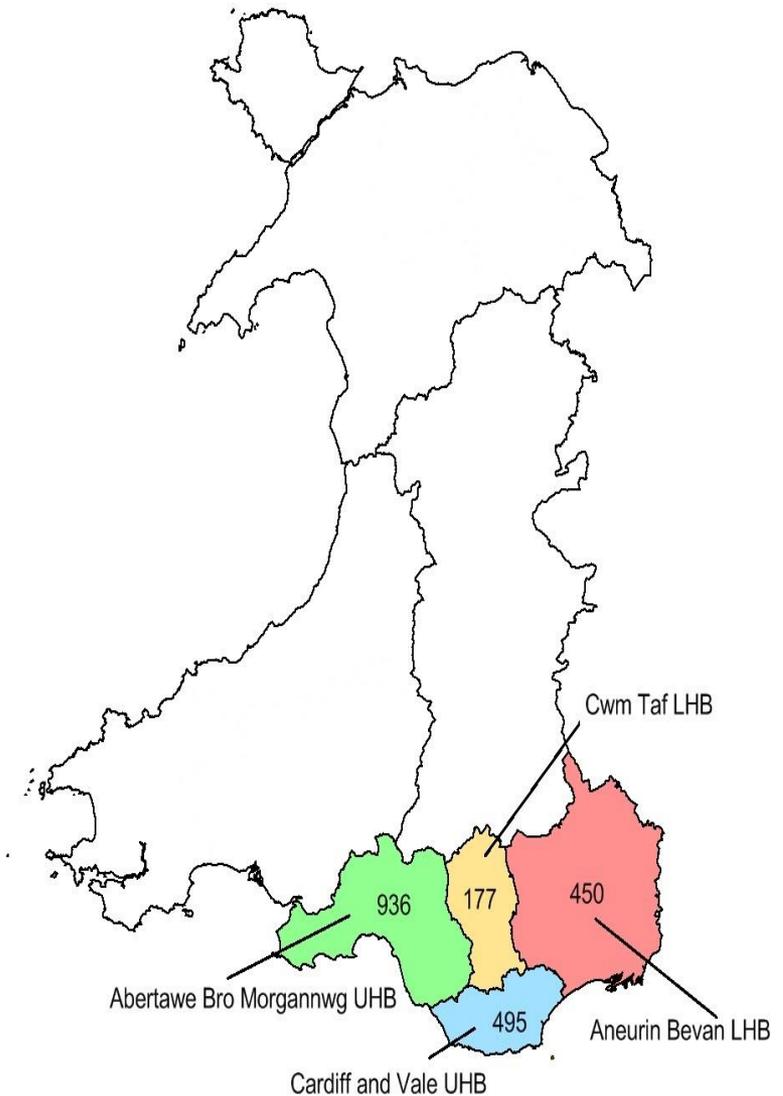
# Aims

- This study was to audit the 3,995 patients under care of HES and who have never been screened by DRSSW.

# Health Board breakdown

Of the 3,995 patients 2,058 (51.5%) were under the care of four local Health Boards located in South Wales, these were broken down into:

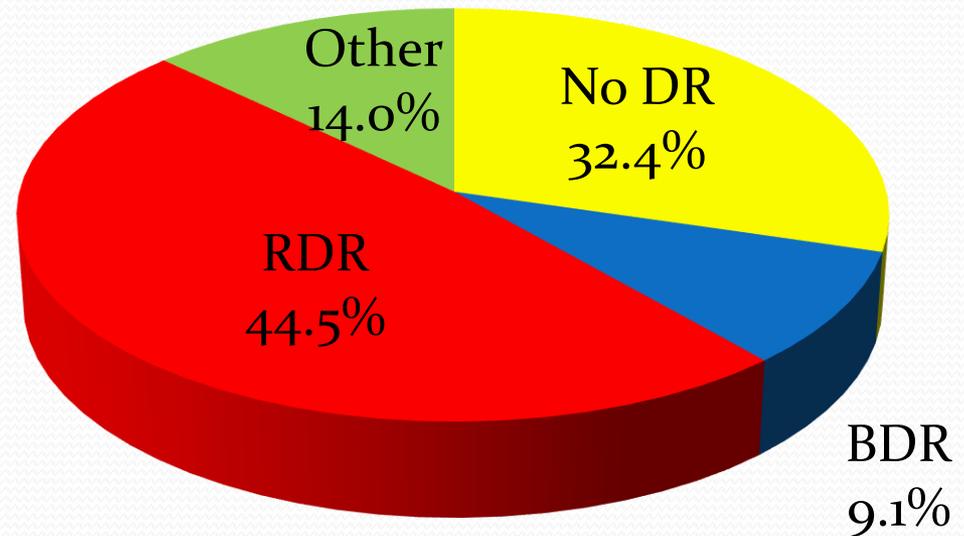
- Cardiff and Vale 495 (12.4%)
- Abertawe Bro Morgannwg 936 (23.4%)
- Cwm Taf 177 (4.4%)
- Aneurin Bevan 450 (11.3%)



# Results:

Of the 2,058 patients audited there were:

- 667 (32.4%) without DR (NoDR)
- 187 (9.1%) with Background DR (BDR)
- 915 (44.5%) with referable DR (RDR)
- 289 (14.0%) were either deceased or categorised as 'Other' (e.g. private patients, those with notes not accessible etc.).

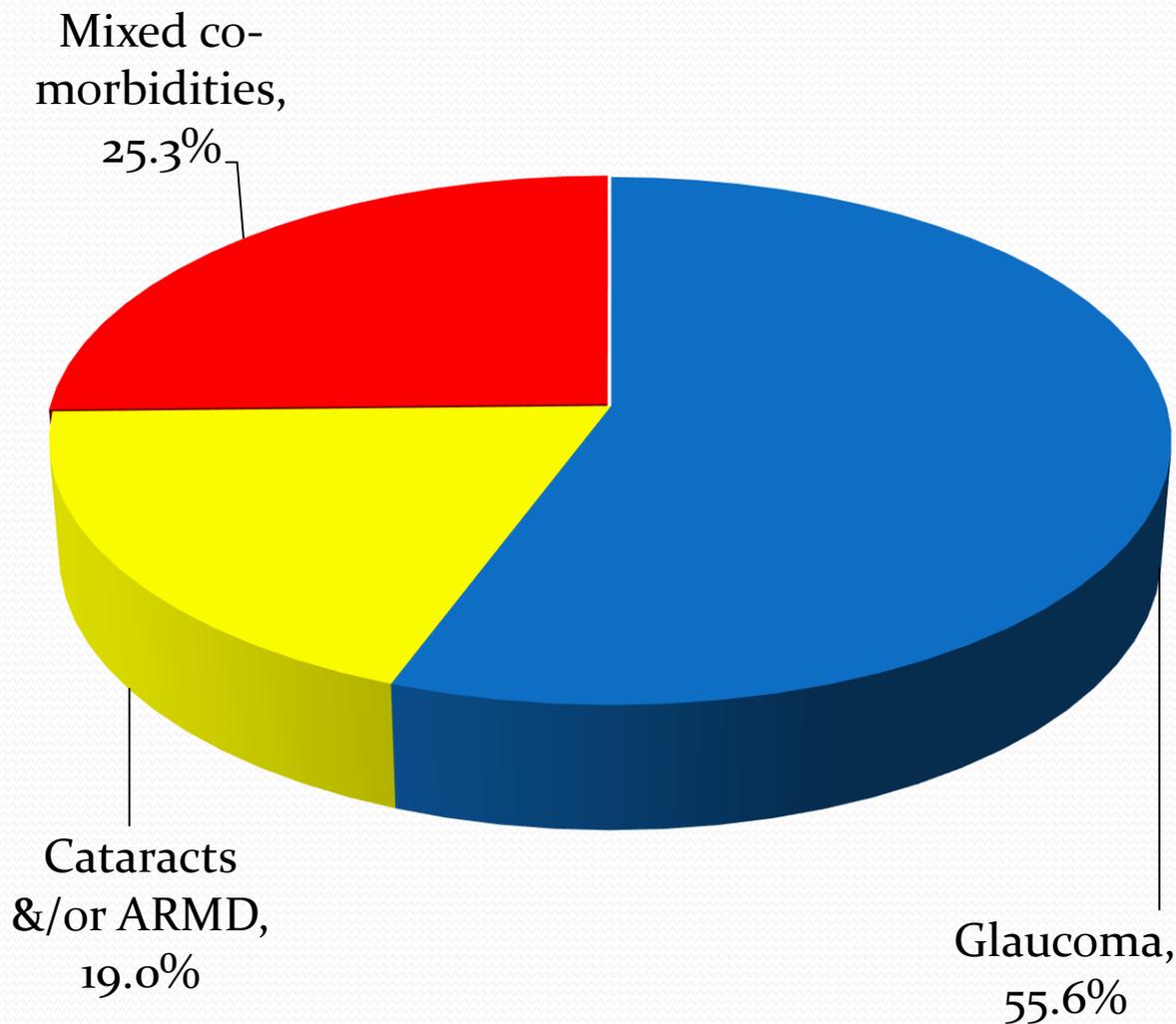


## Area breakdown results of each Health Board audited so far

Health Board	Total Audited	NoDR	BDR	RDR	Other
Cardiff and Vale	495 (24.1%)	148 (29.9%)	45 (9.1%)	277 (56.0%)	25 (5.1%)
Abertawe Bro Morgannwg	936 (45.5%)	282 (30.1%)	127 (13.6%)	341 (36.4%)	186 (19.8%)
Cwm Taf	177 (8.6%)	81 (45.8%)	10 (5.6%)	51 (28.8%)	35 (19.8%)
Aneurin Bevan	450 (21.9%)	156 (34.7%)	5 (1.1%)	246 (55.0%)	43 (9.6%)

# NoDR Results

- Of those 667 (32.4%) persons not under care for DR reasons -
  - 371 (55.6%) had glaucoma,
  - 127 (19.0%) had cataracts and/or age related macular degeneration (ARMD) and
  - 169 (25.4%) had a variety of other eye conditions which have co-morbidities.



# Conclusion:

- The audit of 2,058 (51.5%) of persons with diabetes under the care of HES in four Health Boards in Wales identified:
  - Prevalence of RDR 44.5% and BDR 9.1%
  - 32.4% had NoDR and were not under care for DR but for reasons such as: glaucoma, cataracts and/or age related macular degeneration or other eye conditions with co-morbidities.
- The difference in rates between the Health Boards for RDR ranged from 29-56% and NoDR from 30-46% and these will be looked at in more detail at a later date.

# Discussion:

This audit has identified the importance of retaining patients (referred to HES for NoDR) on the DRSSW recall system. This is to ensure that they receive their retinal screening regularly, and thus reduce the risk of sight threatening retinopathy; patients were subsequently recalled for screening as appropriate.

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**Any questions?**

**Thank you**

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# Reference:

- Thomas R.L., Dunstan F.D., Luzio D., Chowdhury S.R., North R.V., Hale S.L., Gibbins R.L., Owens D.R., 2014: Prevalence of diabetic retinopathy within a national diabetic retinopathy screening service. British Journal of Ophthalmology 2014;0: 1-5