

**Wirral Diabetic Retinopathy
Screening Programme
Health Equity Audit
January – December 2011**

**NHS Wirral
Performance & Public Health Intelligence Team
Updated August 2012**

1. Rationale

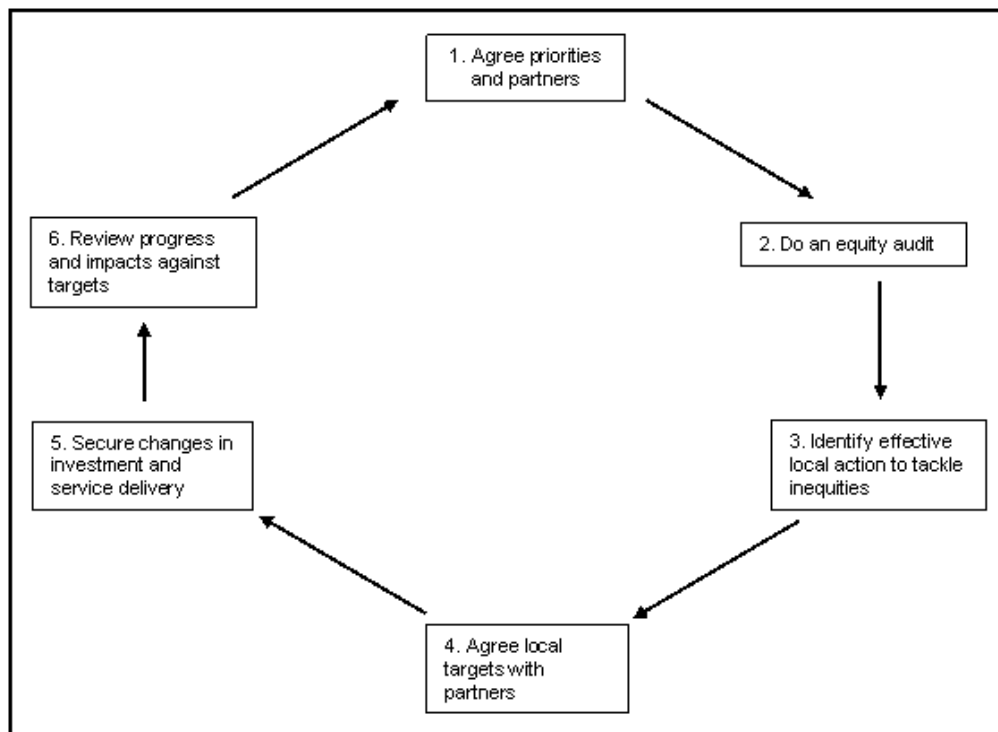
This is the 2nd Wirral Health Equity Audit exploring Diabetic Retinopathy Screening. The data within this report relates to January – December 2011 and is an update of the 2009 HEA which explored data from 2008/09.

2. Introduction

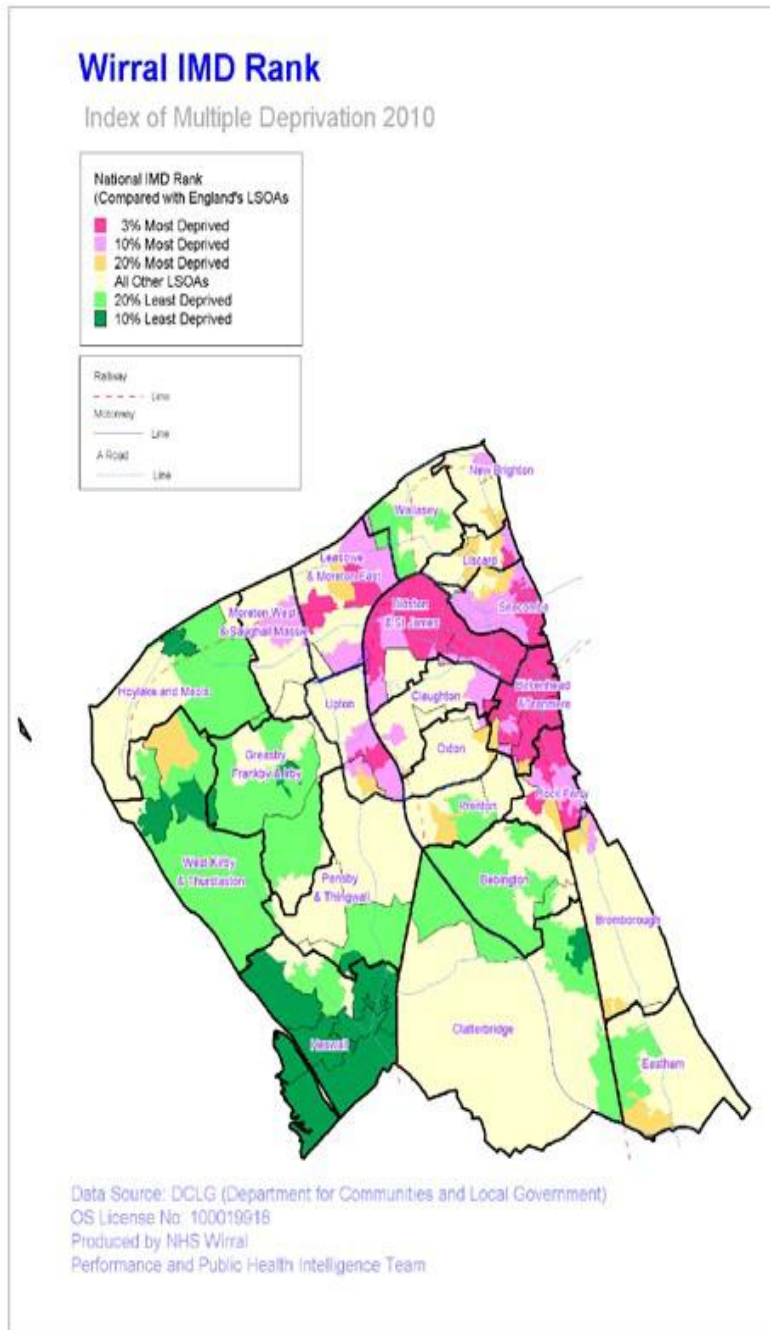
2.1. Health Equity Audit

Health Equity Audits (HEA) focus on how fairly resources are distributed in relation to the health needs of different areas or groups. The aim is not to distribute resources equally, but to ensure they are allocated in relation to health need. This is vital, as failure to take into account health need could mean we contribute to increasing health inequalities instead of reducing them. Equity audits are a cyclical process, as illustrated in points 1 to 6 in Figure 1.

Figure 1: The Health Equity Audit Cycle



2.2. Wirral: Demographic Information¹



Wirral is a borough of contrast, both in its physical characteristics and demographics. Rural, urban and industrialised areas sit side by side in a compact peninsula of 60 square miles.

There are a lower proportion of younger adults in their twenties and thirties and a higher proportion of older people in Wirral compared to England and Wales

The 65+ age group is expected to increase at a faster rate than any other age group over the next two decades. Between 2006 and 2031 it is estimated that this population group will have increased by 45% in Wirral

The Index of Multiple Deprivation (IMD) 2010, ranked Wirral overall as being in the bottom 20% of areas nationally, but this masks significant health inequalities

The internal life expectancy gap in Wirral is one of the largest in England

The map (left) highlights the differential in deprivation between the east and west of Wirral

ONS estimates indicate that 5% of the Wirral population are from black and minority ethnic (BME) groups

For more information on health and wellbeing in Wirral, consult the Wirral Joint Strategic Needs Assessment, Available at <http://info.wirral.nhs.uk>

¹ **Index of Multiple Deprivation (IMD) 2010:** The Index of Multiple Deprivation takes a number of factors covering a range of health, economic, social and housing issues and combines them into a single deprivation score for each small area in England. This allows areas to be ranked according to their level of deprivation.

2.3. Background & Context

Diabetes (diabetes mellitus)

Diabetes is a long-term condition caused by excess glucose in the bloodstream. There are two main types of diabetes;

- Type 1
- Type 2

In the UK, diabetes affects approximately 2.8 million people. More than 1 million people are thought to have undiagnosed type 2 diabetes. All people with diabetes are at risk of developing diabetic retinopathy.

Diabetic Eye Screening Programme

The NHS Diabetic Eye Screening Programme is a systematic national population-based programme that aims to reduce the risk of sight loss among people with diabetes through the early detection and appropriate treatment of diabetic retinopathy. Reducing inequalities of access to health care and health outcomes is a government priority, and a key target within the Diabetes National Skills Framework launched in 1998. (DH 1998) The establishment of a universal screening programme was to ensure all diabetics are screened annually. All people aged 12 and over with diabetes (type 1 and 2) are offered appointments to attend screening.

Diabetic Retinopathy

Diabetic retinopathy is caused when diabetes affects the small blood vessels in the retina, (part of the eye that acts like a film in a camera). Diabetic retinopathy progresses with time but may not cause symptoms until it is quite advanced and close to affecting a person's sight. All people with diabetes are at some risk of developing diabetic retinopathy, whether their diabetes is controlled by diet, tablets or insulin. Diabetic retinopathy is the most common cause of sight loss in people of working age. It is estimated that in England every year 4,200 people are at risk of blindness caused by diabetic retinopathy and there are 1,280 new cases of blindness caused by diabetic retinopathy, (NHS Choices 2012).

This report examines equity in attendance for the Wirral diabetic retinopathy screening programme.

3. Method

Anonymised screening activity and total numbers of patients with diabetes were extracted from the Wirral diabetic register in 2011. This included information about patient demographics (age and sex), their area of residence (postcode and GP details) and their screening activity (attendance).

3.1 Limitations²

At the time of this study, it was not possible to directly link individual patient attendance to screening and residence. It has only been possible to group the number of screening attendances by GP practice, consortia and then compare this to the practice's diabetes

4. Results

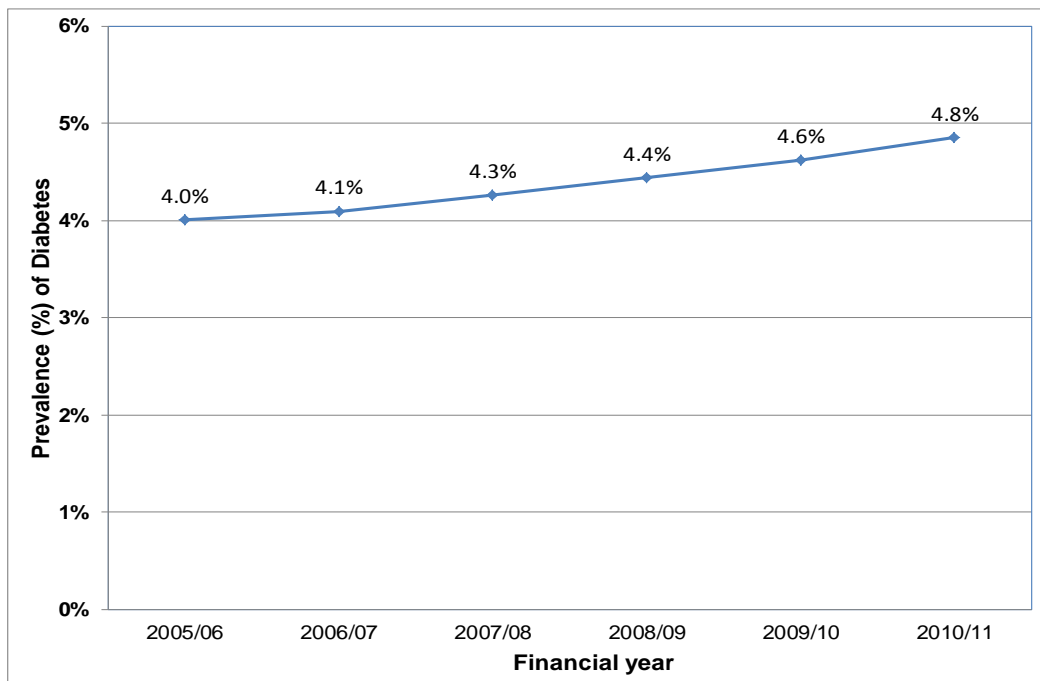
4.1 Prevalence

In 2010/11, there were approximately 16,100 people with diabetes recorded in Wirral, which equates to 4.8% of the total Wirral population. In England the prevalence of diabetes for the same time period is 4.45% (Quality and Outcomes Framework, 2012).

4.1.1 Trends in diabetes prevalence for Wirral

The prevalence of diabetes has increased by a fifth (20%) in Wirral from 13,417 in 2005/06 to 16,122 in 2010/11 - an increase of about 500 diabetics per year (Figure 2). A proportion of this may be due to improved recording of diabetic status in primary care rather than increased new occurrences of people with diabetes.

Figure 2: Trends in the prevalence of diabetes, Wirral, 2005/6 – 2010/11



Source: Quality and Outcomes Framework, 2012

² recent software changes within the programme should allow for a more sophisticated analysis of the data in further health equity audits

4.1.2 GP Consortia Prevalence

The highest prevalence rate of diabetes is observed for Wirral GP Commissioning Consortium (Table 1), however it should be noted that the difference between consortia are not significant ($p < 0.05$). (For prevalence by GP practices see Appendix 1)

Table 1: Prevalence of diabetes by GP consortia 2010/2011

GP Consortia Groups	Number	Per cent	95% Confidence Interval	
			Lower	Upper
Wirral GP Commissioning Consortium	6485	5.1%	4.6%	5.6%
Wirral Health Commissioning Consortium	7793	4.7%	4.2%	5.2%
Wirral NHS Alliance	1844	4.6%	3.6%	5.6%
Wirral	16122	4.9%	4.5%	5.2%
England	2455937	4.5%	4.4%	4.5%

Source: Quality and Outcomes Framework, 2012

4.2 Diabetic Retinopathy Screening Uptake

Overall, 13,208 or 81% of diabetic patients in Wirral received diabetic retinopathy screening between January 2011 and December 2011, compared to 77.4% in England. This compares to an uptake of 11,921 or 80% of diabetic patients receiving diabetic retinopathy screening between July 2008 and August 2009.

4.2.1 GP Consortia Uptake

The rate of uptake of diabetic retinopathy screening was fairly consistent across the 3 Wirral GP consortia, ranging from 79.8% to 81.4% (Table 2).

Table 2: Diabetic Retinopathy Screening, GP Consortia, January – December 2011

GP Consortia Groups	Screening Uptake (%)
Wirral GP Commissioning Consortium	81.4
Wirral Health Commissioning Consortium	80.9
NHS Alliance	79.8
Wirral	81

Source: Orion, Wirral Diabetic Eye Screening Programme, 2012

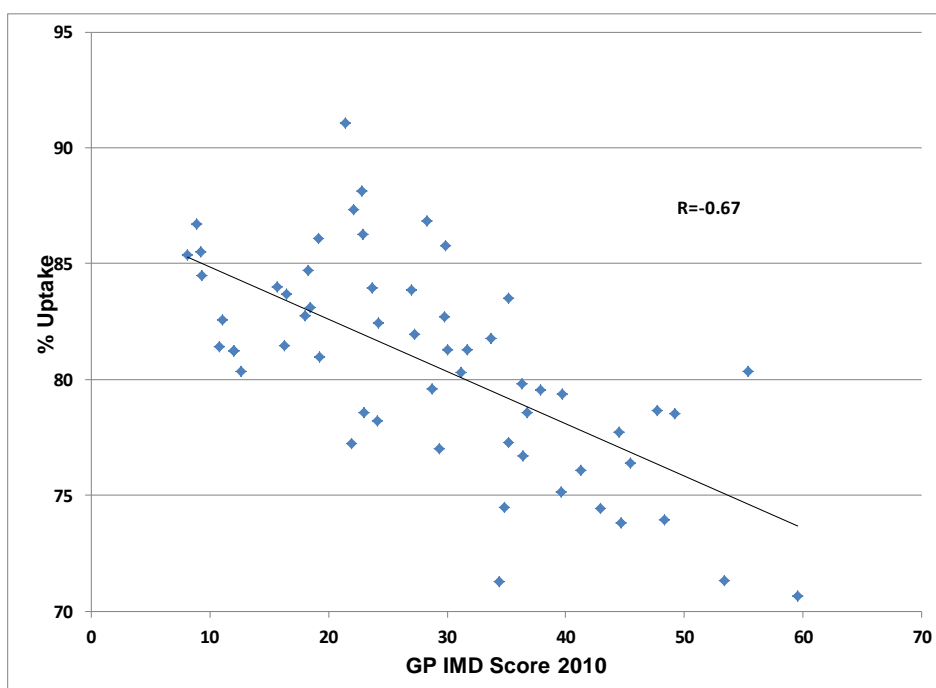
4.1.2 Screening Uptake in GP Practices

There was a large variation in screening between Wirral GP practices, from 70.7% to 91% (Appendix 2). The highest uptake was seen at Teehey Lane Medical Centre.

4.1.3 Screening Uptake and GP Practice Deprivation³

There was a strong negative correlation between GP practice deprivation scores and GP practice uptake of diabetic retinopathy screening (Figure 3). Thus GP practices with a more deprived population are more likely to have a lower rates of uptake of diabetic retinopathy screening ($R = -0.67$). In the previous equity audit (2009) the correlation score was -0.42 thus suggesting an increase in inequalities between GP practice deprivation scores.

Figure 3: Correlation between Diabetic Retinopathy Screening Uptake and GP IMD Score, January - December 2011



Source: Orion, Wirral Diabetic Eye Screening Programme, 2012 and Index of Multiple Deprivation 2010

³ The correlation chart above includes IMD 2010; previous equity audits would have included IMD 2007. Please note changes will have occurred between the two datasets over time. See IMD 2010 technical report for more information <http://www.communities.gov.uk/documents/statistics/pdf/1870718.pdf>

4.2.4 Screening Uptake and Optometrist

The table below presents the number and percentage of diabetic retinopathy screens by optometrists.

Table 3: Proportion of people screened by Optometrist, Jan– Dec 2011

Grader	Number of screenings	Percentage (%) of the total screens
JACKSONK	1963	14.65
HOWARDF	936	6.98
MCCORMICKK	867	6.47
WHITTINGHAMN	865	6.45
HILLN	840	6.27
MELLINGA	698	5.21
PRICEV	638	4.76
MOOREP	597	4.45
HYLANDR	564	4.21
LOKD	532	3.97
BALLP	487	3.63
BARTOND	464	3.46
HARRISP	460	3.43
NORTONM	455	3.40
MILLICANR	419	3.13
GARTSHOREE	394	2.94
DALYL	392	2.93
CANNINGS	371	2.77
MCGOWAND	348	2.60
PENDLEBURYD	322	2.40
MAHMOUDA	225	1.68
ORRELLR	225	1.68
MCKENNAC	171	1.28
MARSHALLJ	94	0.70
BOOTHR	59	0.44
HOWARDF	5	0.04
HOUGHTONSA	5	0.04
PRICEA	2	0.01
UNKNOWN	2	0.01
MACDONALDI	1	0.01
Total	13401	100

Source: Orion, Wirral Diabetic Eye Screening Programme, 2012,

4.2.5 Geographical Distribution by Optometrist Clinic

Birkenhead is the most popular area in Wirral for people to attend diabetic retinopathy screening (Table 4). There may be many reasons for this, such as it is a convenient location with better transport links within a town centre.

Table 4: Proportion of diabetics screened by practice, Jan – Dec 2011

Optometrist Clinic	Number of screenings	percentage (%) of the total screens
Specsavers - Birkenhead	2079	15.51
Specsavers - Wallasey	1123	8.38
Frederick Howard - Wallasey	933	6.96
R Millican - Moreton	912	6.81
Harris - West Kirby	808	6.03
Paul Moore - Moreton	597	4.45
Eye 2 Eye - Upton	596	4.45
IR McGarvey - Birkenhead	564	4.21
Houghtons - Bromborough	537	4.01
Harris - Heswall	492	3.67
PM & DJ Ball - Bebington	487	3.63
Eye 2 Eye - Birkenhead	477	3.56
The Eyeworks - Bromborough	475	3.54
Price - New Ferry	461	3.44
Orrells - New Brighton	450	3.36
LM Daly - Greasby	392	2.93
Eye 2 Eye - Heswall	382	2.85
Howards - Bebington	355	2.65
Howards - Pensby	347	2.59
The Eyeworks - Upton	337	2.51
IR McGarvey - Rockferry	260	1.94
Price - Claughton	179	1.34
RT Booth - Birkenhead	94	0.70
RT Booth - Birkenhead	59	0.44
Management Resource	5	0.04
Total	13401	100

Source: Orion, Wirral Diabetic Eye Screening Programme, 2012

5. Conclusions

- The prevalence of diabetes in Wirral is 4.8% of the population and is higher amongst men and older people. The diabetes prevalence in Wirral is higher than the England average which is 4.45%
- The prevalence of recorded diabetes increased from 4% in 2005/06 to 4.8% in 2010/11.
- The prevalence of diabetes is higher in the more deprived populations of Wirral.
- Screening uptake varies significantly between GP practices across Wirral.
- GP practices with a higher deprivation score were more likely to have lower uptake rates of diabetic retinopathy screening. Therefore, disability from blindness is a more significant risk for more deprived diabetic populations.
- Accessibility to an optometrist for people with diabetes is fairly equitable with 84% of people known to have diabetes living within 1 mile of an optometrist clinic/practice.

Changes from August 2009 audit:

- Uptake levels of diabetic retinopathy screening have changed slightly from 80% in 2009 compared to 81% in 2011 - a 1% change.
- The inequalities in uptake have widened since the audit in August 2009.
- The diabetes prevalence has continued to increase.

Reference:

Department of Health (1998) **National Skills Framework: Diabetes**

NHS Choices (2012). **Diabetes**. [Online] Available at <http://www.nhs.uk/conditions/diabetes/pages/diabetes.aspx> [Date Accessed May 2012]

Quality of Outcomes Framework (2012). **Diabetes Prevalence**. [Online] Available at <http://www.ic.nhs.uk/statistics-and-data-collections/supporting-information/audits-and-performance/the-quality-and-outcomes-framework/qof-2010-11/qof-2010-11-data-tables/qof-pct-level-data-tables-2010-11> [Date Accessed March 2012]

Appendix 1: Diabetes Prevalence by GP Practice, 2010/11

Practice Name	List size	Diabetes Register (ages 17+)	Diabetes Prevalence (%)
Wirral	332529	16122	4.80%
Wirral GP Commissioning Consortium	127007	6485	5.10%
BLACKHEATH MEDICAL CENTRE, QUINN BNE	2890	153	5.30%
CAVENDISH MEDICAL CENTRE, MELVILLE JA	4850	251	5.20%
CHURCH ROAD SURGERY, PATWALA DY	2128	105	4.90%
COMMONFIELD RD SURGERY, BRODBIN C	5653	323	5.70%
DEVANEY MEDICAL CENTRE, BATES JW	8171	334	4.10%
HAMILTON MEDICAL CENTRE, JAYAPRAKASAN CA	2488	135	5.40%
HOLMLANDS MEDICAL CENTRE, JOSHI VK	3287	179	5.40%
HOYLAKES RD MEDICAL CENTRE, ALIA	4043	222	5.50%
KINGS LANE MEDICAL CENTRE, KERSHAW D	3996	174	4.40%
MANTGANI AB & PARTNERS (EARLSTON)	2658	158	5.90%
MANTGANI AB & PARTNERS (MIRIAM)	4987	251	5.00%
MANTGANI AB & PARTNERS (SEABANK)	1517	104	6.90%
MORETON CROSS GROUP PRACTICE, ALMAN R	7223	389	5.40%
MORETON HEALTH CENTRE, WRIGHT JEM	6399	355	5.50%
MORETON MEDICAL CENTRE, PEREIRA A	5676	305	5.40%
PARKFIELD MEDICAL CENTRE, CHESTERS SA	7479	383	5.10%
PARKFIELD MEDICAL CENTRE, HAWTHORNTHWAITE EM	6284	382	6.10%
PRENTON MEDICAL CENTRE, SYED MF	1730	76	4.40%
SANDSTONE MEDICAL CENTRE, ALAM NM	3862	156	4.00%
TEEHEY LANE SURGERY, SAGAR A	2643	135	5.10%
TOWNFIELD HEALTH CENTRE	6676	303	4.50%
UPTON GROUP PRACTICE, LARKIN PS	8272	470	5.70%
VILLA MEDICAL CENTRE, COOKSON NMP	6034	293	4.90%
VITTORIA MEDICAL CENTRE, EDWARDS RW	5152	257	5.00%
VITTORIA MEDICAL CENTRE, MURTY KS	1436	82	5.70%
WHETSTONE LANE MEDICAL CENTRE, PLEASANCE CM	8996	430	4.80%
WOODCHURCH MEDICAL CENTRE, MARTIN-HIERRO ME	2477	80	3.20%
Wirral Health Commissioning Consortium	165376	7793	4.70%
ALL DAY HEALTH CENTRE	353	19	5.40%
ALLPORT MEDICAL CENTRE WALTON H	4311	200	4.60%
CENTRAL PARK MEDICAL CENTRE, MUKHERJEE SK	7990	406	5.10%
CLAUGHTON MEDICAL CENTRE, RENWICK JA	9609	375	3.90%
EASTHAM GROUP PRACTICE, BUSH KJ	11643	496	4.30%
EGREMONT MEDICAL CENTRE, HICKEY JJM	4285	230	5.40%
FENDER WAY HEALTH CENTRE, REAM JE	3937	201	5.10%
FIELD RD HEALTH CENTRE, DOWNWARD DC	3601	186	5.20%
GREASBY GROUP PRACTICE, COPPOCK PJ	7473	325	4.30%
GREENWAY RD SURGERY, DOW SC	7737	365	4.70%
GROVE MEDICAL CENTRE, ROBERTS A	3215	153	4.80%
GROVE RD SURGERY, TANDON R	2486	134	5.40%
HESWALL & PENSBY GROUP PRACTICE, RULE EM	12230	541	4.40%
HOYLAKES & MEOLS MEDICAL CENTRE, WIGHT JA	5219	204	3.90%
LEASOWE PRIMARY CARE CENTRE, SWIFT ND	3261	137	4.20%
LISCARD GROUP PRACTICE, STAPLES B	3990	206	5.20%
MANOR HEALTH CENTRE, MAGENNIS SPM	5808	280	4.80%
MILL LANE SURGERY, KIDD S	2432	111	4.60%
SILVERDALE MEDICAL CENTRE, HENNESSY TD	4881	247	5.10%
SOMERVILLE MEDICAL CENTRE, SMYE RA	8118	360	4.40%
ST. GEORGES MEDICAL CENTRE, RUDNICK S	9834	548	5.60%
VICTORIA PARK HEALTH CENTRE, FREEMAN MJ	7518	384	5.10%
WALLASEY VILLAGE GROUP PRACTICE, CAMERON EF	4390	239	5.40%
WEST KIRBY HEALTH CENTRE WELLS SM	6508	299	4.60%
WEST KIRBY HEALTH CENTRE, SIDA EC	5363	244	4.50%
WEST KIRBY HEALTH CENTRE, SMETHURST ME	5312	221	4.20%
WEST WIRRAL GROUP PRACTICE, JOHNSTON AR	13872	682	4.90%
Wirral NHS Alliance	40146	1844	4.60%
CIVIC MEDICAL CENTRE, PILLOW SJ	9528	392	4.10%
GLADSTONE MEDICAL CENTRE, SALAHUDDIN M	5052	278	5.50%
HEATHERLANDS MEDICAL CENTRE, CAMPHOR IA	3837	202	5.30%
ORCHARD SURGERY, LANNIGAN BG	4863	248	5.10%
RIVERSIDE SURGERY, WILLIAMS RM	7520	329	4.40%
SPITAL SURGERY, FRANCIS GG	4084	151	3.70%
ST. HILARY BROW GROUP PRACTICE, KINGSLAND JP	5262	244	4.60%

Source: Quality and Outcomes Framework, 2012

Appendix 2: Diabetic Retinopathy Screening Uptake and Practice IMD (2010) Score, Jan-Dec 2011

Practice Code	Practice Name	% Uptake	Practice IMD Score
N85057	Teehey Lane Medical Centre	91.04	21.46
N85022	Holmlands Medical Centre	88.14	22.85
N85052	Grove Road Surgery	87.31	22.15
N85028	Moreton Cross Group Practice	86.86	28.33
N85032	Greasby Group Practice	86.71	8.92
N85018	Villa Medical Centre	86.27	22.86
N85013	Upton Group Practice	86.1	19.16
N85040	Moreton Health Centre	85.79	29.88
N85008	West Wirral Group Practice	85.52	9.27
N85058	Silverdale Medical Centre	85.39	8.09
N85047	The Orchard Surgery	84.71	18.31
N85007	Pensby Surgery / Heswall MC	84.48	9.31
N85006	Civic Medical Centre	83.98	15.72
N85046	Hoylake Road Medical Centre	83.95	23.66
N85048	Moreton Medical Centre	83.85	26.99
N85005	Eastham Group Practice	83.66	16.44
N85616	Liscard Group Practice	83.5	35.14
N85643	Prenton Medical Centre	83.12	18.45
N85003	Allport Surgery	82.76	18.01
N85648	Blackheath Medical Centre	82.69	29.74
N85059	Hoylake & Meols Medical Centre	82.59	11.07
N85025	St. Hilary Brow Group Practice	82.45	24.18
N85619	Earlston Road Surgery	*81.93	27.22
N85009	Commonfield Road Surgery	81.76	33.74
N85054	Kings Lane Medical Practice	81.48	16.25
N85617	Spital Surgery	81.44	10.83
N85051	Parkfield Medical Centre (Chesters)	*81.28	31.73
N85034	Parkfield Medical Centre (Hawthornthwaite)	*81.28	30.04
N85011	West Kirby Health Centre (Dr Smethurst)	*81.24	12.05
N85002	West Kirby Health Centre	*81.24	12.05
N85004	West Kirby Health Centre	*81.24	12.05
N85633	Church Road Medical Centre	80.95	19.27
N85001	Park Medical Centre	80.34	12.67
N85038	Vittoria Medical Centre (Edwards)	80.34	55.41
N85053	Field Road Health Centre	80.31	31.19
N85635	Martins Lane Surgery	79.82	36.3
N85012	St. George's Medical Centre	79.61	28.71
N85027	Central Park Medical Centre	79.57	37.92
N85024	Somerville Medical Centre	79.35	39.72
N85019	Whetstone Medical Centre	78.65	47.7
N85020	Victoria Park Health Centre	78.59	36.74
N85056	Wallasey Village Group Practice	78.57	23.01
N85017	Cavendish Medical Centre	78.51	49.21
N85620	Grove Medical Centre	78.21	24.09
N85029	Fender Way Health Centre	77.72	44.51
N85041	Greenway Road Surgery	77.28	35.2
N85014	Woodchurch Road Surgery	77.24	21.94
N85023	Manor Health Centre	77	29.36
N85044	Claughton Medical Centre	76.72	36.43
N85629	Egremont Medical Centre	76.39	45.49
N85037	Heatherlands Medical Centre	76.06	41.29
N85016	Riverside Surgery	75.15	39.62
N85015	Devaney Medical Centre	74.46	34.86
Y02162	Woodchurch Medical Centre	74.42	42.89
N85640	Leasowe Primary Care Centre	73.94	48.33
N85031	Gladstone Medical Centre	73.8	44.65
N85021	Hamilton Medical Centre	71.32	53.41
N85614	Seabank Medical Centre	71.26	34.43
N85625	Miriam Medical Centre	70.66	59.53

* Practice figures were combined and could not be separated out

Source: Orion Wirral Diabetic Eye Screening Programme, 2012 and IMD 2010