

Wirral Digital Diabetic Retinopathy Screening Programme Health Equity Audit

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1. Introduction

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.

Diabetes and Digital Diabetic Retinopathy Screening

“Inequitable access to diabetes care may be an important determinant of variations in health outcomes.” [Millet C & Dodhia H, 2006] Reducing inequity of access to healthcare and health outcomes is a key government priority. A key driver to reduce inequalities of access and variations in care has been the series of National Service Frameworks (NSF) published since 1998. A key target from the Diabetes NSF has been the establishment of a universal digital diabetic retinopathy screening programme to ensure all diabetics are screened annually. The aim of the digital diabetic retinopathy screening programme is to reduce the risk of sight loss among people with diabetes by the prompt identification and effective treatment of sight threatening retinopathy.

This report examines equity in attendance for digital diabetic retinopathy screening programme for diabetic patients resident in Wirral.

2. Method

Anonymised screening activity and total numbers of patients with diabetes were extracted from the Wirral diabetic register in 2008/09. This included information about patient demographics (age and sex), their area of residence (postcode and GP details) and their screening activity (attendance).

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 practices and then compare this to the practice's diabetes population.

3. Results

Prevalence

There are approximately 14,800 diabetics in Wirral, which equates to 4.8% of the total population. The prevalence of diabetes is higher for men and in the older age groups (Table 1).

Table 1: Prevalence of diabetes, by age and sex, 2009

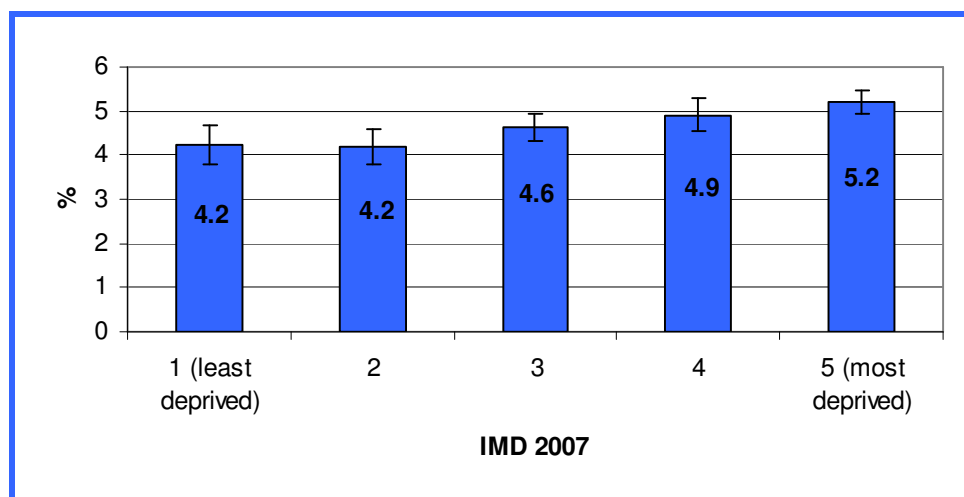
Age Band	Female		Male		Total	
	Number	%	Number	%	Number	%
Under 45	563	0.7	732	0.9	1295	0.8
45-54	729	3.3	1112	5.5	1841	4.3
55-64	1273	6.2	1961	10.0	3234	8.1
65-74	1769	11.4	2261	16.9	4030	13.9
75+	2433	13.3	1991	18.8	4424	15.4
Total	6767	4.7	8057	5.9	14824	5.3

Source: Wirral Diabetes Register, 2009

Prevalence by Deprivation

The prevalence of diabetes in the most deprived quintile of the Wirral population, is 24% higher than that in the least deprived quintile as Figure 1 shows.

Figure 1: diabetes prevalence by deprivation quintile, 2009

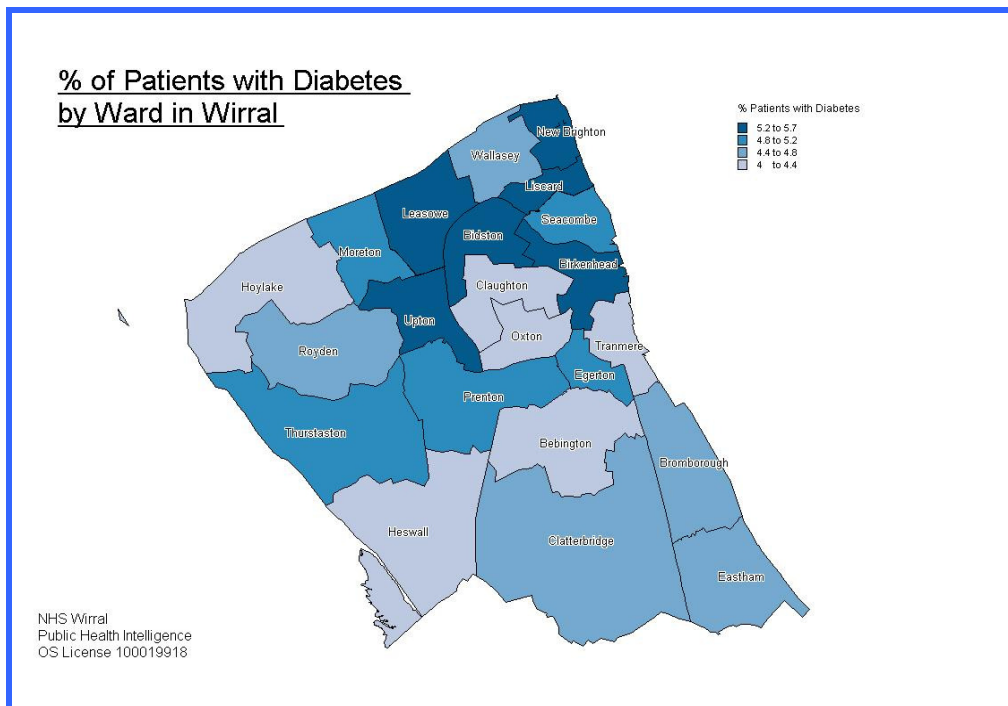


Source: Wirral Diabetes Register, 2009 & Index of Multiple Deprivation 2007

Prevalence by ward

The prevalence of diabetes varies widely across Wirral wards as Map 1 below shows. The prevalence in Leasowe ward is 5.7%, compared to 4.1% in Bebington. See Appendix 2 for number and rate by ward.

Map1: diabetes prevalence by Wirral Ward



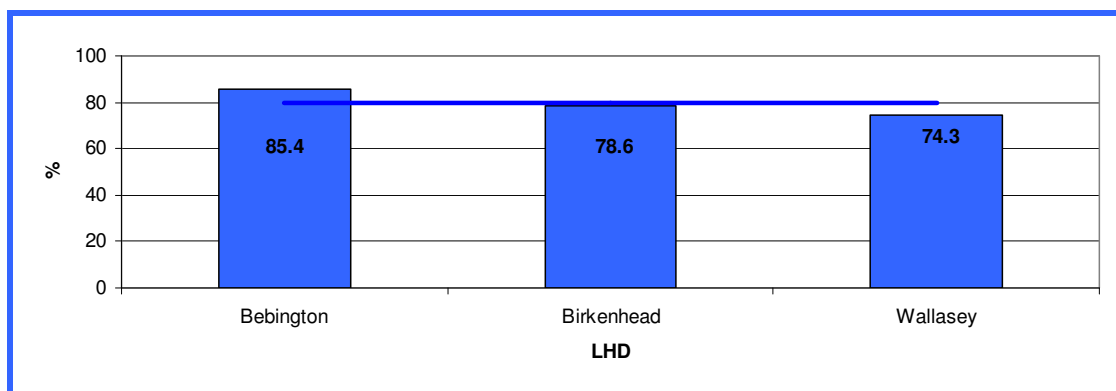
Source: Wirral Diabetes Register, 2009

Digital Diabetic Retinopathy Screening

Screening and LHD

Overall, 11,921 or 80% of diabetic patients received diabetic retinopathy screening between July 2008 and August 2009. Uptake varies considerably by LHD (Figure 2). Bebington LHD has the highest uptake of screening.

Figure 2: Digital Diabetic Retinopathy Screening by LHD, July 2008-August 2009



Source: Wirral Diabetic Register, 2009

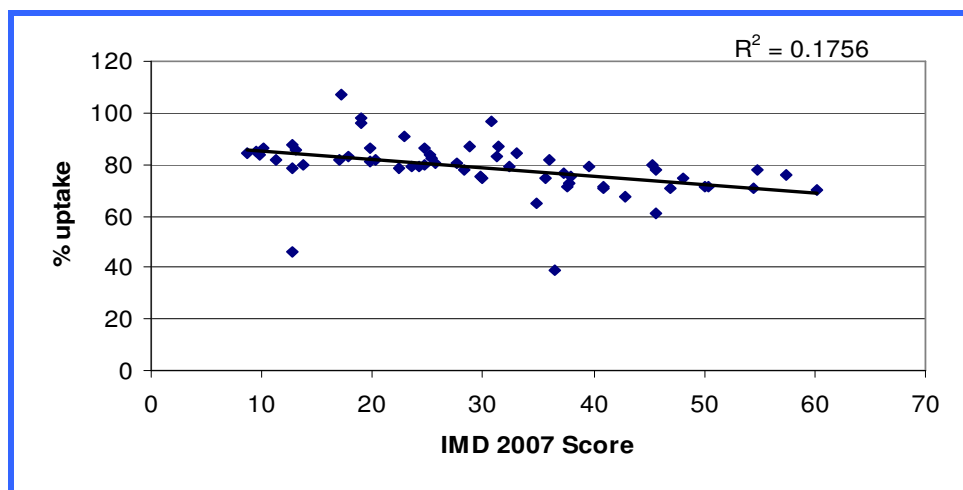
GP Practice

There is a large variation in screening between Wirral GP practices, from 38.9% to 107.3% (Appendix 1). The highest uptake is greater than 100% because the data covers two screening rounds. The data used was taken from the cohort July 2008 to August 2009 when the normal screening round is April to March.

GP Practice Deprivation and Screening Uptake

There is a negative correlation between GP practice deprivation scores and GP practice uptake of digital diabetic retinopathy screening (Figure 3). As GP deprivation score increases, digital retinopathy screening decreases ($R = 0.42$).

Figure 3: Digital Diabetic Retinopathy Screening % uptake and GP IMD score, July 2008-August 2009



Source: Wirral Diabetic Register 2009, and Index of Multiple Deprivation 2007

Screening by Optometrist

The annual screening benchmark for optometrists is 500 people. Table 2 presents the number and percentage of digital diabetic retinopathy screens by optometrists.

Table 2: Number and percentage of people screened by Optometrist, July 2008-August 2009

Grader	Total	%
JACKSON K	1861	15.6
HILLN	804	6.7
WHITTINGHAMN	784	6.6
HOWARDF	720	6.0
McCORMICKK	538	4.5
MELLINGA	515	4.3
BALLP	506	4.2
NORTONM	487	4.1
MILLICANR	417	3.5
PRICEV	401	3.4
BARTOND	399	3.3
ORRELLR	388	3.3
MOOREP	387	3.2
SELBYS	385	3.2
DALYL	358	3.0
HARRISP	332	2.8
AWANM	309	2.6
GARTSHOREE	304	2.6
HOUGHTONC	290	2.4
McGOWAND	288	2.4
PENDLEBURYD	276	2.3
CANNINGS	268	2.2
MARSHALLJ	225	1.9
BULLEYJ	154	1.3
DOBSONI	154	1.3
BOOTHR	129	1.1
McKENNAC	96	0.8
EVANSA	80	0.7
WARINGD	50	0.4
LAMBA	5	0.0
WHORTONA	4	0.0
McGARVEYI	3	0.0
NICCOLLSP	3	0.0
Admin	1	0.0
Total	11921	

Distribution by Optometrist

Birkenhead is the most popular area in Wirral for people to go for their digital diabetic retinopathy screening (see Table 3). Map 2 shows that the majority of diabetics do live in the area surrounding Birkenhead and this may be the main reason why they visit Birkenhead to be screened. It may also be that central Birkenhead is convenient for people – both in terms of access or when they are already visiting the town centre to shop for example.

Table 3: Number and percentage of diabetics screened by optometrist, July 2008-August 2009

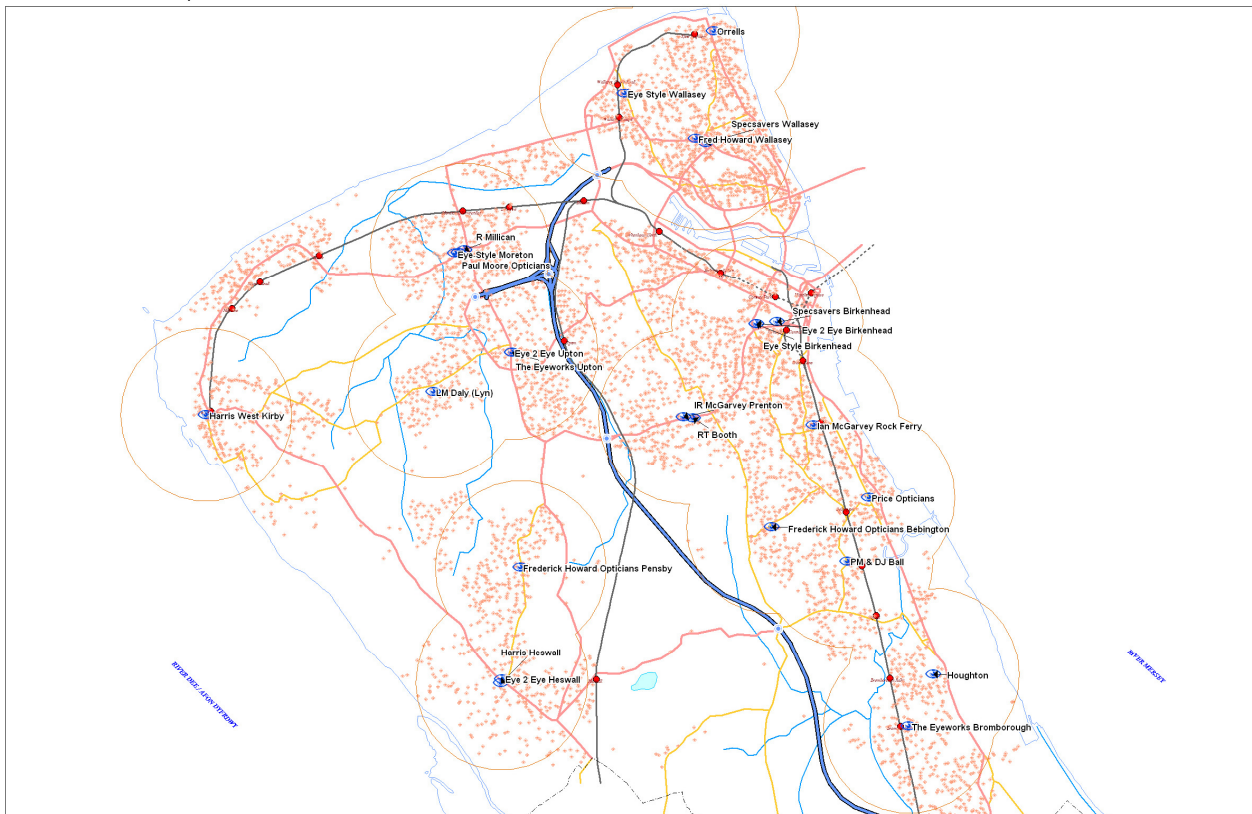
Optometrist	Total	%
Specsavers - Birkenhead	1851	15.5
R Millican - Moreton	919	7.7
Specsavers - Wallasey	816	6.8
Frederick Howard - Wallasey	723	6.1
Harris - West Kirby	691	5.8
Eye 2 Eye - Upton	565	4.7
Eye 2 Eye - Birkenhead	547	4.6
PM & DJ Ball - Bebington	506	4.2
Harris - Heswall	445	3.7
Houghtons - Bromborough	444	3.7
The Eyeworks - Bromborough	441	3.7
Price - New Ferry	401	3.4
Orrells - New Brighton	388	3.3
Paul Moore - Moreton	387	3.2
IR McGarvey - Birkenhead	383	3.2
LM Daly - Greasby	362	3.0
Eye 2 Eye - Heswall	355	3.0
RT Booth - Birkenhead	354	3.0
IR McGarvey - Rockferry	272	2.3
Howards - Pensby	259	2.2
Howards - Bebington	253	2.1
The Eyeworks - Upton	246	2.1
Eyestyle - Wallasey	213	1.8
Eyestyle - Moreton	96	0.8
Management Resource	4	0.0
Total	11921	100

Source: Wirral Diabetic Register, 2009

Map 2 (below) shows that the majority (11,351/84%) of diabetic patients live within a one mile radius of an optometrist. It does also show that there are areas of Wirral more than 1 mile away from an optometrist, notably in Hoylake, the north end of Birkenhead (around Birkenhead North Train Station), the very south end of Seacombe and parts of Leasowe.

Map 2: Digital retinopathy screening optomotrists shown with 1 mile buffer and diabetes patients

Digital retinopathy screening optometrists shown with 1 mile buffer and diabetes patients



4. Conclusions

- The prevalence of diabetes in Wirral is 4.8% of the population and is higher amongst men and older people
- The prevalence of diabetes is higher in the more deprived populations of Wirral
- Screening uptake varies greatly amongst GPs and also between LHDs. There is a 10% difference in uptake between Bebington & West Wirral LHD and Wallasey LHD.
- There is a positive correlation between GP practice deprivation scores and uptake of screening
- Seven out of the thirty three optometrists have screened 500 or more patients
- 84% of diabetics live within 1 mile of an optometrist.
- Due to limitations on the availability of data, it has not been possible to carry out some of the analysis planned. For example, MOSAIC analysis was not possible as it requires patient level postcoded data which was not available. Other limitations have been described earlier in the report (see Method, p2).

Appendix 1

Table 1: Digital Diabetic Retinopathy Screening Uptake – GP Practice

GP	Practice Code	% uptake	Practice IMD Score
Eastham Group Practice	N85005	107.3	17.1
The Orchard Surgery	N85047	97.8	18.9
Moreton Health Centre	N85040	96.5	30.8
Allport Surgery	N85003	96.1	19.1
Teehey Lane Medical Centre	N85057	90.6	22.9
West Kirby Health Centre (Dr Parry)	N85004	87.7	12.7
Moreton Cross Group Practice	N85028	87.1	28.9
Blackheath Medical Centre	N85648	86.8	31.4
Upton Group Practice	N85013	86.5	19.8
Villa Medical Centre	N85018	86.0	24.8
West Wirral Group Practice	N85008	86.0	10.2
West Kirby Health Centre (Dr Smethurst)	N85011	85.5	13.0
Greasby Group Practice	N85032	84.8	9.6
Silverdale Medical Centre	N85058	84.3	8.6
Parkfield Medical Centre (Chesters)	N85051	84.1	33.0
Pensby Surgery / Heswall MC	N85007	83.8	9.8
Wallasey Village Group Practice	N85056	83.8	25.2
Parkfield Medical Centre (Hawthornthwaite)	N85034	83.3	31.2
Kings Lane Medical Practice	N85054	82.8	17.8
St. Hilary Brow Group Practice	N85025	82.4	25.4
Church Road Medical Centre	N85633	82.0	20.3
Commonfield Road Surgery	N85009	81.8	36.0
Civic Medical Centre	N85006	81.8	16.9
Spital Surgery	N85617	81.6	11.3
Prenton Medical Centre	N85643	80.8	19.8
Grove Medical Centre	N85620	80.4	25.7
Moreton Medical Centre	N85048	80.3	27.6
Hoyle Road Medical Centre	N85046	80.0	24.8
Fender Way Health Centre	N85029	79.8	45.4
Park Medical Centre	N85001	79.6	13.7
Woodchurch Road Surgery	N85014	79.5	23.6
Holmlands Medical Centre	N85022	79.0	24.3
Central Park Medical Centre	N85027	78.9	39.6
Field Road Health Centre	N85053	78.8	32.4
Grove Road Surgery	N85052	78.6	22.4
West Kirby Health Centre (Dr Clark)	N85002	78.2	12.7
Vittoria Medical Centre (Murty)	N85634	78.1	54.8
Earlston Road Surgery	N85619	77.7	28.3
Gladstone Medical Centre	N85031	77.6	45.6
Martins Lane Surgery	N85635	76.7	37.2
Vittoria Medical Centre (Edwards)	N85038	76.1	57.5

Manor Health Centre	N85023	75.1	29.8
Greenway Road Surgery	N85041	74.9	38.0
Devaney Medical Centre	N85015	74.9	35.7
St.George's Medical Centre	N85012	74.7	29.9
Whetstone Medical Centre	N85019	74.6	48.1
Victoria Park Health Centre	N85020	72.9	37.8
Leasowe Primary Care Centre	N85640	71.6	50.5
Cloughton Medical Centre	N85044	71.4	37.6
Cavendish Medical Centre	N85017	71.3	50.0
Somerville Medical Centre	N85024	71.3	40.9
Hamilton Medical Centre	N85021	71.0	54.5
Egremont Medical Centre	N85629	70.6	47.0
Riverside Surgery	N85016	70.4	40.9
Miriam Medical Centre	N85625	70.3	60.2
Heatherlands Medical Centre	N85037	67.7	42.8
Seabank Medical Centre	N85614	64.7	34.9
Leasowe Medical Centre	N85624	61.0	45.6
Hoylake & Meols Medical Centre	N85059	46.3	12.8
Liscard Group Practice	N85616	38.9	36.4

Source: Wirral Diabetic Register, 2009 and IMD 2007

Appendix 2

Table 2: Diabetes Prevalence by Wirral Ward Table 2

Ward	Number	%
Bebington	556	4.10
Bidston	518	5.24
Birkenhead	660	5.27
Bromborough	669	4.79
Clatterbridge	738	4.52
Cloughton	641	4.37
Eastham	600	4.43
Egerton	667	5.10
Heswall	675	4.28
Hoylake	652	4.23
Leasowe	748	5.68
Liscard	743	5.35
Moreton	640	5.11
New Brighton	756	5.20
Oxton	580	4.15
Prenton	734	5.16
Royden	710	4.48
Seacombe	746	4.97
Thurstaston	742	4.84
Tranmere	510	4.18
Upton	807	5.26
Wallasey	732	4.78
Total	14824	4.78

Source: Wirral Diabetic Register, 2009