

**Derby and Derbyshire
Eye Health and Ophthalmology
Health Needs Assessment
2018**

**On behalf of the Derbyshire CCGs Ophthalmology High Impact Intervention Working Group
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Siobhan Horsley

Specialty Registrar in Public Health, Derbyshire County Council

Siobhan.horsley@nhs.net

Sereena Raju

Public Health Support Officer, Derby City Council

Sereena.Raju@derby.gov.uk

Dan Merrison

Business Intelligence Manager, NHS Southern Derbyshire CCG

daniel.merrison@nhs.net

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1. Executive summary

1.1 Introduction and Scope

The purpose of this Health Needs Assessment is to describe the eye health of adults in Derby and Derbyshire, including risk factors, protective factors, prevalence of serious eye conditions, and resultant service use. It also makes recommendations in order to improve eye health and reduce inequalities. It has been written to inform the CCG-led capacity review of Ophthalmology services in Derbyshire.

The eye conditions in scope are Glaucoma, Age related Macular Degeneration, Diabetic Retinopathy, Cataracts and Minor Eye Conditions.

1.2 Risk and Protective Factors

The risk factors for eye conditions include age, ethnicity, learning disability, obesity, diabetes, smoking, hypertension, stroke, dementia, and deprivation. The prevalence of each of these is increasing, which is driving the increase in eye conditions. Some of this risk is modifiable with appropriate public health action and a focus on prevention.

Protective factors for eye health include reducing or eliminating the modifiable risk factors described above and access to routine screening and where appropriate diabetic eye screening.

1.3 Prevalence of eye conditions

The prevalence of eye health conditions is higher in Derbyshire than Derby (apart from Glaucoma). When compared to England, Derbyshire rates are higher and Derby rates are lower. The number of people with all eye health conditions is projected to increase – this is due to changes in age structure of the population; increased prevalence in underlying risk factors described above; and improvements in accuracy of diagnosis and recording.

Derby and Derbyshire have higher rates of sight loss than England. Although the rates per 100,000 population are decreasing, the absolute number of people with sight loss is increasing.

1.4 Service Usage

Service use for ophthalmology sits across a range of providers: opticians, general practice, secondary care outpatient and inpatients. It is thought that 1% of primary care activity is for Minor Eye Conditions.

For secondary care most in area outpatient and daycase referrals are to Derby Teaching Hospitals NHS Foundation Trust (FT) and Chesterfield Royal Hospital NHS FT, followed by Derbyshire Community Health Services NHS FT. A significant amount (27%) of Ophthalmology referrals of Derbyshire residents are to Out of Area providers, primarily Sheffield Teaching Hospitals NHS FT, Stockport NHS FT and Nottingham University Hospitals NHS Trust.

Activity analysis is based on in area patients only. In 2017/18 there were a total of 26,843 referrals into and 145,950 attendances at secondary care ophthalmology outpatient services (a first to follow up ratio of 4.4). The majority of referrals were from Optometrists and General Practice.

The first ophthalmology outpatient appointment may or may not include a procedure and will end with discharge, a follow up appointment or a request to the patient to arrange a follow up at a later date. Approximately 3 in 4 patients do not receive a procedure at their first appointment, and of those approximately 1 in 2 are immediately discharged. Therefore, overall approximately 1 in 3 new appointments do not receive a procedure at that appointment and are immediately discharged.

The most common outpatients procedure is Tomography evaluation of retina (25,252 procedures in 2017/18 at a cost of £2,390,543). This is a diagnostic procedure.

Minor Injury Unit activity mainly relates to the more minor conditions in particular the removal of foreign bodies and minor injuries.

The most common inpatient procedure is Insertion of prosthetic replacement for lens NEC, which is for cataracts. 98.7% of inpatient activity is provided as daycase.

1.4.1 Inequalities in secondary care usage

There is a weak correlation between deprivation and activity which indicate that there are a range of variables contributing to the activity levels, likely to include the number of older people in a given area, referral practice of primary care, distance from care provider etc.

1.5 Service User feedback

Between June and September 2018, Healthwatch undertook a survey with 62 people who had been diagnosed with cataracts within the past two years. The survey found that the majority of people were very happy with their treatment, but there was potential for improvements in relating to information provision.

1.6 Policy Context

There are 2 key potential areas for change: a revised NICE Quality Standard for Serious Eye Conditions and the use of Avastin for Wet AMD.

2. Recommendations

2.1 Recommendations for Service Providers

- Promote primary prevention messages as a means of reducing risk of serious eye conditions, be able to signpost and refer to support services e.g. Live Life Better Derbyshire or Live Well Derby
- Promote NHS funded eye tests
- Review the information given to patients about their treatment and post-operative care to ensure it is accessible for patients, including those with learning disabilities.
- Ensure service providers are confident in providing advice about driving, practitioners should ensure that NICE guidelines for post-operative assessment are followed.
- Ensure that offers of second eye surgery are made using the same criteria as the first eye.

2.2 Recommendations for Commissioners

- Include prevention in eye condition pathways – ensure there is a link across the wider system encompassing public health, primary care, secondary care and social care e.g. smoking cessation, healthy weight etc.
- Uptake of NHS-funded eye tests to be promoted as part of the eye health communications and engagement strategy, particularly in more deprived areas and with a focus on the diagnostic role of eye testing.
- Promote diabetic retinopathy screening as part of the eye health communications and engagement strategy.
- Provide an enhanced focus on prevention and service uptake in the more deprived areas.
- Audit the referral processes for outpatients to understand if some of these new appointments could have been managed in primary care or optometry. DTHFT could be prioritised for this audit due to the volume of activity undertaken, and the high proportion of patients discharged following first appointment.
- Undertaken further audit in the South Derbyshire CCG area to understand the referral practices of optometry as the number and percentage of referrals resulting in discharge from first appointment are highest in this area. Whilst the percentage is low, the number of referrals from GPs is also high in this area, investigation regarding GP referral practice may also be useful due to the service demand it creates.
- Investigate the variation in first to follow up ratios in outpatient provision to determine whether this is due to variation in the underlying complexity within the population or variation in care.
- Seek information regarding out of area provision to enable a fuller understanding of patient care pathways
- Explore further the variation in Right Care data, especially to understand the variation between North Derbyshire CCG and other areas
- Audit the use of Avastin for Wet AMD, explore the feasibility for a local policy on this.
- Audit against NICE Serious Eye Conditions Quality Standards when these are published in February 2019

3. Introduction

The purpose of this Health Needs Assessment is to describe the eye health of people in Derby and Derbyshire, including risk factors, protective factors, prevalence of serious eye conditions, and resultant service use. It also makes recommendations in order to improve eye health and reduce inequalities.

The HNA has been written to inform the CCG-led capacity review of Ophthalmology services in Derbyshire. The review is in response to part of the NHS Elective Care Transformation Plan: High Impact Interventions for Ophthalmology, which aims to reduce unwarranted variation in referral to hospital eye services, resulting in delays in care and poorer outcomes. The capacity review is one of three areas for action; the other 2 actions are hospital-led and require improvements in prioritisation of new and existing patients.

The HNA builds upon the recent regional Eye Health Needs Assessment undertaken by Public Health England.¹

¹ Eye Health Needs Assessment of people in Lincolnshire, Rutland, Leicestershire, Derbyshire, Nottinghamshire, Northamptonshire, Hertfordshire and Bedfordshire, PHE 2018 <https://www.gov.uk/government/publications/eye-health-needs-assessment-east-midlands-and-east-of-england>

4. Scope

The eye conditions in scope for this report include:

Glaucoma	Glaucoma is where the optic nerve becomes damaged. It's usually caused by build up of fluid which increases pressure inside the eye. Glaucoma can lead to loss of vision if it isn't diagnosed and treated early. It is most common in adults in their 70s and 80s ² .
Age related Macular Degeneration	Age-related macular degeneration (AMD) affects the middle part of vision. It usually first affects people in their 50s and 60s. It doesn't cause total blindness. But it can make everyday activities like reading and recognising faces difficult. Without treatment, vision may get worse. This can happen gradually over several years ("dry AMD"), or quickly over a few weeks or months ("wet AMD"). The exact cause is unknown. It's been linked to smoking, high blood pressure, being overweight and having a family history of AMD. ³
Diabetic Retinopathy	Diabetic retinopathy is a complication of diabetes, caused by high blood sugar levels damaging the back of the eye (retina). It can cause blindness if left undiagnosed and untreated. ⁴
Cataracts	Cataracts are when the lens develops cloudy patches. Over time these patches usually become bigger causing blurry, misty vision and eventually blindness. Cataracts usually appear in both eyes. They may not necessarily develop at the same time or be the same in each eye. Risk factors include family history of cataracts, smoking, diabetes, eye injury, long-term use of steroids, alcohol ⁵
Minor Eye Conditions	Minor eye conditions include red eye, sore eyes, flashers (flashing light) and floaters (spots in front of the eye)

Eye conditions relating to children and young people are out of scope.

² <https://www.nhs.uk/conditions/glaucoma/>

³ <https://www.nhs.uk/conditions/age-related-macular-degeneration-amd/>

⁴ <https://www.nhs.uk/conditions/diabetic-retinopathy/>

⁵ <https://www.nhs.uk/conditions/cataracts/>

5. Risk factors

There are a number of risk factors for the development of eye conditions; a number of them are modifiable with appropriate public health action and a focus on prevention e.g. smoking, obesity, diabetes, cardiovascular diseases. The regional Eye Health Needs Assessment (PHE 2018) describes the risk factors for eye conditions which are discussed in more detail in the following sections of the report:

Increasing Age	It is predicted that the number of people living with sight loss will double by 2050
Ethnicity	The risk of developing diabetes is higher in South Asian populations. The risk of developing glaucoma is higher in African and African-Caribbean populations and people from South-East Asia and China are at higher risk of angle-closure glaucoma.
Learning Disability	People with learning disabilities have a higher incidence of eye and vision problems than the general population and poorer access to services.
Obesity	Linked to several eye conditions including cataracts and AMD. Obesity has a strong link to diabetes and exacerbation of diabetic retinopathy.
Diabetes	Persistent high blood sugar can damage the blood vessels leading to the retina leading to Diabetic Retinopathy
Smoking	The association between smoking and AMD is as strong as the link between smoking and lung cancer. Smokers double their risk of developing AMD and tend to develop it earlier than non-smokers. Additionally, smoking can make diabetes-related sight problems worse, and has been linked to the development of cataracts.
Hypertension	Increases the risk of stroke and if uncontrolled can increase the risk of both retinal vein and retinal artery occlusion. Both conditions can cause sudden loss of vision in one eye and can lead to further complications. Blood pressure is also an important risk factor in the incidence and progression of diabetic retinopathy.
Stroke	Damage as a result of stroke can impact on the visual pathway of the eyes which can lead to disruption of eye movement control causing diplopia, nystagmus, blurred vision and loss of depth of perception. Approximately 60% of stroke survivors have some sort of visual dysfunction following stroke.
Dementia	At least 100,000 people in the UK have both dementia and serious sight loss. This is set to increase as the UK population ages.
Deprivation	Evidence shows that there is a link between people on low incomes and living in deprivation and people living with sight loss; 3 out of 4 blind or partially sighted people are living in poverty or on its margins

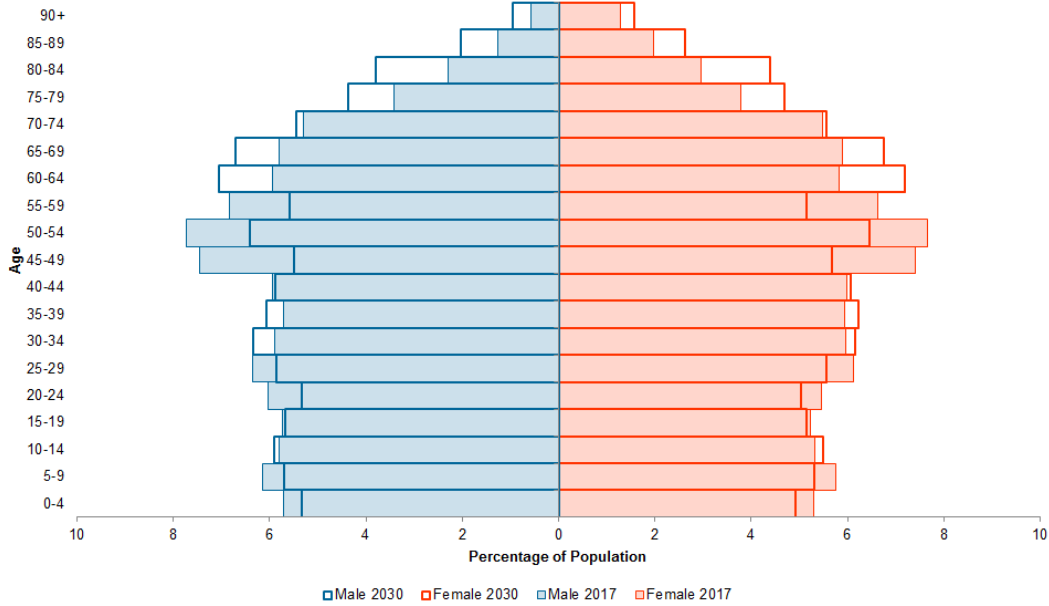
5.1 Age

The population pyramid below shows the percentage of male and female population in 5 year age bands, in 2017, and then projected for 2030. The pyramid shows how the age structure of the population will change – with an increasing proportion of the population aged over 60 and reaching older ages. With healthy life expectancy in Derby currently estimated to be 60.2 years for men and 58.4

years for women; and in Derbyshire 63.9 years for men and 63.5 years for women (PHE 2014/16) this has significant implications for future planning of healthcare services including eye health⁶.

Figure 5.1 Derbyshire Resident Population Estimates and Projections

Derbyshire Resident Population Estimates and Projections
Source: Office for National Statistics



⁶ <https://fingertips.phe.org.uk/profile/public-health-outcomes-framework>

5.2 Illness related risk factors

The tables below show the illness-related risk factors for eye health conditions for Derby and Derbyshire. Current prevalence is shown, as well as the counts for 2015/16, 2016/17 and projected for 2030. Prevalence data is important for understanding the rates of illness in the population, and being able to make comparisons between areas. Count is particularly focussed on here because of the direct impact that increasing numbers of people requiring support for their health has on the planning and provision of services. The increases will be driven by a number of factors including the changes in age structure of the population; increased prevalence in underlying factors such as obesity; accuracy of diagnosis and recording.

Figure 5.2 Prevalence of illness related risk factors

	Derby				Derbyshire			
	%	Count			%	Count		
	2016/17	2015/16	2016/17	2030	2016/17	2015/16	2016/17	2030
Hypertension (all ages)	13.2%	36,561	37,648	40,089	16.2%	128,061	130,007	136,569
Dementia (all ages)	0.80%	2,222	2,337	2,485	1.00%	7,579	7,716	8,083
Stroke (all ages)	1.7%	4,598	4,790	5,042	2.2%	17,619	17,997	18,790
Diabetes (17+ years)	7.30%	15,896	16,574	17,613	7%	45,878	47,249	49,225

Source: QOF data, ONS, NHS Digital

5.3 Wider determinants – Index of Multiple Deprivation

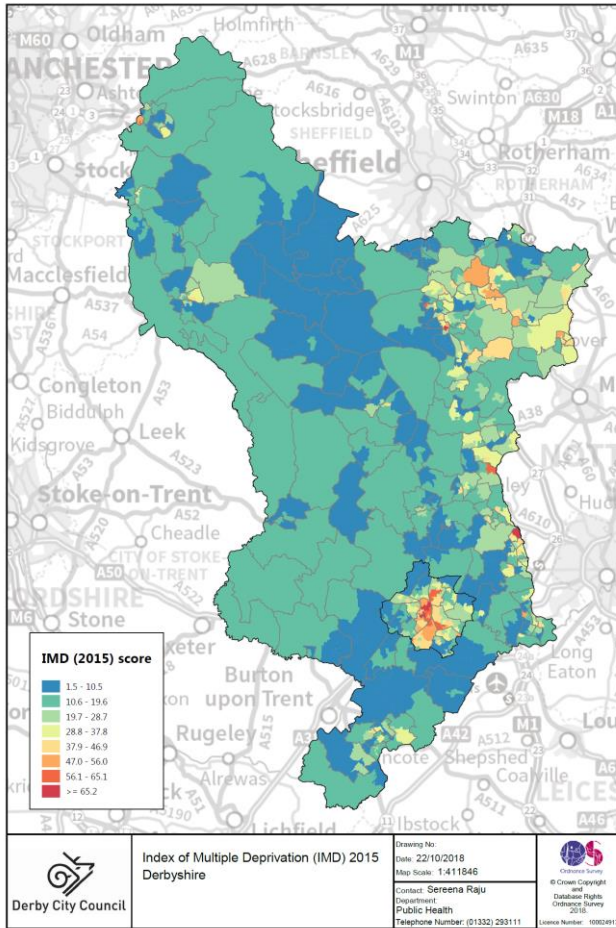
Wider determinants, also known as social determinants, are a diverse range of social, economic and environmental factors which impact on people's health. As described above evidence shows that there is a link between people on low incomes and living in deprivation and people living with sight loss. In addition, the prevalence of risk factors will be greater in more deprived areas, and at an earlier age. Social determinants can also impact upon people's capacity to access and benefit from health services.

The Index of Multiple Deprivation (IMD)⁷, combines a number of the other indices, and gives an overall score for the relative level of multiple deprivation experienced in small geographical areas. To produce the Overall IMD there are 38 separate indicators that are combined and weighted. Broadly, the indicators fall across seven Domains: Income, Employment, Health and Disability, Education, Skills and Training, Barriers to Housing and Services, Crime, Living Environment.

As such, relative IMD can give an indication of cumulative risk factors for health and illness. The map below shows the variation in deprivation in Derby and Derbyshire at Lower Super Output Area (LSOA) level.

⁷ Department for Communities and Local Government, 2015

Figure 5.3 Index of Multiple Deprivation in Derby and Derbyshire

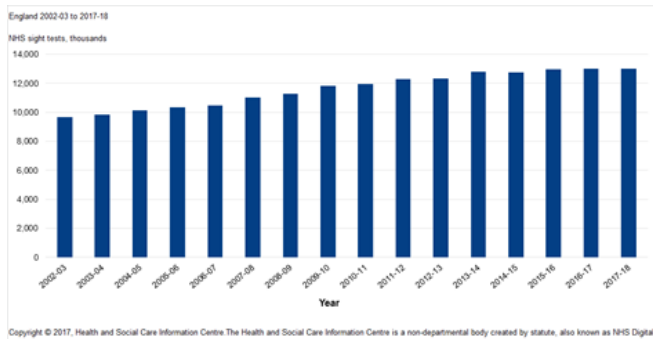


6. Protective factors

6.1 Routine Eye Tests

The NHS recommends that everyone from the age of three undergoes an eye test at least every two years to address uncorrected refractive error and detect any possible eye health conditions. Data regarding uptake of routine sight tests is limited to national level, NHS funded tests only.

Figure 6.1 Provision of NHS sight tests



In 2017/18, in England there were 13,032,583 NHS-funded Sight tests provided, equivalent to 23,994 per 100,000 population. The chart below shows the national trend in NHS Sight Test uptake⁸:

A survey conducted by RNIB and Yougov estimated that 27% of people of any age had not had an eye test in the previous 2 years, and 15% of people aged 55 and over had not had an eye test.

A recent study by Leeds University explored inequalities in uptake of NHS sight tests in Essex (a CIPFA statistical neighbour to Derbyshire) and found that whilst all over 60s are eligible for NHS funded eye tests, people living in the least deprived areas were 15% more likely to take this up. The researchers suggest that barriers to uptake include access to optometrists, cost of implementing recommendations e.g. spectacles purchase, and mistrust of recommendations i.e. that they would be prescribed items that they did not need. Poor uptake of routine eye testing is likely to contribute to inequalities in correction of refractive error, and more significantly inequalities in late diagnosis of serious eye conditions, leading to poorer long term outcomes. The researchers recommend that work is undertaken to support a shift in public perception of routine eye test from a 'high street' activity to a 'healthcare' activity⁹. It is recommended that uptake of NHS-funded eye tests is promoted as part of the communications and engagement strategy, particularly in more deprived areas and with a focus on the diagnostic role of eye testing.

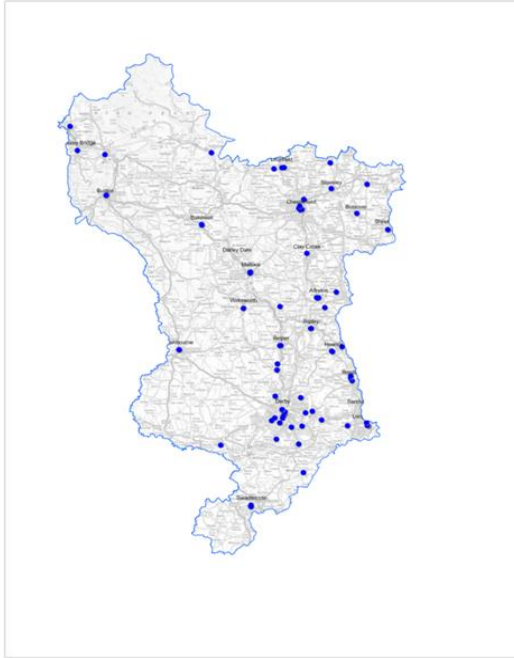
⁸ <https://digital.nhs.uk/data-and-information/publications/statistical/general-ophthalmic-services-activity-statistics/year-ending-31-march-2018/gosactivity1718>

⁹ Darren Shickle, Tracey M Farragher, Chris J Davey, Sarah V Slade, James Syrett; Geographical inequalities in uptake of NHS funded eye examinations: Poisson modelling of small-area data for Essex, UK, *Journal of Public Health*, Volume 40, Issue 2, 1 June 2018, Pages e171–e179, <https://doi.org/10.1093/pubmed/fox058>

6.1.1 Geographical distribution of optometry

The map below shows the geographical distribution of optometrists in Derbyshire. They are primarily in area of higher population density. There appears to be a gap in the West of the County – however patients may be travelling outside of the region for optometry services.

Figure 6.2 Geographical distribution of optometrists



6.2 Diabetic Eye screening

Diabetic Eye screening is a key part of diabetic care and involves an examination of the retina to detect any damage. It is recommended that people with diabetes attend diabetic retinopathy screening once a year (in addition to a routine eye test every 2 years). The table below shows the number of people invited for screening in Derby and Derbyshire, with an England level comparison¹⁰. NHS Right Care Data estimates that if the Derbyshire CCGs were to perform to the level of the best comparator CCGs a further 3681 people should be screened annually. It is recommended that promotion of diabetic retinopathy screening forms part of the communications and engagement strategy.

Figure 6.3 Uptake of Diabetic Eye Screening in Derby and Derbyshire

	2014/15	2015/16	2016/17
Number invited for screening	50,825	52,430	56,060
Percentage uptake (England)	82% (83%)	81% (83%)	82% (82%)

¹⁰ NHS screening annual KPI data, Public Health England

7. Prevalence and Projections

This section presents the current prevalence (rate and count) and projections of the eye health conditions in scope for this report.

In summary, the prevalence rate (per 100,000) of eye health conditions is higher in Derbyshire than Derby (apart from Glaucoma). When compared to England, Derbyshire rates are higher and Derby rates are lower. The number of people with all eye health conditions is projected to increase – this is due to changes in age structure of the population; increased prevalence in underlying risk factors described above; and improvements in accuracy of diagnosis and recording.

7.1 Minor Eye conditions

There is limited published data available on who experiences minor eye conditions (MECs), and how they are experienced. It is thought that 1% of primary care activity is for MECs¹¹.

One study which monitored MECs in Lambeth and Lewisham over a twelve month period found that the commonest reason for a MECS assessment was ‘red eye’ (36.7% of patients); other common reasons for attending were ‘painful white eye’ (11.1%), ‘flashes and floaters’ (10.2%) and ‘loss of vision’ (9.2%), while ‘headaches’ (5.3%), ‘trauma’ (1.7%) and ‘diplopia’ (0.4%) were less common¹².

In a snapshot MEC audit undertaken by North Derbyshire CCG (12 practices, 4 week period, 206 entries), 33% of activity was for flashers and floaters, 14% for red eye, and 16% for dry eye.

7.2 Serious Eye Conditions – Rates

The table below shows the current rate (per 100,000) of serious eye conditions in Derby, Derbyshire and England¹³. Rates are higher in Derbyshire than Derby (apart from Glaucoma), Derbyshire has higher rates than England, and Derby has lower rates. The difference in rates will be influenced by the underlying age structures of the population.

Figure 7.2 Prevalence rates of serious eye conditions Derby, Derbyshire and England

Serious Eye condition: Estimated rate per 100,000	Derby	Derbyshire	England
AMD (all ages)	896.7	1057.9	939.6
Late stage wet AMD (all ages)	604.3	710.4	632.4
Surgical cataracts (all ages)	924	1115.2	979.6
Glaucoma (30+ years)	1470.2	1472.0	1455.9

¹¹ “Optometry First” Minor Eye Conditions Service, Business Case, Local Optical Committee Support Unit, North Derbyshire CCG (2016)

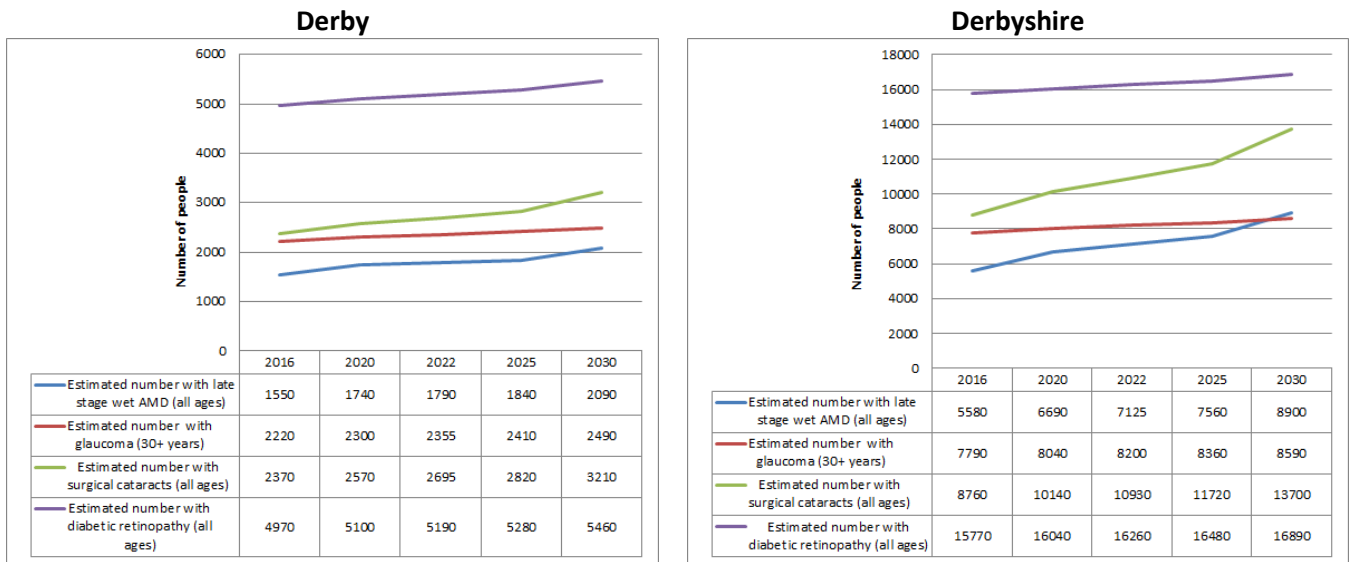
¹² Minor eye conditions policy roundtable evidence briefing <https://www.rnib.org.uk/optimal-models-eye-care-policy-roundtables-2017>

¹³ Source: Sight loss data tool, RNIB and ONS, 2016

7.3 Serious Eye conditions: Numbers and Projections

The following charts show the numbers of people in Derby and Derbyshire with each of the serious eye conditions in scope for this report, including projections¹⁴. The numbers of people with serious eye conditions are projected to increase over the coming years.

Figure 7.3 Numbers and projections of serious eye conditions

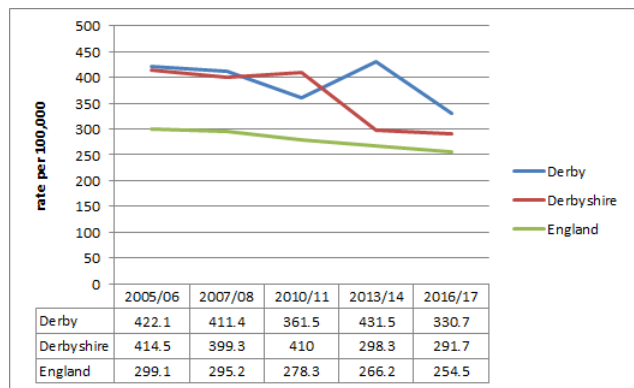


Source: Sight loss data tool, RNIB and ONS 2016

7.4 Sight loss and blindness

The charts below show the rates and number of registration in Derby and Derbyshire for blindness. These charts illustrate that whilst the overall rates are decreasing, the absolute numbers are increasing.

Figure 7.4 Registered blindness per 100,000 population



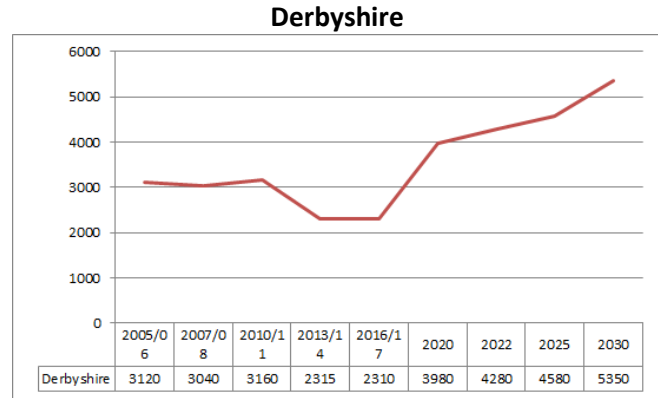
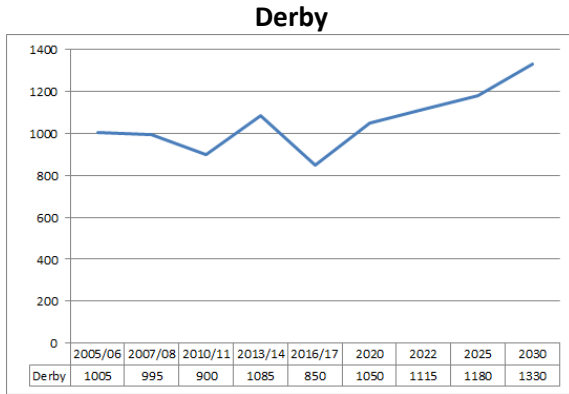
Source: NHS Digital, ONS

This chart shows the rate of registered blindness per 100,000 population (all ages) in Derby, Derbyshire and England. Whilst trends are decreasing, both Derby and Derbyshire have higher rates than England.

¹⁴ Source: Sight loss data tool, RNIB and ONS, 2016

The charts below show the current and projected number of registrations for blindness in Derby and Derbyshire, blindness registrations are expected to increase:

Figure 7.5 Current and projected number of blindness registrations



Source: NHS Digital

8. Secondary Care Service use

Service use for ophthalmology sits across a range of providers: opticians, general practice, secondary care outpatient and inpatients. Optometry data has been discussed above in the section on Protective Factors. This section will focus on secondary care usage; the data is taken from SUS via the NECS CSU SQL databases.

8.1 Providers

Most in area outpatient and daycase referrals are to Derby Teaching Hospitals NHS Foundation Trust (FT) and Chesterfield Royal Hospital NHS FT, followed by Derbyshire Community Health Services NHS FT. A significant amount (27%) of Ophthalmology referrals of Derbyshire residents are to Out of Area providers, primarily Sheffield Teaching Hospitals NHS FT, Stockport NHS FT and Nottingham University Hospitals NHS Trust. This is shown in more detail in the table below

Figure 8.1 Outpatient and Inpatient referral destinations

New Outpatient Referrals			Daycase Referrals			Elective Activity		
Derby	39%	10,352	Derby	32%	8,053	Sheffield	43%	209
Chesterfield	26%	6,989	Chesterfield	17%	4,302	Derby	19%	93
DCHS	7%	1,882	Stockport	11%	2,684	Chesterfield	16%	77
Sheffield	6%	1,683	Sheffield	10%	2,625	Nottingham	7%	34
Stockport	4%	1,187	Nottingham	9%	2,292	Burton	6%	31
Nottingham	4%	1,162	DCHS	6%	1,416	Manchester	4%	22
Burton	3%	864	Burton	3%	841	DCHS	2%	9
Sherwood Forest	3%	844	East Cheshire	2%	600	Moorfields	1%	7
New Medical Systems	2%	649	New Medical Systems	2%	493	Birmingham	1%	7
Other	5%	1,231	Other	8%	2,080	Stockport	*	<5
Total	100%	26,843	Total	100%	25,386	Total	100%	*

*Secondary suppression has been implemented in order to protect the confidentiality of cells that pose an unacceptable risk of disclosure.

8.2 Outpatients referrals - Source of referral

In 2017/18 there were a total of 26,843 referrals into secondary care ophthalmology outpatient services. The majority of referrals were from Optometrists and General Practice. The full list of referral sources is shown below:

8.2 Source of referral for outpatient activity

Source	Number referred	
Optometrist	32%	8,624
General Medical Practitioner	29%	7,736
Consultant, exc A&ED	13%	3,561
other - not initiated by the Consultant responsible for the Consultant Out-Patient Episode	9%	2,298
A&ED (inc. Minor Injuries Units and Walk In Centres)	5%	1,461
Self-referral	5%	1,244
National Screening Programme	4%	1,082
other - initiated by the Consultant responsible for the Consultant Out-Patient Episode following an A&ED Attendance (inc. Minor Injuries Units and Walk In Centres)	2%	430
Other	1%	159
Total	100%	26,843

8.3 First outpatient appointment outcomes

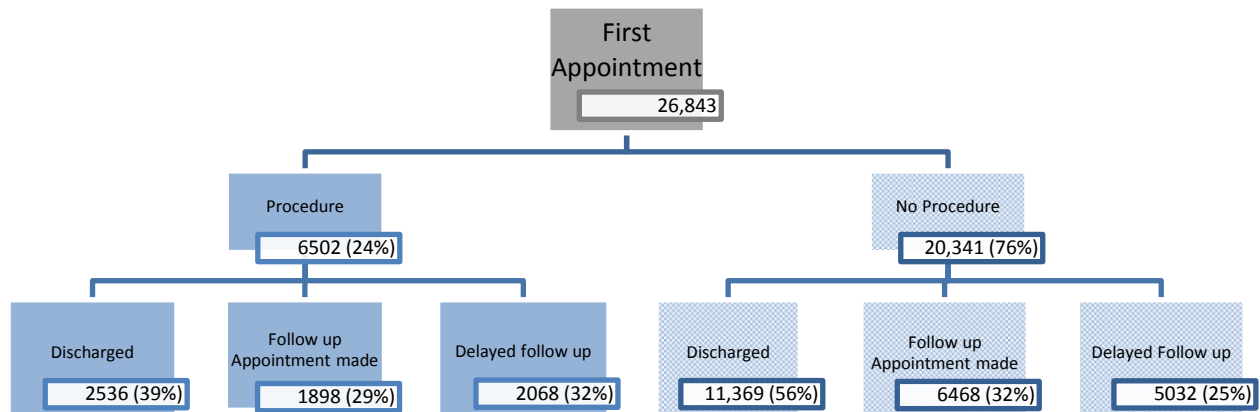
The first ophthalmology outpatient appointment may or may not include a procedure and can result in one of three potential outcomes regarding further care:

- 1) The patient is immediately discharged from Consultant care
- 2) Another outpatient appointment is given (follow up)
- Or 3) The patient is asked to make an outpatient appointment at a later date (delayed follow up)

Overall, 42% of outpatients are discharged from Consultant care at this first appointment, this compares to 47% nationally (England).

The chart below provides more detail about how Derbyshire patients move through this pathway. Approximately 3 in 4 patients do not receive a procedure at their first appointment, and of those approximately 1 in 2 are immediately discharged. Therefore, overall approximately 1 in 3 new appointments do not receive a procedure at that appointment and are immediately discharged. It is recommended that referral processes are audited to understand if some of these new appointments could have been managed in primary care or optometry, without the need for a secondary care referral.

Figure 8.3 First outpatient appointment outcomes



8.4 Total Outpatient appointments 2017/18

In 2017/18 there were 145,950 outpatient attendances. This figure represents a combined total of first and follow-up appointments. The following chart shows first and follow-up outpatient attendances in 2017/18, by CCG. The follow up ratio describes how many follow up appointments are provided for every first appointment – and is used as an indication of how many people are receiving long term care. The follow up ratio for Derbyshire is 4.4, which is higher than the England rate of 3.0. In the table below Hardwick and North Derbyshire CCGs have higher follow up ratios than Erewash and South Derbyshire. It is recommended that the variation in first to follow up ratios be investigated further to determine whether this is due to variation in the underlying complexity within the population or variation in care.

Figure 8.4 Total outpatient appointments

	Erewash		Hardwick		N Derbyshire		S Derbyshire		TOTAL		ENGLAND
Appointments 2017/18	Number	rate per 1000	Number	rate per 1000	Number	rate per 1000	Number	rate per 1000	Number	rate per 1000	rate per 1000
First	2573	26.4	3021	29.0	9299	31.8	11950	21.5	26843	25.6	34.0
Follow-up	9464	97.0	15424	148.1	43613	149.1	50606	91.1	119107	113.4	102.7
Total	12037	123.4	18445	177.1	52912	180.9	62556	112.6	145950	139.0	136.7
Follow-Up Ratio	3.7		5.1		4.7		4.2		4.4		3.0

This is an indicative ratio – it is not the actual number of follow ups for each appointment. If the 11,369 patients who did not receive a procedure and were immediately discharged are excluded, the follow up ratio increases to 9.4.

8.5 Discharges from new patient appointments by referral source

This section provides some further information about those patients who are discharged from their first appointment – these numbers represent the total number of new outpatient discharges and does not make the distinction over whether they received a procedure or not. Figure 8.2 is repeated below with additional information regarding how many of those referrals were discharged following the first appointment. If the number of discharges from first appointment were proportional to the number of referrals then the 2 percentage columns below would look very similar. The table below shows that there is proportionally more discharges from first appointment of patients who were referred by optometry –32% of the total referrals leading to 41% of the total discharges. Further audit would need to be undertaken to understand whether these patients could have been seen elsewhere.

8.5 Source of referral for outpatient activity and number discharged following first appointment

Source	Number referred	Number discharged following 1 st appt
Optometrist	32% 8,624	3,597 41%
General Medical Practitioner	29% 7,736	1,956 22%
Consultant, exc A&ED	13% 3,561	900 10%
other - not initiated by the Consultant responsible for the Consultant Out-Patient Episode	9% 2,298	777 9%
A&ED (inc. Minor Injuries Units and Walk In Centres)	5% 1,461	290 3%
Self-referral	5% 1,244	496 6%
National Screening Programme	4% 1,082	600 7%
other - initiated by the Consultant responsible for the Consultant Out-Patient Episode	2% 430	94 1%
following an A&ED Attendance (inc. Minor Injuries Units and Walk In Centres)	1% 248	8 0%
Other	1% 159	7 0%
Total	100% 26,843	8,736 100%

The following two tables provide further detail on discharges from new appointments, by provider and by CCG. Please note that as above, these numbers represent the total number of new outpatient discharges and does not make the distinction over whether they received a procedure or not.

There is variation between provider and between CCGs, key points of note are as follows:

DTHFT show a significantly higher amount of referrals from Optometrists and more diverse sources of referrals (as expected with higher numbers). DTHFT also have much higher rates of discharge following first appointment than the other main providers. Further audit would be required to understand how many of these patients received a procedure or not, and how many could have been seen elsewhere.

Due to the volume of activity at DTHFT it is recommended that any work to understand the outcomes of first appointments is primarily focussed on this provider.

CRH have most (72%) of their referrals from GPs or Optometrists in equal measure. They also have 14% from A&E but this could be a data recording issue i.e. a difference in recording Eye Casualty.

DCHS have mainly GP referrals (58%) and less diversity in sources, as expected with lower numbers.

When looking at the same data by CCG, the key areas of variation are the discharges of patients referred by GP and by Optometry. The pattern reflects the patterns seen in the providers. It is recommended that further investigation is undertaken in the South Derbyshire area to understand the referral practices of optometry as the number and percentage of referrals are highest in this area. Whilst the percentage is low, the number of referrals from GPs is also high in this area, investigation regarding GP referral practice may also be useful due to the service demand it creates.

Figure 8.6 Discharges from New Patient Appointments, by Referral Source and Provider (Top 3 providers) 2017/18

Source of Referral	DTHFT		CRH		DCHS		Total	
Optometrist	2,600	43%	702	35%	295	40%	3,597	41%
General Medical Practitioner	777	13%	749	37%	430	58%	1,956	22%
Consultant, exc A&ED	779	13%	119	6%	<5	*	900	10%
other - not initiated by the Consultant responsible for the Consultant Out-Patient Episode	701	12%	73	4%	<5	*	777	9%
National Screening Programme	551	9%	48	2%	<5	*	600	7%
self-referral	496	8%					496	6%
A & ED (including MIU and Walk In Centres)	11	0%	277	14%	<5	*	290	3%
other - initiated by the Consultant responsible for the Consultant Out-Patient Episode	40	1%	48	2%	<5	*	94	1%
Allied Health Professional	11	0%	-		-		11	0%
following an A & ED attendance (including MIU and Walk In Centres)	8	0%	-		-		8	0%
Orthoptist	5	0%	-		-		5	0%
General Practitioner or Dentist with a Special Interest (GPwSI or DwSI)	<5	*	-		-		<5	*
Total	*		2,016		739		*	
As a proportion of overall referrals (see fig 8.1)	57.8%		28.8%		39.2%		45.4%	

Figure 8.7 Discharges from New Patient Appointments, by Referral Source and CCG 2017/18

Source of Referral	Hardwick		N Derbys		Erewash		S Derbys		Total	
Optometrist	175	29%	547	36%	254	32%	2,621	45%	3,597	6%
General Medical Practitioner	248	41%	542	36%	228	29%	938	16%	1,956	6%
Consultant, exc A&ED	44	7%	98	6%	140	18%	618	11%	900	1%
other - not initiated by the Consultant responsible for the Consultant Out-Patient Episode	23	4%	60	4%	62	8%	632	11%	777	1%
National Screening Programme	21	3%	38	3%	56	7%	485	8%	600	0%
self-referral	6	1%	<5	*	31	4%	455	8%	496	0%
A & ED (including MIU and Walk In Centres)	75	12%	194	13%	<5	*	20	0%	290	2%
other - initiated by the Consultant responsible for the Consultant Out-Patient Episode	14	2%	34	2%	10	1%	36	1%	94	0%
Allied Health Professional							11	0%	11	0%
following an A & ED attendance (including MIU and Walk In Centres)							8	0%	8	0%
Orthoptist					<5	*	<5	*	5	0%
General Practitioner or Dentist with a Special Interest (GPwSI or DwSI)							<5	*	<5	*
Total	606		*		*		5,829		*	

8.6 Procedures

8.6.1 Outpatients procedures

There are three in-area ophthalmology care providers: Derby Teaching Hospitals NHS FT, Chesterfield Royal Hospital NHS FT and Derbyshire Community Health Services NHS FT. This section uses the routine contractual activity reporting to summarise the procedures being provided to patients. It may exclude activity which is not routinely monitored, and excludes procedures that are provided out of area.

The table below shows the most common procedures provided to Ophthalmology Outpatients. The most frequent procedure is Tomography evaluation of the retina which is a diagnostic procedure for glaucoma, Wet AMD and Diabetic retinopathy.

Figure 8.8 Outpatient procedures

Primary Procedure 2017/18	Number	Cost	% overall activity
Tomography evaluation of retina	25,252	£2,390,543	69%
Injection into vitreous body NEC	4,832	£2,559	13%
Fluorescein angiography of eye	759	£84,434	2%
Capsulotomy of posterior lens capsule	558	£51,649	2%
Unspecified assessment	479	£56,651	1%
Capsulotomy of lens NEC	457	£41,521	1%
Panretinal laser photocoagulation to lesion of retina	428	£47,628	1%
Laser photocoagulation of retina for detachment	382	£41,647	1%
Vitrectomy using anterior approach	371	£39,153	1%
Other specified other diagnostic tests	313	£16,058	1%
Other procedure	2,605	£303,043	7%
Total	36,436	£3,074,887	100%

8.6.2 Inpatients procedures – Daycase activity

Daycases are planned admissions with patients leaving within the day. The majority (98.7%) of inpatient procedures are daycases. The table below shows the procedures undertaken - the most common is insertion of a prosthetic lens replacement for patients with cataracts. This excludes out of area activity.

Figure 8.9 Inpatient procedures- daycase activity

Dominant Procedure 2017/18	DTHFT	CRH	DCHS	Total	%
Insertion of prosthetic replacement for lens NEC	2,809	1,621	675	5,105	37%
Vitrectomy using pars plana approach	1,099	-	-	1,099	8%
Panretinal laser photocoagulation to lesion of retina	973	-	-	973	7%
Excision of lesion of eyelid NEC	42	378	231	651	5%
Trabeculectomy	385	112	-	497	4%
Biopsy of lesion of eyelid	7	448	7	462	3%
Correction of entropion NEC	77	322	63	462	3%
Curettage of lesion of eyelid	28	119	308	455	3%
Laser photocoagulation to lesion of retina NEC	336	-	-	336	2%
Correction of ptosis of eyelid using levator muscle technique	322	7	-	329	2%
Other	1,975	1,295	132	3,402	25%
Total	8,053	4,302	1,416	13,771	100%

8.6.3 Inpatients procedures – elective activity

Electives are planned admissions which require an overnight stay. This represents the minority of inpatient activity. The table below shows the procedures undertaken – as with day case activity the

most common procedure is insertion of a prosthetic lens replacement for patients with cataracts. This excludes out of area activity.

Figure 8.10 Inpatient procedures – elective activity

Dominant Procedure 2017/18	DTHFT	CRH	DCHS	Total	%
Insertion of prosthetic replacement for lens NEC	<5	38	7	*	26%
Trabeculectomy	28	7	-	35	20%
Laser photocoagulation to lesion of retina NEC	21	-	-	21	12%
Evisceration of eye	7	7	-	14	8%
Needling of bleb	-	14	-	14	8%
Phacoemulsification of lens	7	-	-	7	4%
Laser photocoagulation of ciliary body	-	7	-	7	4%
Recession of medial rectus muscle and resection of lateral rectus muscle of eye	7	-	-	7	4%
Excision of lesion of eyelid NEC	7	-	-	7	4%
Excision of lesion of conjunctiva	7	-	-	7	4%
Penetrating graft to cornea	7	-	-	7	4%
Other		4	2	6	3%
Total	*	77	9	*	100%

8.7 Minor Injuries Unit and Accident and Emergency Department Activity

This section provides detail regarding emergency activity provided by Minor Injuries Units (MIU) and Accident and Emergency Departments (A&E). The MIUs are located in Buxton (High Peak), Ripley (Amber Valley), Ilkeston (Erewash, and Whitworth (Matlock, High Peak) and are provided by DCHS, the A&E departments are in Derby and Chesterfield hospitals. This data excludes patients who are seen out of area.

8.7.1 Geographical residence of patients attending MIU or A&E

The table below shows the geographical area of residence (by Place) of patients attending MIU or A&E for eye –related conditions. At Derbyshire level there is a similar overall number and rate of attendance at MIUs and A&E, but there is variation at Place level which reflects the relative availability of provision in those areas. In Erewash there is proximity to both Derby Hospital and Ilkeston MIU, which will explain the similar numbers in that area.

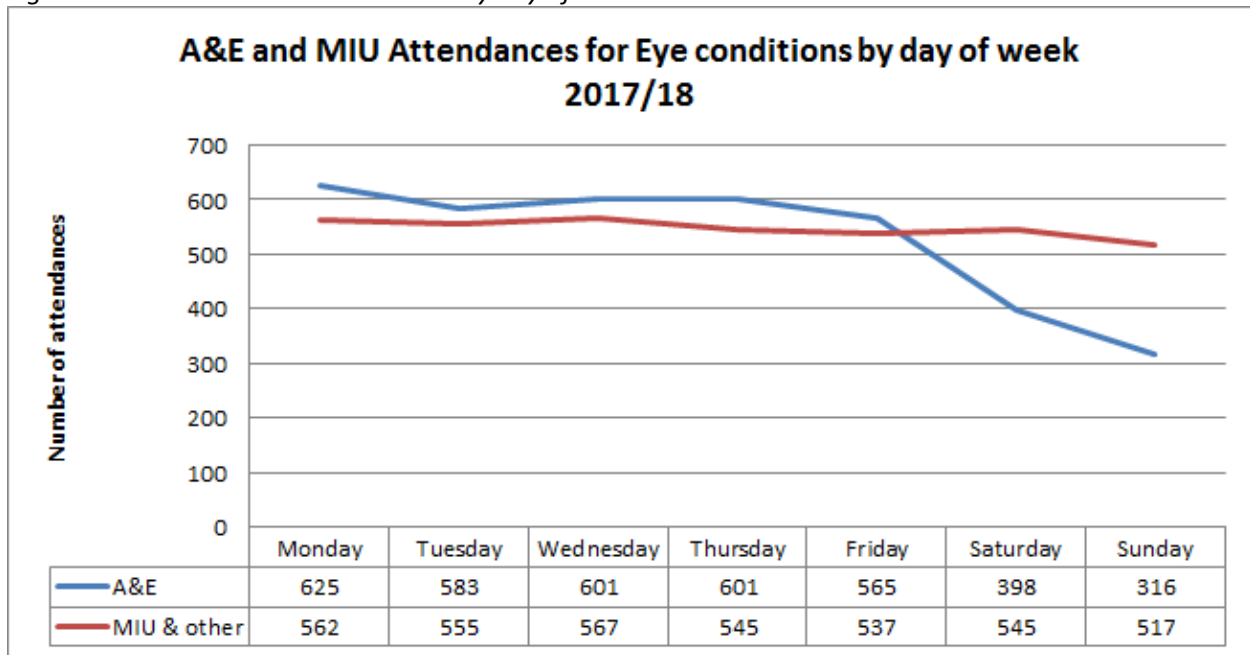
Figure 8.11 MIU and A&E use by place of residence 2017/18

Place	Actual Attendances			Population	Attendances per 1000 population		
	A&E	MIU & other	Total		A&E	MIU & other	Total
Amber Valley	283	1,191	1,474	133,959	2.1	8.9	11.0
Bolsover and NE Derbyshire	1,111	194	1,305	174,014	6.4	1.1	7.5
Chesterfield	254	70	324	112,712	2.3	0.6	2.9
Derby City	447	182	629	334,167	1.3	0.5	1.9
Derbyshire Dales	383	767	1,150	80,243	4.8	9.6	14.3
Erewash	728	763	1,491	97,545	7.5	7.8	15.3
High Peak	179	627	806	60,430	3.0	10.4	13.3
South Derbyshire	292	27	319	54,953	5.3	0.5	5.8
Other	12	7	19	-	-	-	-
Total	3,689	3,828	7,517	1,048,023	3.5	3.7	7.2

8.7.2 Patterns in attendance at MIUs or A&E

Analysis of time of attendance at MIU or A&E for eye-related conditions shows that MIU attendance is fairly consistent during the week, whereas A&E attendance is lower at the weekend. Attendance is also higher during the day, with a peak at 8am for MIU and 10am for A&E. This information is shown in the charts below. Further information would be required to understand the triggers for attendance at MIU or A&E over primary care (for example), but these trends could be simply explained by working and living patterns meaning that damage to the eye is more likely to be sustained or noticed during daylight hours.

Figure 8.12 A&E and MIU attendance by day of the week



8.7.3 MIU activity by site

There is further breakdown detail available for MIU attendance, which counts for 38% of A&E activity. The following table shows how this activity is split between provider:

8.13 DCHS MIU Ophthalmic activity by Site - 2017/18

Site	Total	Cost	Activity %
ILKESTON COMMUNITY HOSPITAL	1,031	£67,230	29%
RIPLEY HOSPITAL	977	£63,914	28%
WHITWORTH HOSPITAL	829	£54,096	24%
BUXTON HOSPITAL	688	£44,733	20%
Total	3,525	£229,974	

The following 3 tables provide a breakdown of MIU activity: by diagnostic group, investigation undertaken and treatment received. MIU activity mainly relates to the more minor conditions in particular the removal of foreign bodies and minor injuries. The coding is not always well defined which means there is a significant amount of diagnostic activity coded as ‘Ophthalmological conditions’ without any further clarity (see table 8.14). Likewise, the breakdown of Investigations (Table 8.15) shows most as ‘Other’. To support interpretation, it would be reasonable to assume that if a specific investigation was not recorded, then it was not carried out and therefore could be inferred that this was a simple examination of the eye. This is supported by the fact that 28% of patients received only guidance and advice. 34% of patients were given eye drops so if more information is required there may be opportunities to look at prescribing data.

Figure 8.14 DCHS MIU Ophthalmic activity by Diagnostic Group -2017/18

Diagnosis Group	Total	Cost	Activity %
Ophthalmological conditions	1,465	£95,579	42%
Foreign body in Eye	605	£39,532	17%
Contusion/abrasion	516	£33,550	15%
Local infection	350	£22,822	10%
Diagnosis not classifiable - Eye	206	£13,459	6%
Laceration	88	£5,787	2%
Allergy	75	£4,876	2%
Nothing abnormal detected	60	£3,901	2%
Soft tissue inflammation	54	£3,576	2%
Burns & Scalds	37	£2,406	1%
Bites/Stings	14	£910	0%
ENT conditions - Eye	14	£910	0%
Other	10	£650	0%
Head injury including Eye	10	£650	0%
Dermatological conditions	9	£585	0%
Infectious disease	8	£520	0%
Facio-maxillary conditions - Eye	<5	£195	*
Closed fracture - Eye	<5	£65	*
Total	3,525	£229,974	

Figure 8.15 DCHS MIU Ophthalmic activity by Investigation Undertaken - 2017/18

Investigation	Total	Cost	Activity %
Other	2,314	£150,975	66%
Refraction, orthoptic tests and computerised visual fields	977	£63,654	28%
None	225	£14,759	6%
Urinalysis	<5	£260	*
X-ray plain film	<5	£130	*
Electrocardiogram	<5	£130	*
Pregnancy test	<5	£65	*
Total	3,525	£229,974	

Figure 8.16 DCHS MIU Ophthalmic activity by Treatment Received - 2017/18

Treatment	Total	Cost	Activity %
Medication administered - eye drops	1,212	£78,869	34%
Guidance/advice only - verbal	994	£65,150	28%
Prescription/medicines prepared to take away	582	£37,906	17%
Removal foreign body	218	£14,174	6%
Recording vital signs	146	£9,493	4%
Guidance/advice only - written	98	£6,437	3%
Medication administered - oral	78	£5,072	2%
Observation/electrocardiogram, pulse oximetry/head injury/trends	59	£3,836	2%
Wound cleaning	30	£1,951	1%
Anaesthesia - local anaesthetic	28	£1,821	1%
Other	80	£5,267	2%
Total	3,525	£229,974	

8.8 NHS Right care data

NHS Right Care have produced data packs for Vision. These describe spend on prescribing, completion of referral to treatment pathways, admissions data, waiting times and expenditure. The data packs were produced for the 4 Derbyshire CCGs, benchmarking each of them against their peers and highlighting the potential opportunities for further investigation and improvement. The findings are tabulated on the following page and show the following:

- Primary care spending is higher across all CCGs when they are compared with their peers, it should be noted however that increased spending in prescribing is not necessarily negative as it could be preventing spending further downstream.
- The greatest opportunity for improvement across all domains is with the North Derbyshire CCG area.
- There is a higher spend on outpatients attendances and procedures in Southern Derbyshire CCG area than would be expected.

It is recommended that the variation within the Right Care data be explored further, especially to understand the variation between North Derbyshire CCG and other areas.

Figure 8.17 Key outcome measures from NHS RightCare

Measure (2016/17)	Erewash		Hardwick		N. Derbyshire		S. Derbyshire		England	
	value	opportunity	value	opportunity	value	opportunity	value	opportunity		
Primary Care prescribing, Spend per ASTRO-PU weighted population	Anti-infective eye preparations	96	-	127	-	141	-	116	-	180
	Corticosteroids and other anti-inflammatory preparations	146	-	156	£3k	166	£2k	162	-	197
	Mydriatics and cycloplegics	47	-	143	£10k	69	£8k	55	£3k	58
	Treatment of glaucoma	1527	£18k	1914	£20k	1845	£126k	1709	£49k	1601
	Misc ophthalmic preparations	357	-	579	£24k	482	£25k	463	£49k	476
Referral to treatment pathway, % within 18 weeks	For admitted patients	84.3	-	67.6	141 px	71.5	424 px	75.2	348 px	78.1
	For non-admitted patients	97	-	92.3	32 px	94.3	125px	95.8	-	91.7
Inpatient admissions per 1,000 age-sex weighted population	Total spend on discharges	6675	-	6678	-	7109	-	5888	-	8369
	Elective spend on discharges	6173	-	6121	-	6513	-	5561	-	7786
	Non-elective spend on discharges	503	-	562	-	606	£32k	324	-	603
Inpatient admissions per 100,000 age-sex weighted population	Total admissions	884	-	791	-	928	145 admissions	728	-	1131
	Elective admissions	846	-	751	-	878	113 admissions	701	-	1084
	Non-elective admissions	38	-	40	-	53	41 admissions	27	-	47
Cataract Surgery	Average wait in days for inpatient Cataract surgery	54	-	88	19 days per patient	81	28 days per patient	34	-	69
Programme Budgeting: Expenditure per 1,000 overall weighted population	Outpatient attendances related to problems of vision	2189	-	3206	-	7668	£863k	21925	£1,996k	7674
	Outpatient procedures related to problems of vision	1400	-	1708	-	3201	-	17411	£1749k	5127
	Unbundled drugs & devices (excluded from Payment by Results tariff) for vision problems	1578	-	2412	-	6944	774k	20605	£2478k	6262

8.9 Population projections and service use

It is difficult to project the impact of increasing prevalence of Eye Health conditions on service use as service use is driven by a number of different factors in addition to prevalence e.g. demand, service capacity, and policies defining eligibility criteria.

Based on the data in section 7.3, if all other factors remained constant the multiplier for prevalence for each of the 4 serious eye conditions between 2016 and 2022 is as follows:

Figure 8.18 Prevalence multipliers for serious eye conditions

Condition	Derby	Derbyshire
Late stage wet AMD (all ages)	1.15	1.28
Glaucoma (30+ years)	1.06	1.05
Surgical Cataracts (all ages)	1.19	1.25
Diabetic Retinopathy (all ages)	1.04	1.03

8.10 Potential inequalities in service use

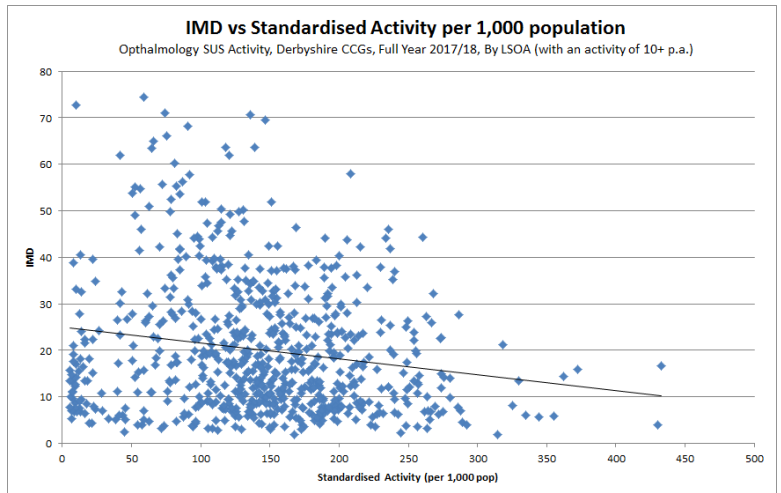
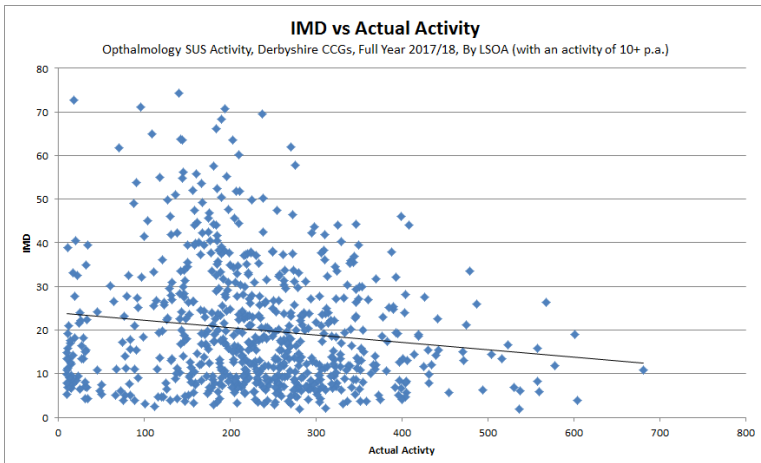
The inverse care law was suggested thirty years ago by Julian Tudor Hart in a paper for The Lancet, to describe a perverse relationship between the need for health care and its actual utilisation: that those who most need medical care are least likely to receive it. Conversely, those with the least need for health care tend to use health services more (and more effectively)¹⁵. It is therefore important to consider whether use of services is likely to reflect underlying need (as opposed to demand).

It has been outlined above that there is likely to be a correlation between need and deprivation. Many of the risk factors for serious eye conditions (see section 5) are experienced disproportionately by people living in deprivation, and it is therefore likely that serious eye conditions are distributed in the same way.

Analysis has been undertaken to understand whether there is a correlation between deprivation and ophthalmology service use – the findings are inconclusive. The following 2 graphs show that there is a weak, negative correlation between IMD and actual activity, which is statistically significant ($r = -0.126$, $p < 0.01$). The correlation between IMD and standardised activity is also weak, negative and statistically significant ($r = -0.153$, $p < 0.001$).

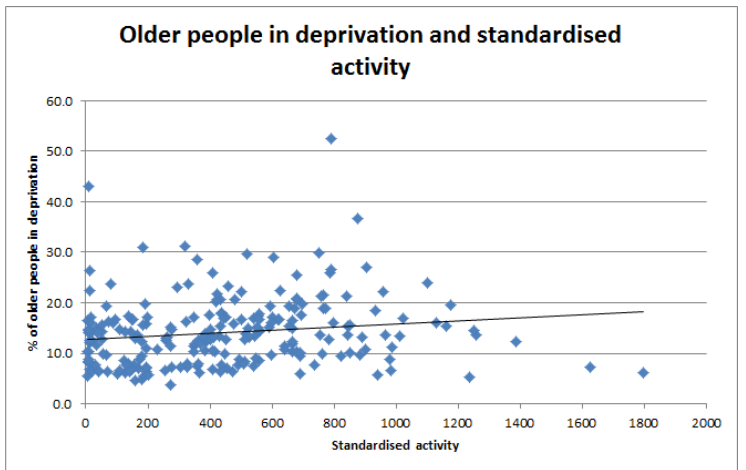
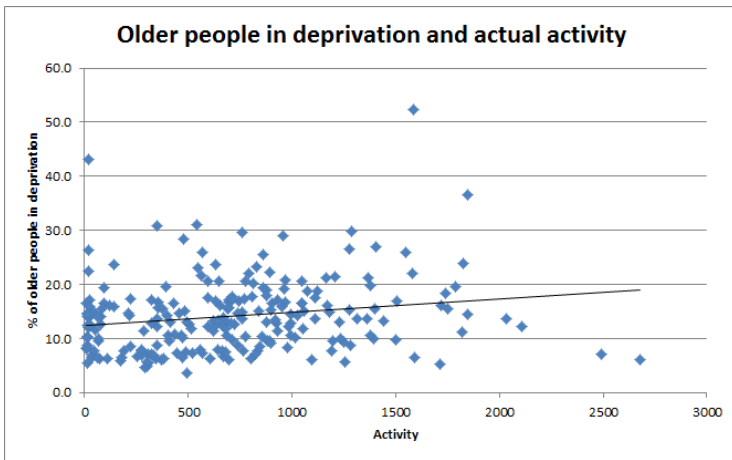
¹⁵ Tudor Hart, J. (1971) The inverse care law, The Lancet 297 (7696) p405-412

Figure 8.19 Ophthalmology activity correlated with IMD



When the comparator is changed from IMD to older people living in deprivation the correlation reverses: there is now a weak, positive, statistically significant correlation between older people in deprivation and activity ($r = 0.23, p < 0.01$); and older people in deprivation and standardised activity ($r = 0.22, p < 0.01$). This is shown in the charts below:

Figure 8.20 Ophthalmology activity correlated with older people in deprivation



The weak correlation indicates that there are a range of variables contributing to the activity levels, likely to include the number of older people in a given area, referral practice of primary care, distance from care provider etc. Given that it is difficult to demonstrate the inverse care law, it is still recommended that it is assumed to exist and actions are taken to promote the uptake of prevention activity and service use in more deprived areas.

9. Service User Feedback

Between June and September 2018, Healthwatch surveyed 62 people who had been diagnosed with cataracts within the past two years. The survey collected feedback about each step of the pathway, including cataract development, surgery and aftercare.

The key themes that emerged from the survey were as follows:

- The majority of people were very happy with their treatment
- The quality of information and guidance had a significant impact on patient experience
- Some people said that they were not offered enough information about the impact of cataracts upon their ability/fitness to drive
- Some felt they had not been involved in decision making regarding treatment
- Some raised issues around aftercare e.g. problems administering eye drops and others said that no aftercare or follow up was offered to them
- Some were concerned because they have been told that the NHS only offer cataract surgery in one eye.

Healthwatch Derbyshire makes the following recommendations:

- Patients, and their relatives and carers, should be given clear, accessible and accurate information about cataracts both orally and in written form upon initial diagnosis.
- Practitioners should make sure patients are aware of DVLA guidelines, advice as to fitness to drive and make sure that this information is updated as a patients sight changes.
- NICE guidance should be followed to ensure a person centred approach and an appropriate degree of choice over their treatment for cataracts.
- Patients should be given information about the post-operative care.
- Practitioners should ensure that NICE guidelines for post-operative assessment are followed.
- Patients with additional support needs should be identified and action undertaken to ensure effective post-operative care.
- Practitioners to ensure that offers of second eye surgery are made using the same criteria as the first eye.
- In line with NICE guidance, there should not be higher thresholds for second eye surgery than the first eye.

10. Policy influences

Demand for and supply of services is also influenced by policy. The table below lists the relevant policy guidance related to Ophthalmology as identified by the Royal College of Ophthalmologists (RCO). There are 2 key potential areas for change: a revised NICE Quality Standard for Serious Eye Conditions and the use of Avastin for Wet AMD, which are discussed in the following sections.

Figure 10.1 Policy review

Guidance	Date published	Position at October 2018
National Institute for Health and Care Excellence (NICE)		
Cataracts in adults: management NG77	October 2017	No scheduled update
Macular degeneration NG82	January 2018	No scheduled update
Diabetic macular oedema (DMO) TA346 and TA349	July 2015	Reviewed in July 2018 and remains unchanged. No scheduled update
Retinal vein occlusion (RVO) TA229 and TA283	January 2015	No scheduled update
Glaucoma diagnosis and management NG81	November 2017	No scheduled update
Glaucoma in adults QS7	November 2017	Currently under consultation and will be reissued in February 2019, as Serious Eye Disorders QS to also include additional eye disorders: cataracts, AMD and support for people with vision impairment
Clinical Council for Eye Health Commissioning (CCEHC), The Royal College of Ophthalmologists, College of Optometrists		
Commissioning guidelines for cataract	January 2018	To be reviewed Oct 2020
Commissioning guidelines for glaucoma	January 2016	Stated review date Jan 18
Commissioning framework for community ophthalmology	July 2015	Stated review date July 17
Commissioning framework for primary care ophthalmology	June 2016	Stated review date July 2018
Commissioning framework for low vision, habilitation and rehabilitation	June 2017	To be reviewed July 2019
The Royal College of Ophthalmologists ophthalmic service guidance		
Eye care services for adult with learning disabilities	Sept 2015	Stated review date Sept 2018
Emergency eye care in hospital eye units and secondary care	August 2017	No scheduled update
Ophthalmic theatre facilities, ophthalmic theatre processes	February 2018	February 2021
Standards for virtual clinics in glaucoma care	November 2016	November 2019

Standards for intravitreal injections	August 2018	February 2021
The Royal College of Ophthalmologists service quality standards		
Quality Standard for adnexal services	Not given	Not given
Quality standards for urgent and emergency eye care	July 2017	July 2019
Quality Standard for cataract services	Not given	Not given
Quality Standards for cornea services	Not given	Not given
Quality Standard for glaucoma services	Not given	Not given
Quality Standard for medical retina disease services	Not given	Not given
Quality Standard for neuro-ophthalmology services	Not given	Not given
Quality Standard for vitreoretinal services	Not given	Not given
Quality Standards for diabetic retinopathy services	Not given	Not given
Quality Standards for services to patients with learning disabilities	April 2014	No scheduled update
Quality Standards for ophthalmic care and services for children and young people	July 2013	Stated review date July 2015
Quality standard for people with sight loss and dementia in an ophthalmology department	December 2015	December 2018
The Royal College of Ophthalmologists clinical guidelines		
Hydroxychloroquine and chloroquine retinopathy screening	February 2018	February 2021
Serum Eye Drops Guideline	September 2017	September 2020
Referral pathways for adult ocular tumours	June 2017	2020
Retinal vein occlusion	July 2015	No scheduled update
Diabetic retinopathy guidelines	July 2013	No scheduled update

10.1 Serious Eye Disorders Quality Standard (NICE)¹⁶.

This Quality Standard is currently under consultation and is expected to be issued in February 2019. The proposed Quality Statements within the guidance are as follows:

1. *Adults with cataracts are not refused surgery based on visual acuity alone.*

The rationale for this statement is that discussions regarding surgery should also include the effects of cataracts on the patient's daily life and the impacts of surgery. This could potentially increase demand for cataract surgery.

2. *Adults have case-finding tests in primary care before referral for further investigation and diagnosis of chronic open angle glaucoma (COAG) and related conditions.*

¹⁶ <https://www.nice.org.uk/guidance/indevelopment/gid-qs10058/documents>

The rationale is that this will improve accuracy in referrals, enabling prompt diagnosis and treatment, and reducing patient anxiety caused by unnecessary referral. This could decrease demand for secondary care treatment for COAG and reduce waiting times.

3. *Adults with late age-related macular degeneration (AMD) (wet active) start treatment within 14 days of referral to the macular service.*

The rationale is that it is important to reduce unnecessary delay for treatment in order to preserve the patient's vision. The service impact will depend on current referral times.

4. *Adults with late age-related macular degeneration (AMD) (wet active) have ongoing monitoring for both eyes.*

This is to ensure optimum treatment for patients. The service impact depends on current practice.

5. *Adults with chronic open angle glaucoma (COAG) and related conditions have reassessment at specific intervals.*

This is to ensure optimum treatment for patients. The service impact depends on current practice.

6. *Adults with age-related macular degeneration (AMD) or chronic open angle glaucoma (COAG) are given a certificate of vision impairment (CVI) as soon as they are eligible.*

This is to enable access to services and support as soon as possible – without waiting for completion of treatment. It is intended to improve patient quality of life. Impact is likely to be on wider services e.g. Local Authority rather than NHS.

10.2 The use of Avastin for Wet AMD

An intravitreal anti-vascular endothelial growth factor (anti-VEGF), such as aflibercept, ranibizumab, or bevacizumab [unlicensed use], is first-line treatment for patients with wet-active age-related macular degeneration who have a visual acuity between 6/12 and 6/96¹⁷. The use of bevacizumab (Avastin) in this case was challenged in the High Court by the manufacturers of aflibercept and ranibizumab, however this was unsuccessful (Sept 2018)¹⁸.

Avastin is significantly cheaper than the other 2 treatments and could present significant savings for the NHS^{19, 20}.

¹⁷ <https://bnf.nice.org.uk/treatment-summary/age-related-macular-degeneration.html>

¹⁸ <https://www.rcophth.ac.uk/2018/09/the-royal-college-of-ophthalmologists-is-delighted-that-the-high-court-has-found-in-favour-of-the-use-of-avastin-for-wet-amd/>

¹⁹ <https://www.nature.com/articles/eye2016154>

²⁰ Aflibercept £816 per injection, ranizumab £551 per injection, bevacizumab £12.13 per injection (based on dividing the cost of a 100 mg vial (£242.66) by 20. All plus VAT. <https://www.nature.com/articles/eye2016154> and <https://bnf.nice.org.uk>