Kent and Medway Local Eye Health Network

Kent and Medway Eye Health Needs Assessment

September 2014

Authors' Note

This HNA builds upon the work previously carried out in 2012 and 2014 regarding sensory impairment initially for the Kent population and has applied changes and additions as a result of updated knowledge and data.

This assessment acknowledges the fact that there are several prevalence models relating to the burden of ophthalmic disease and cites these models wherever they are used. These models relate to national data and highlight the fact that currently there is little known or in the public domain about locality prevalence and incidence rates in Kent and Medway. This needs to be addressed. For the most part data is based upon Unitary, County, City or District areas. Future iterations will be based upon CCGs.

The main changes/additions in this iteration relate to:-

- An executive summary
- Kent and Medway demographic profile
- Risk stratification
- Deprivation
- The Public Health Outcomes Framework
- Care pathways
- Diabetic Eye Screening Service
- Hospital Consultant Episodes (Ophthalmology)
- General Ophthalmic Services

During this review a Kent and Medway Eye Health Professional Network was set up by the NHS England Area Team with Dr Deacon Harle as Chair to inform that team, Kent and Medway Commissioners, providers and other stakeholders. The work of this group, as well as that from other key stakeholders is on-going, and will act as sources for future enhancements to relevant Needs Assessments

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Executive Summary

Introduction

This Health Needs Assessment (HNA) focuses upon identifying the needs of those in the community with an eye health need, and covers those who live in the administrative areas of Kent and Medway. This Assessment was commissioned jointly by the Kent County Council Adult Social Services Directorate, the Kent County Council Public Health Directorate (both in part) and the Kent and Medway Local Eye Health Network and is the first needs assessment undertaken in this format. It therefore serves as a reference point for future service development.

Methods

The study was carried out using the three main methods of epidemiological, corporate and comparative needs assessment.

The epidemiological needs assessment consisted of a qualitative analysis of the results from the application of the National Eye Health Epidemiological Model (NEHEM), the Projecting Older People Population Information System (POPPI), Projecting Adult Needs and Services Information (PANSI), and other data modelling bases. There was also a literature review for evidence of effectiveness.

The corporate (qualitative) assessment consisted of a narrative of historic engagement by Kent County Council services with some key stakeholders in the public and voluntary sectors as well as the acute sector and other service providers.

The comparative needs assessment compared existing and evidenced based morbidity of the Kent and Medway populations against the English and other relevant populations.

Results

Kent's population is forecast to rise over the next 20 years by some 14% and of this increase there will be a significant proportion of people over 75 years of age. This has implications for some localities particularly East Kent districts and Maidstone where this proportion will be greater. This also has implications for increased sensory impairment prevalence unless robust prevention strategies are followed. Patients with learning disabilities and diabetes have a greater risk of ophthalmic morbidity.

Currently estimates based upon the National Eye Health Epidemiological Model (NEHEM) show a prevalence of those with glaucoma exceeding 12,600, and a similar figure for those with cataracts. Figures for age-related macular degeneration (AMD), is some 12,000 people. The data suggests that this figure for AMD comprises NV-AMD (8,400), geographic atrophy (4,200) whilst Drusen cases (a pre AMD condition) comprise 53,500 patients.

The HNA also cites the key impacts upon the quality of life and emotional outcomes as well as a summary of policies, standards, guidance, good practice and research.

There is now greatly improved joint working between key stakeholders and this needs to be widened to include other partners within the NHS family and other agencies particularly the acute sector and Clinical Commissioning Groups (CCGs). The Kent and Medway Local Eye Health Network will be instrumental in this.

Gaps have been identified between baseline services and the needs identified through the health needs assessment. In policy terms the outcome of this needs assessment will be the development of a joint commissioning strategy and plan. This will include a detailed action plan which will provide a framework to implement the recommendations listed below:-

- Ensure the impact and burden of glaucoma care is managed with appropriate use of step down care to primary care practitioners / optometrists. Ensure equitable consistent and timely access to care for glaucoma.

- Ensure the burden of age-related macular degeneration care is managed with appropriate use of step down care to primary care practitioners / optometrists. Ensure equitable consistent and timely access to care for macular degeneration care.

- Ensure the burden to the health economy is minimized when commissioning services for age-related macular degeneration by using safe and effective therapies.

- Ensure equitable consistent and timely access to care for cataract services with primary care practitioners / optometrists for pre and post-operative assessments.

- Ensure consideration of sight impairment issues and services in Department of Health (DH) Long Terms Condition Agenda, including risk stratification and integrated health and social care teams.

- As part of any Sensory Public Health Improvement Strategies carry out health promotion campaigns aimed at raising people's awareness of the need for regular sight tests, targeted particularly at risk groups.

- Improve the provision of information on services and support available, ensuring it is available at key locations and is available in accessible formats.

- Develop and implement clearer pathways for accessing services and improve processes for joined up assessment and delivery of services. e.g., Eye Clinic Liaison Officer posts.

- Carry out sensory impairment awareness training of health and social care staff to help identify individuals with sight impairment and refer on to appropriate services.

- Transform services by developing new ways of working e.g. clinic approach for equipment assessment and provision to achieve efficiencies and meet increasing demand.

- Establish an on-going basis self-management and peer support programmes for vision impaired people.

- Continue to develop personalised services for vision impaired people, maximising opportunities for choice and control.

- Ensure vision impaired people benefit from the opportunities to be gained from new technologies including Telecare and communication aids.

- Ensure the development of appropriate health and social care services meet the specific eye health needs of people with learning disabilities.

- Ensure the development of appropriate emotional support and mental health services for vision impaired people at the point of diagnosis.

- Ensure effective joint working between Health and Social Care services for vision impaired people.

- Ensure an effective low vision service for sight impaired adults and children.

- Establish child centred clinics, with a multi-disciplinary approach facilitating access to a range of services.

- Develop consistent and equitable vision screening for children.

- Further work to be carried out on locality prevalence rates, service mapping, current levels of activity, pathways and the identification of additional unmet needs and gaps in services.

- Wider engagement with service users and other stakeholders.

- Development of a Vision Commissioning Strategy and Implementation Plan.

- Closer working with the Falls Service to better understand the impact that vision impairment has upon falls prevalence.

- Health and Social Care partners to support any current plan(s) developed by the diabetic eye screening service Commissioners and Providers so as to reduce DNA rates.

1. INTRODUCTION

What is the Eye Health Needs Assessment?

This is a needs assessment of people with eye health needs living within Kent and Medway, developed by Kent County Council, and the former PCTs of NHS West Kent, and Eastern and Coastal Kent as well as the Kent and Medway Local Eye Health Network. The needs assessment is a way of estimating the extent and nature of the needs of a population so that appropriate and timely support can be planned accordingly.

This needs assessment looks at prevalence of eye health needs, vision impairment, the impact this has on people's lives and health and what sight impaired people tell us are their priorities.

This information will be used to inform future commissioning of services within Kent and Medway.

Who the Needs Assessment is about?

It should be noted that nationally, there are conflicting statistics on the prevalence of vision impairment. This is due to the following issues:

- Differing criteria used to classify a person as vision impaired.
- Differing methods of surveys; some are self-reporting. questionnaires whilst others are face-to-face examinations.
- Low response rates for surveys.
- Lack of consistency in the results.

1.3 Models of Disability

There are 2 main models of disability: the **Medical Model** and the **Social Model**.

The **Medical Model**

Under the Medical Model, disabled people are defined by their illness or medical condition. The Medical Model regards disability as an individual problem. It promotes the view of a disabled person as dependent and needing to be cured or cared for, and justifies the way in which disabled people have been systematically excluded from society. The disabled person is the problem, not society. Control resides firmly with professionals; choices for the individual are limited to the options provided and approved by the 'helping' expert.

The Medical Model is best summarised by referring to the International Classification of Impairments, Disabilities and Handicaps developed by the World Health Organisation in 1980. The classification makes the following distinctions:

Impairment is 'any loss or abnormality of psychological, physiological or anatomical structure or function'.

Disability is ‘any restriction or lack of ability (resulting from an impairment) to perform an activity in the manner or within the range considered normal for a human being’.

People with disabilities have generally rejected this model. They say it has led to their low self-esteem, undeveloped life skills, poor education and consequent high unemployment levels. Above all, they have recognised that the Medical Model requires the breaking of natural relationships with their families, communities and society as a whole.

The **Social Model**

During the 1960’s and 1970’s newly formed groups of disabled people started to challenge the way in which they were treated and regarded within society. Alternative definitions of impairment and disability were developed and formed the basis of what is known as the Social Model.

Impairment is the functional limitation within the individual caused by physical, mental or sensory impairment.

Disability is the loss or limitation of opportunities to take part in the normal life of the community on an equal level with others due to physical and social barriers (Barnes, 1994:2).

Disability is no longer seen as an individual problem but as a social issue caused by policies, practices, attitudes and/or the environment. For example, a wheelchair user may have a physical impairment but it is the absence of a ramp that prevents them from accessing a building. In other words, the disabling factor is the inaccessible environment.

The disabled people’s movement believes the 'cure' to the problem of disability lies in the restructuring of society. Unlike medically based 'cures' that focus on individuals and their impairment, this is an achievable goal and to the benefit of everyone. This approach suggests that disabled people's individual and collective disadvantage is due to a complex form of institutional discrimination and is as fundamental to our society as sexism, racism or homophobia.

The Medical Model vs. the Social Model

Medical Model	**Social Model**
Disability is a ‘personal tragedy’	Disability is the experience of social oppression
Disability is a personal problem	Disability is a social problem
Medicalisation is the ‘cure’	Self-help groups and systems benefit disabled people enormously
Professional dominance	Individual and collective responsibility
Expertise is held by the (qualified) professionals	Expertise is the experience of disabled people
The disabled person must adjust	The disabled person should receive affirmation
‘The Disabled’ have an individual	Disabled people have a collective identity

identity	
Disabled people need care	Disabled people need rights
Professionals are in control	Disabled people should make their own choices
Disability is a policy issue	Disability is a political issue
Individual adaptations	Social change

1.4 Risk Stratification and Vision Impairment

Over the last 18 months, the Kent County Council Public Health team has been supporting the 8 Kent and Medway Clinical Commissioning Groups (CCGs) to programme manage the rollout of the Long Term Conditions Model of Care, under the Department of Health led Quality Improvement, Productivity & Prevention agenda.

The main objective was to design and develop a baseline profile of population utilisation of health and social care services for commissioners, with special emphasis on the impact of multiple morbidities.

The work involved information and intelligence teams from various organisations, starting with the risk stratification of a historical Kent & Medway population list, using the locally developed tool based on the King's Fund model using hospital data. Datasets from all other services such as community health, mental health, social care, primary care and continuing health care were linked via pseudonymisation of NHS numbers which was the common patient identifier.

Results have been described as a longitudinal baseline analysis of over a 3 year period, describing activity and spend the years before, during and after 'crisis'. They show a Pareto distribution between the different risk stratified cohorts and how activity and spend varied across different services. For example, the top 0.5% of the population classified as the very high risk represented 20% of total unscheduled hospital admission spend. Ninety per cent of all deaths were found in the top 20% at risk population. Analysis of social care and continuing health care service utilization data revealed relatively much higher average per capita spend in the low risk band possibly explained by higher prevalence of patients with long term care needs such as learning, physical and sensory disabilities and impairments. Further analysis is required to understand variation in use of some services at CCG level such as community beds.

This approach has substantially contributed to the necessary evidence base and strategic planning of the local health and social care integration programme, and the cornerstone for the Kent and Medway CCGs' transformational plans over the next 3 to 5 years. Planned financial savings can now be robustly estimated and realised; to support the phased investment of the national model of care on the top 5% risk stratified population alongside disinvestment of hospital and long term care.

It is proposed to ensure that relevant health and social care data relating to vision impairment is included in this work to both give added value and to better understand the impact of these types of vision impairment on multiple morbidities/long term conditions.

KENT & MEDWAY POPULATION – KEY STATISTICS

This section highlights some key statistics relating to the population of the Kent County Council Area [KCC], and Medway. Figures are based on the Mid-Year Population Estimate 2011

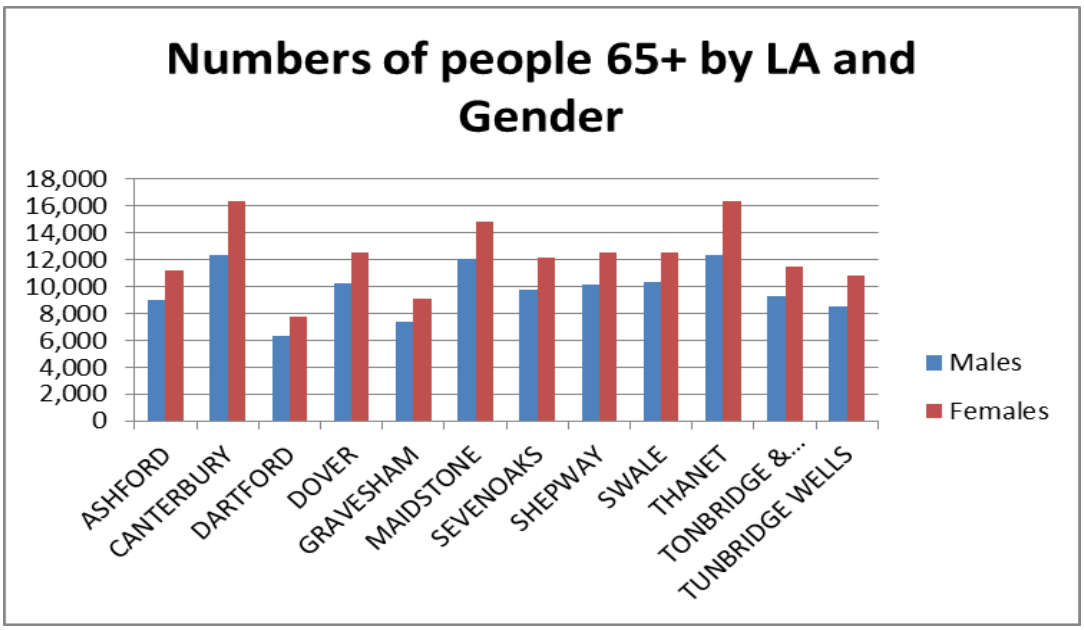
Table 1: Total Population for KCC and Medway Areas by Area and Age

Males						
Name	**ALL AGES**	**0-4**	**5-14**	**15-24**	**25-64**	**65+**
ASHFORD	57,441	3,901	7,756	7,126	29,649	9,009
CANTERBURY	72,565	3,853	8,205	14,275	33,866	12,366
DARTFORD	48,187	3,382	6,107	6,069	26,309	6,320
DOVER	54,780	3,200	6,322	6,667	28,343	10,248
GRAVESHAM	50,180	3,401	6,630	6,624	26,164	7,361
MAIDSTONE	76,868	5,001	9,386	9,419	41,052	12,010
SEVENOAKS	55,975	3,631	7,058	6,162	29,349	9,775
SHEPWAY	53,287	2,999	6,190	6,633	27,304	10,161
SWALE	67,418	4,549	8,584	8,560	35,357	10,368
THANET	64,652	4,201	8,287	8,245	31,607	12,312
TONBRIDGE & MALLING	59,318	3,960	8,022	7,187	30,906	9,243
TUNBRIDGE WELLS	56,563	3,729	7,302	6,405	30,626	8,501
KENT COUNTY	717,234	45,807	89,849	93,372	370,532	117,674
MEDWAY	131,368	8,819	16,739	19,625	69,435	16,750

Females						
Name	**ALL AGES**	**0-4**	**5-14**	**15-24**	**25-64**	**65+**
ASHFORD	60,964	3,845	7,511	6,828	31,596	11,184
CANTERBURY	78,035	3,670	7,722	14,726	35,624	16,293
DARTFORD	49,417	3,402	5,770	6,143	26,360	7,742
DOVER	56,938	3,039	6,124	6,255	29,045	12,475
GRAVESHAM	51,586	3,262	6,117	6,583	26,546	9,078
MAIDSTONE	78,896	4,663	8,813	8,523	42,059	14,838
SEVENOAKS	59,376	3,413	6,954	6,094	30,797	12,118
SHEPWAY	54,912	2,977	5,711	6,187	27,487	12,550
SWALE	68,906	4,218	8,214	8,048	35,921	12,505
THANET	69,750	3,932	7,533	7,794	34,210	16,281
TONBRIDGE & MALLING	61,769	3,493	7,814	6,824	32,199	11,439
TUNBRIDGE WELLS	58,683	3,565	7,315	6,522	30,527	10,754
KENT COUNTY	749,232	43,479	85,598	90,527	382,371	147,257
MEDWAY	133,517	8,465	16,074	18,597	69,800	20,581

Source: ONS 2011 mid-year estimates

Table 2: Total Population over 65 for KCC Area by Area and Gender



Forecasts

Over the next twenty years the population of the Kent County Council (KCC) area is forecast to increase by an additional 197,700 people (+14.3%).

Kent's population is projected to grow at a faster rate than both the regional (+20%) and national average (+18%).

2.3 Table 2: Equalities Data

Gender

51.3% (731,870 people) of Kent residents were female and 48.7% (695,550) were male. In Medway 50.4% (133,517 people) are female and 49.6% (131,368 people) male.

There is no official estimate of the Transgender population. It is estimated the number of people in the UK who have experienced some degree of gender variance to be between 0.6% and 1% of the adult population. For the KCC area, this translates to approximately 6,687 to 11,145 people.

Ethnicity

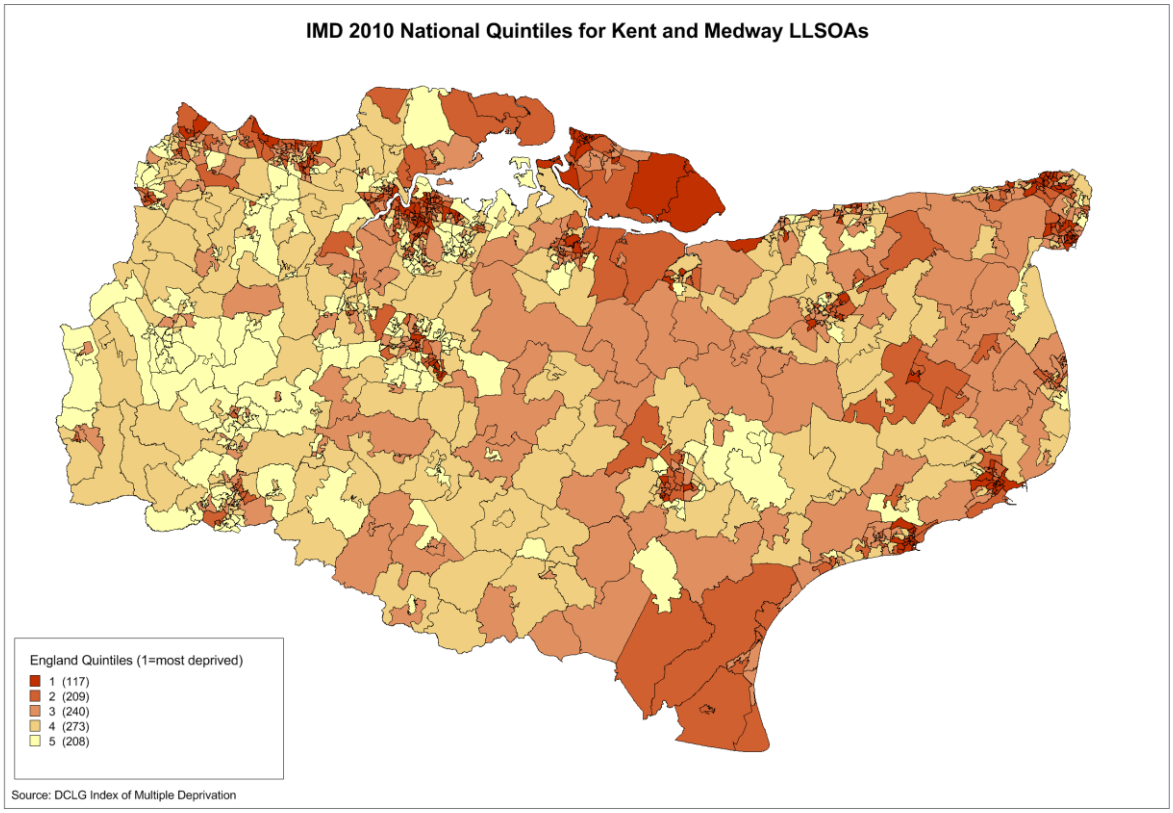
People of Indian origin represent the largest single BME group in Kent at 1.4% of the population in 2007. In all age bands Indian and Asian ethnicity is the largest group in Medway. Of the BME groups, the Pakistani population increased the greatest within the KCC area, in percentage terms, between 2006 and 2007.

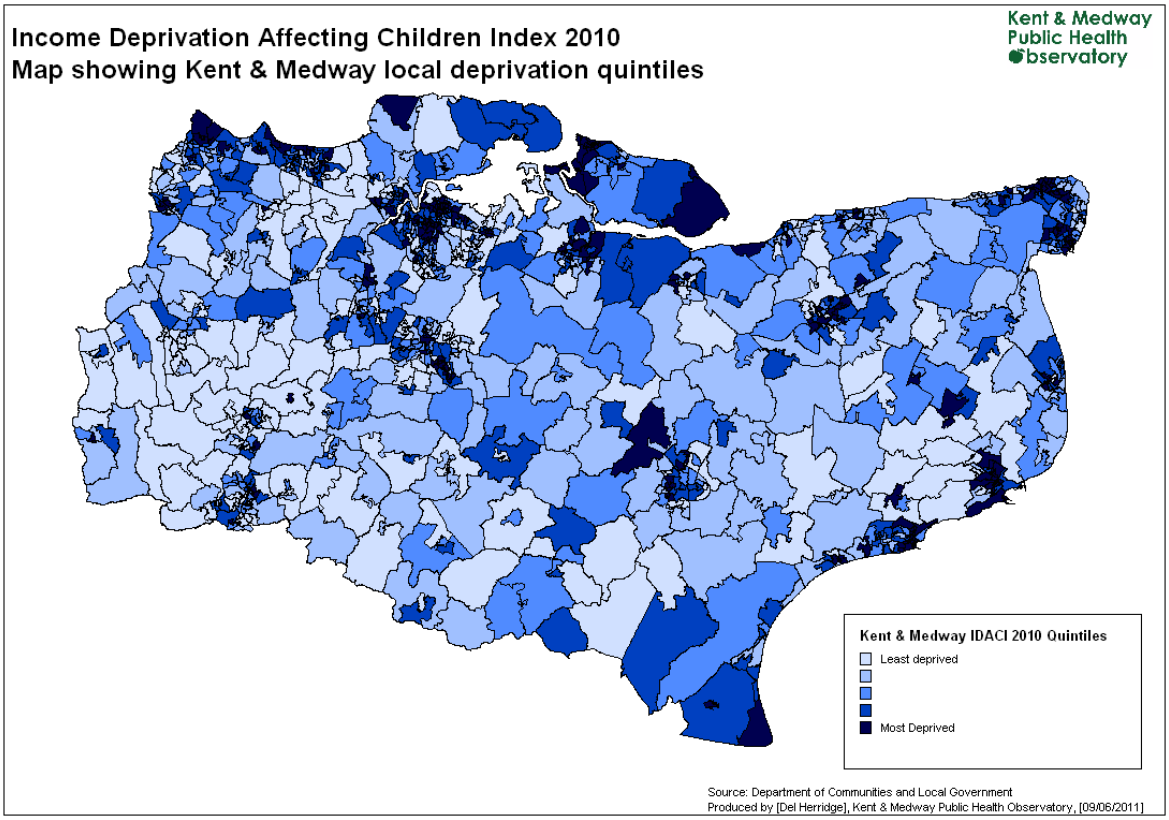
Lesbian, gay, bisexual (LGB)

The Government estimates that between 5% and 7% of the population are LGB. This suggests that there are between 55,726 and 78,016 lesbian, gay or bisexual adults in the KCC area and between 13,244 and 18,542 in the Medway area.

Deprivation

The east of the county of Kent has higher levels of deprivation than the west and there is significant deprivation in the Medway
towns





SIGHT IMPAIRMENT

3.1 Definitions

This section explores the needs of those with sight impairment. In collecting data for this needs assessment, it has become clear that different sources use different definitions for sight impairment and its varying degrees of severity. This has proved problematic in comparing data and where this has been the case, notes have been included with graphs to highlight the definitions used, as it was not possible to use one single definition throughout.

The term sight impairment refers to someone who is blind or partially sighted as fitting the definitions below. It does not refer to someone who has a refractive error.

Partial sightedness
The World Health Organization (WHO) defines partial sightedness as where a person cannot clearly see how many fingers are being held up at a distance of 6m (19 feet) or less, even when they are wearing glasses or contact lenses.

Blindness
WHO defines blindness as severe sight loss, where a person is unable to see clearly how many fingers are being held up at a distance of 3m (9.8 feet) or less, even when they are wearing glasses or contact lenses. However, someone who is blind may still have some degree of vision.

In addition there are specific terms which are used to describe the level of sight impairment. In all cases visual acuity is measured with both eyes open and where appropriate with vision corrected by glasses or contact lenses.

Mild visual impairment

- Visual acuity tested as better than 6/18 with Snellen/Kay Charts or better than 0.50 with LogMAR Charts.
- Mild field loss e.g. the peripheral loss in the early stages of Retinitis Pigmentosa.

Moderate visual impairment

- Visual acuity tested as within the range 6/18 and 6/30 with Snellen/Kay Charts or between 0.5 and 0.7 with LogMAR Charts.
- Reduced field of view e.g. tunnel vision with 90^{o} of vision or homonymous or bitemporal hemianopia.
- Possible registration as sight impaired.

Severe visual impairment

- Visual acuity tested as within the range 6/36 and 4/60 with Snellen/Kay Charts or between 0.8 and 1.20 with LogMAR Charts.
- Severe field loss e.g. 20^{o} visual field or severe tunnel vision.
- Severe loss of central field of view as reflected in the visual acuity.
- Possible registration as sight impaired.

Profound visual impairment

- Visual acuity tested as 3/60 or less with Snellen/Kay Charts or as 1.30 or poorer with LogMAR Charts.
- Profound field loss such as CYP with only 5^{o} visual field.
- Profound loss of central field of view as reflected by the visual acuity.
- Registration as severe sight impaired (blind).

3.2 Causes of Sight Impairment

This section presents a summary of some of the key cause of sight impairment and definitions of the leading causes of blindness.

3.2.1 Age–related Macular Degeneration (AMD)

Age-related Macular Degeneration is the leading cause of blindness in adults. The following definition is taken from the RNIB report Future Sight Loss UK 2: *An epidemiological and economic model for sight loss in the decade 2010 – 2020.*

AMD

This is a chronic, degenerative disease of the macula resulting in progressive damage to the light sensitive cells in the macula. This

leads to loss of central vision, which may be profound, obscuring all details, but peripheral vision (side vision) is unaffected. The disease affects mainly people 50 years or older.

From the RNIB epidemiological model, it was estimated that in 2010, 1,493,963 persons will have early stage of the disease in the UK. There are several different types of AMD as defined below:

Early Age-related Maculopathy (ARM)	Early ARM, also referred to as 'Early AMD', is defined as the presence of indistinct soft drusen (yellowish deposits under the retina) or soft drusen with pigmentary abnormalities present, but no signs of Neovascular AMD (see below) or of the later-stages of 'dry' AMD (Geographic atrophy) (see below), in line with the definition used by the Rotterdam Eye Study.
Neovascular AMD (NV-AMD)	This is the 'wet' form of advanced AMD, and occurs when new, abnormal blood vessels grow under the macula. These new vessels are fragile and prone to leakage which may displace and damage the macula, causing rapid loss of central vision. Left untreated, the damage may lead to scarring of the macula and irreversible loss of central vision.
Geographic Atrophy (GA-AMD)	This is the 'dry' form of late-stage AMD, with part or all of the macular undergoing scarring. The resulting impairment of vision is, at present, irreversible.

3.2.2 CATARACT

Cataracts are a very common eye condition. 2010 estimates show that prevalence of partial sight due to cataract is 206,224 and blindness to be 27,907.

Cataract
A lens that has turned misty, or cloudy, is said to have a cataract. As we get older the lens inside our eye gradually changes and becomes less transparent (clear). Over time, a cataract can get worse, gradually making your vision mistier.

In 2020, should this condition remain at this level in the population, it is estimated that 248,504 will be partially sighted, and 32,750 will be blind.

3.2.3 DIABETIC RETINOPATHY (DR)

The most serious complication of diabetes for the eye is the development of diabetic retinopathy. For 2010, more than 748,000 persons were expected to have early signs of DR and 85,484 will be classified as falling into more advanced stages. By 2020, this is expected to rise to more than 938,000 for

early signs (background retinopathy) and 107,218 for advanced (non proliferative and proliferative retinopathy).

Diabetic Retinopathy
Diabetic retinopathy (DR) is a complication of diabetes, occurring as a result of damage to the blood vessels of the retina, induced by diabetes. 40% of people with type 1 diabetes and 20% with type 2 diabetes will develop some sort of diabetic retinopathy.

It was estimated that in 2010, 40,982 persons were partially sighted from diabetic retinopathy and 24,976 will be blind. In 2020, 46,473 persons are expected to be partially sighted and an additional 29,957 to be blind.

3.2.4 GLAUCOMA

In this report, the term 'glaucoma' is used to indicate Primary Open-angle Glaucoma (POAG). POAG becomes much more common as we get older. It is uncommon below the age of 40 but this type of glaucoma affects 1% of people aged over 40. About 5% of people over the age of 65 have primary open angle glaucoma.

Primary Open-angle Glaucoma (POAG)
Primary open angle glaucoma (POAG) or chronic glaucoma is the most common type of glaucoma. As a chronic condition its effects occur slowly over time. In POAG, the drainage of the aqueous fluid from your eye doesn't happen as well as it should and this causes the pressure to rise. Your eye may seem perfectly normal and your eyesight will seem to be unchanged - because when the pressure starts to build up it doesn't cause you any pain - but your vision is still being damaged.

265,973 persons are estimated to have glaucoma in 2010 by 2020 this is projected to be 327,440.

57,646 persons in 2010 were estimated to be partially sighted from glaucoma and 17,511 will be blind (assuming that the level of detection of this disease in the population is at 50%). 71,806 persons are expected to be partially sighted by 2020, and 22,261 to be blind under the same assumption about detection.

3.2.5 TABLE 3: SUMMARY OF DIFFERENT TYPES OF SIGHT IMPAIRMENT

Type of Impairment	Example	Cause	Effect
Acuity	Objects look fuzzy and washed out	Cataracts, Nystagmus, Myopia	Loss of detail, sensitivity to glare, loss of depth perception
Peripheral field	Similar to looking down a tube or narrow tunnel	Glaucoma, Retinitis Pigmentosa	Difficulty in moving around, vision worse in low light
Central field	Objects looked at directly are hazy or missing, may appear distorted	Macular disease, some forms of Retinitis Pigmentosa	Difficulty with close work, e.g. reading, and in recognising faces etc.

Patchy or interrupted	Hazy or blind spots distributed across the visual field distort the view	Diabetic Retinopathy or other retinal damage	Difficulty with close work and in moving around, effects may not stay constant
Total, or light perception only	No image at all can be discriminated	Congenital, accident, progressive ocular disease	No useful sight, so alternative communication methods are needed

3.2.6 CAUSES OF SIGHT IMPAIRMENT – KEY MESSAGES

Tackling sight impairment means understanding and addressing the key causal conditions: macular eye disease, diabetic retinopathy cataract, glaucoma and refractive error.

A major challenge is to detect conditions early and to ensure these do not unnecessarily develop into irreversible sight impairment. There is also a need to reach out to those patients who would benefit from a correction of their refractive error, which would greatly enhance their safety and quality of life and help to reduce risks to themselves (e.g. falls – see below) and others (e.g. driving) (Bosanquet 2010).

A second major challenge is to manage the treatment of wet AMD in a cost effective manner. There is good evidence that more cost effective treatments than ranibizumab are equally safe and effective but place less of a financial burden on the health economy

3.3 Level of Need in the Population – Key National Statistics

3.3.1 It is important to understand that one fixed number or absolute estimate of the number of individuals who have some kind of sight impairment does not exist. Figures are all estimates based on population approximations and prevalence rates calculated through samples.

Some key statistics are that:

- approximately two million people in the UK have significant sight impairment (RNIB, 2005)
- every day, another 100 people in the UK start to lose their sight (based on average figure of people who register as severely sight impaired/ sight impaired in Britain, 2003)
- 70% of blind/partially sighted adults have other disabilities or long term health problems.

3.3.2 The Royal College of Ophthalmologists (RCOphth) estimate that in England and Wales, around 4.3 million people aged 65 and over have impaired vision (<6/12) in one or both eyes. Of these, 2.4 million have impaired vision in both eyes. 72% is remedial through surgery or refraction and dispensing of spectacles (RCOphth 2002).

3.3.3 A report by Access Economic (2009) found a total of 1.8 million people (both eyes) with partial sight (<6/12) and blindness in the UK in 2008.

Of these, 63.4% had mild sight impairment (largely due to refractive error); 24.5% had moderate sight impairment and 12.1% were considered blind. The report also projected an increase of 115% in the numbers to nearly four million people by 2050 (Access Economics 2009).

3.3.4 The total cost of sight loss in the UK has been estimated at £4.9 billion a year (Winyard, The costs of sight in the UK RNIB 2005).

3.3.5 NATIONAL STATISTICS – KEY MESSAGES

- The impact of eye disease, sight impairment and blindness increase exponentially with age (both for individuals and populations) half of which is preventable if caught early.
- Health outcomes of eye disease are significantly better if detected and treated early.
- Although all age groups can be affected, the main causes of sight impairment in the UK have a higher incidence among the over 65s.

3.4 Level of Need Across Diverse Groups

3.4.1 GENDER

The Health Survey for England 2001 found more women than men reported having sight impairment (3% women, 2% men).

3.4.2 ETHNICITY

There appears to be an almost complete absence of any prevalence estimates to identify whether there are differences for ethnic groups (Charles 2007). However evidence does show that some sections of the black and minority ethnic [BME] community are at a greater risk of some of the leading causes of sight impairment. (Future sight loss UK Report no 1). For example:

- The black population has a greater risk of developing AMD.
- The Asian population have a greater risk of developing cataracts.
- The Chinese population has a greater risk of developing refractive error than other populations.
- Type 2 Diabetes is six times more likely amongst South Asian communities, and 60% of people living with diabetes are likely to develop diabetic retinopathy.
- People from African and Caribbean origin are four times more likely to contract glaucoma and of presenting late when sight impairment is then irreversible.
- The proportional increase of sight impairment for African and Caribbean people with glaucoma up to 2020 is 57.37% for partial sight and 57.31% for blindness in comparison to 24.56% for partial sight and 27.12% for blindness for the population in general.

3.4.3 LEARNING DISABILITIES

Adults with learning disabilities are ten times more likely to be blind or partially sighted than the general population (Emerson and Robertson 2011). Up to 30% of people with learning disabilities may have significant impairment of sight, whilst 10% are blind or partially sighted (cited in Kent Learning Disabilities Joint Needs Assessment 2014).

The prevalence of sight impairment also increases with the severity of the learning disability and with age (Carvil cited in Northfield 2008).

However, people with learning disabilities may not know they have a sight problem and may not be able to tell people. Many people think the person with a learning disability they know can see perfectly well, however, six in ten people with learning disabilities need glasses and often need support to get used to them.

There are particularly high levels of sight problems in those with Down's syndrome and fragile X syndrome. Up to 60% of people with Down's syndrome have acquired cataracts. Mild to moderate sight impairment such as squints or long or short sightedness are common in people who have Down's syndrome. Such problems can worsen in later life but with the risk of under-diagnosis (Davies 2008).

People with learning disabilities are more likely to have serious sight problem than other people.

People with learning disabilities may not know they have a sight problem and may not be able to tell people. Many people think the person they know with a learning disability can see perfectly well.

6 in 10 people with learning disabilities need glasses and often need support to get used to them.

People with learning disabilities need to have a sight test every 2 years, sometimes more often. Regular sight tests and wearing glasses helps people stay healthy and get the most from life.

3.5 Level of Need in the Population – Kent & Medway Statistics

3.5.1 TABLE 4: ESTIMATES OF THE NUMBER OF GLAUCOMA AND CATARACT CASES PER KENT DISTRICT AND MEDWAY, TAKEN FROM THE NATIONAL EYE HEALTH EPIDEMIOLOGICAL MODEL (NEHEM), BASED UPON RELEVANT POPULATION SEGMENTS

	Mean estimated Glaucoma cases (adults 30+ years)	**Cataract cases (low estimate)[1](Adults 40+ years)**
Ashford	931 (1.42%)	922 (1.86%)
Canterbury	1,418 (1.70%)	1,536 (2.31%)
Dartford	699 (1.33%)	663 (1.75%)
Dover	1,068 (1.57%)	1,112 (2.08%)
Gravesham	818 (1.37%)	778 (1.74%)

[1] * NEHEM's lower estimate rate is taken from research undertaken by Frost et al (not cited) on patients in Somerset and Devon. See NEHEM website for greater detail.

Maidstone	1,234 (1.39%)	1,201 (1.77%)
Sevenoaks	1,046 (1.45%)	1,039 (1.84%)
Shepway	1,050 (1.65%)	1,122 (2.24%)
Swale	1,041 (1.36%)	1,002 (1.74%)
Thanet	1,466 (1.77%)	1,611 (2.42%)
Tonbridge and Malling	907 (1.32%)	860 (1.67%)
Tunbridge Wells	961 (1.45%)	974
Total Kent	12,639	12,820
Total Medway	1861 (1.25%)	1705 (1.58%)

3.5.2 TABLE 5: ESTIMATES OF THE NUMBER OF AMD CASES PER KENT DISTRICT AND MEDWAY, AND TYPE TAKEN FROM (NEHEM).(ALL AGES 50+)

	AMD cases	**NV-AMD cases (Wet)**	**Geographic atrophy (Dry)**	**Drusen cases**
Ashford	850 (2.38%)	601 (1.68%)	296 (0.83%)	3,925 (10.99%)
Canterbury	1,450 (2.89%)	1,025 (2.05%)	510 (1.02%)	6,048 (12.07%)
Dartford	612 (2.30%)	432 (1.62%)	214 (0.80%)	2,894 10.87%)
Dover	1,038 (2.62%)	734 1.85%)	363 (0.92%)	4,562 (11.51%)
Gravesham	723 (2.26%)	510 (1.59%)	253 (0.79%)	3,435 (10.74%)
Maidstone	1,114 (2.29%)	788 (1.62%)	388 (0.80%)	5,202 (10.71%)
Sevenoaks	964 (2.37%)	681 1.67%)	336 (0.83%)	4,443 (10.92%)
Shepway	1,057 (2.80%)	747 (1.98%)	372 (0.98%)	4,485 (11.87%)

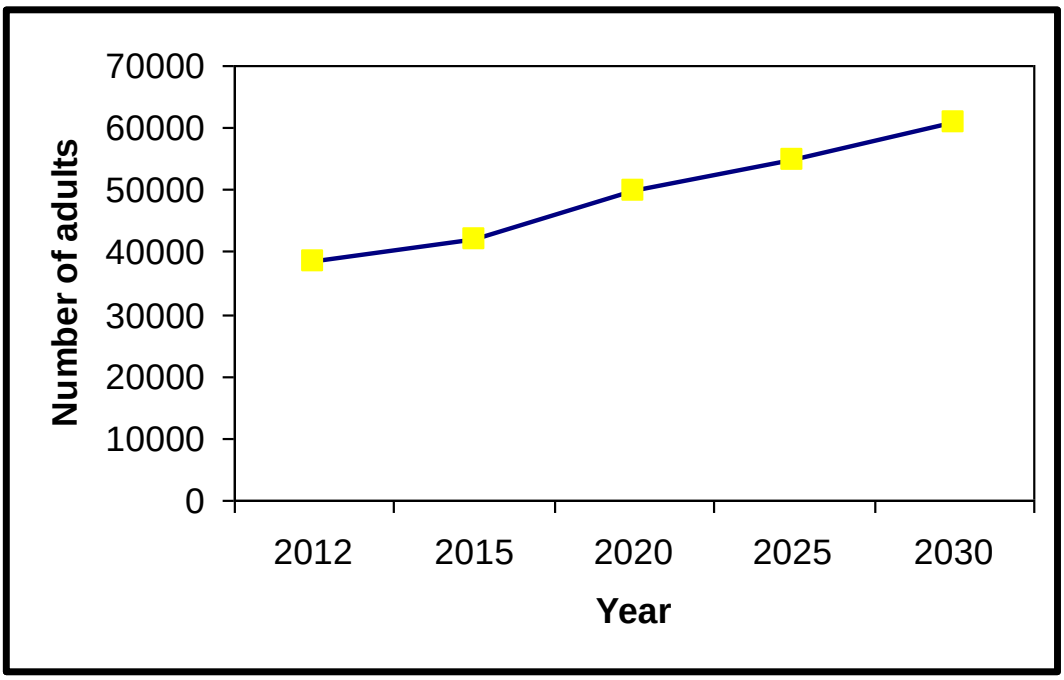
	AMD cases	NV-AMD cases (Wet)	Geographic atrophy (Dry)	Drusen cases
Swale	927 (2.24%)	654 (1.58%)	324 (0.78%)	4,404 (10.65%)
Thanet	1,515 (2.97%)	1,071 (2.10%)	533 (1.04%)	6,292 (12.32%)
Tonbridge and Malling	794 (2.18%)	561 (1.54%)	276 (0.76%)	3,842 10.53%)
Tunbridge Wells	924 (2.18%)	653 (1.81%)	324 (0.90%)	4,046 (11.91%)
Total Kent	11,968	8,457	4,189	53,578
Total Medway	1586 (2.15%)	1120 (1.52%)	554 (0.75%)	7669 (10.38%)

The stages of many eye diseases show no symptoms, so that by the time symptoms manifest themselves, the disease may already be advanced. (Some patients have more than one eye condition)

3.6 Projected Service Use and Outcomes

3.6.1 CHART 1: KENT OVER 75 POPULATION BASED ON 1 IN 5 PEOPLE[2]:
One in five people aged over 75 have some sight impairment (Evans et al 2002) in Kent, based on 2010 mid year population estimates, this figure equates to 24,600 people in Kent and 3292 in Medway with some sight impairment.

[2] Overall, 19.9% of study participants had a binocular acuity of less than 6/12 (17.8% to 22.0%). JR Evans et al


70000
60000
50000
40000
30000
20000
10000
0
Number of adults
2012
2015
2020
2025
2030
Year

3.6.2 CHART 2: ADULTS AGED 18-64 PREDICTED TO HAVE A SERIOUS VISUAL IMPAIRMENT IN THE KCC AREA

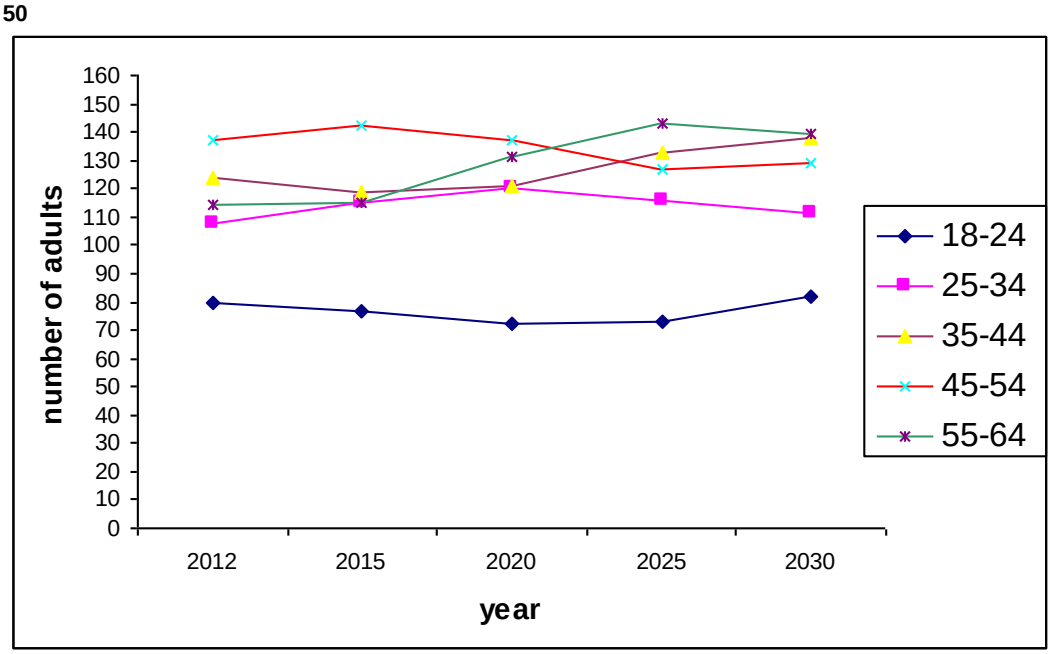
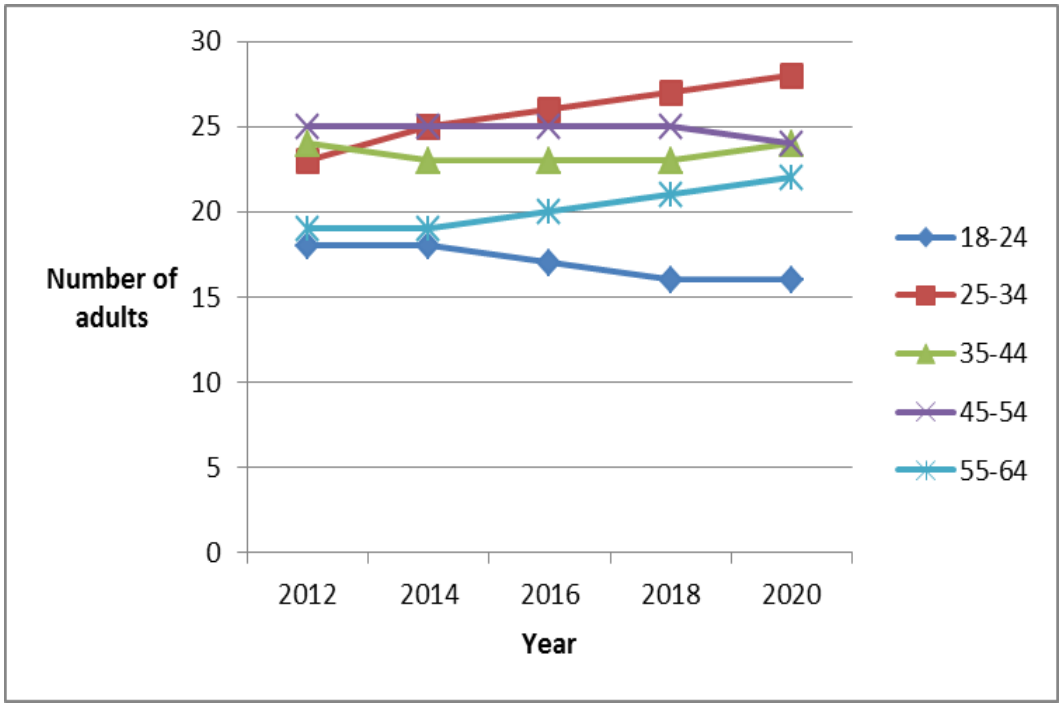


CHART 3: ADULTS AGED 18-64 PREDICTED TO HAVE A SERIOUS VISUAL IMPAIRMENT IN THE MEDWAY AREA



POPPI and PANSI data
Note: the charts above shows estimated numbers predicted to have a serious visual impairment and require help with daily activities, projected to either 2020 or 2030.

3.6.3 CHART 4: ADULTS AGED 65 AND OVER PREDICTED TO HAVE A VISUAL IMPAIRMENT IN THE KCC AREA

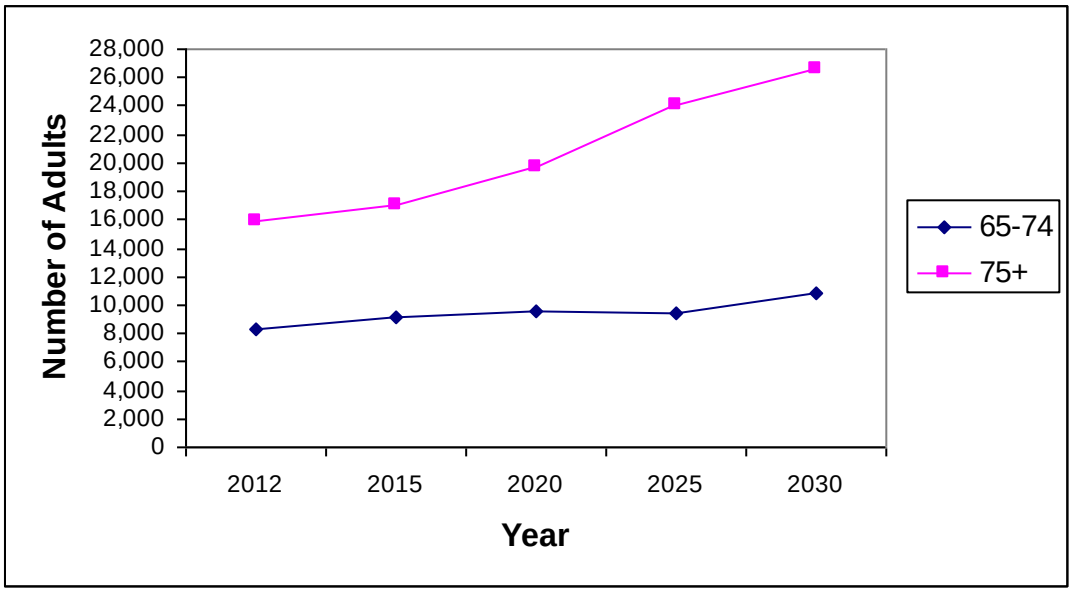
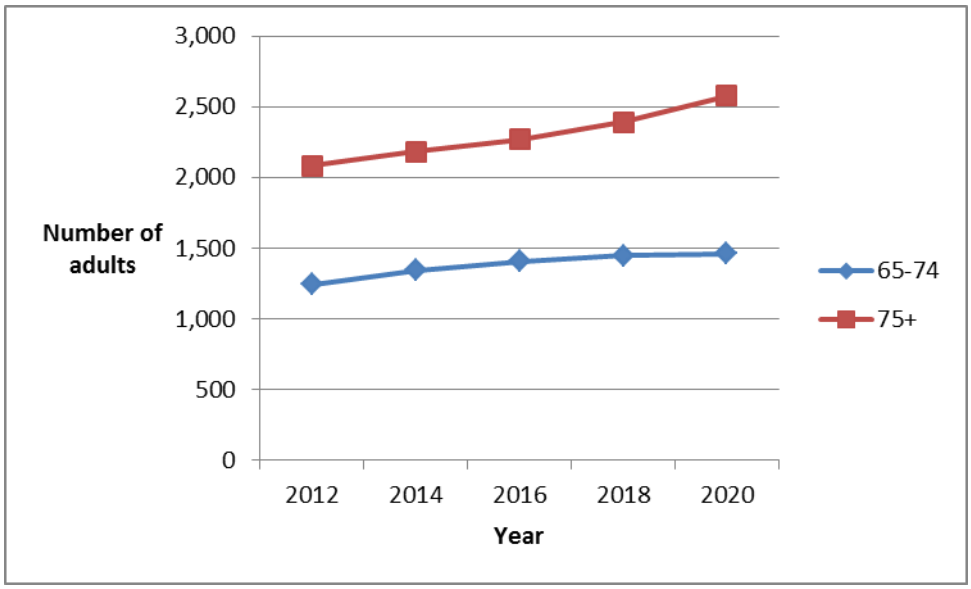


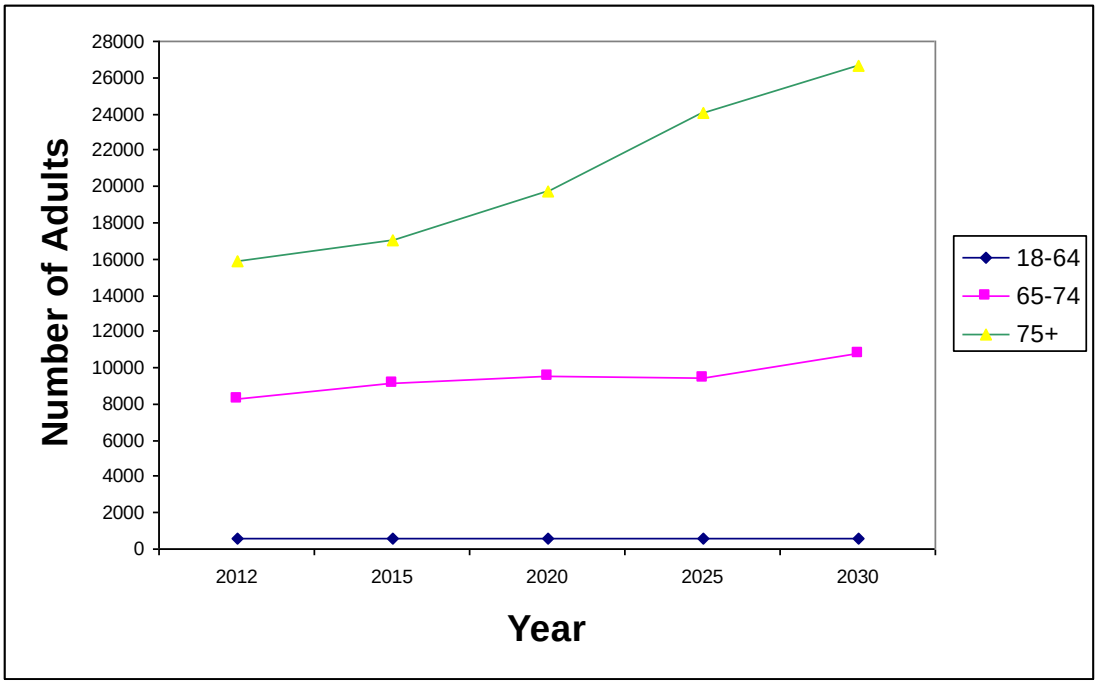
CHART 5: ADULTS AGED 65 AND OVER PREDICTED TO HAVE A VISUAL IMPAIRMENT IN THE MEDWAY AREA



POPPI and PANSI data

Note: the graph above shows the estimated numbers of people predicted to have a moderate or severe visual impairment to either 2020 or to 2030.

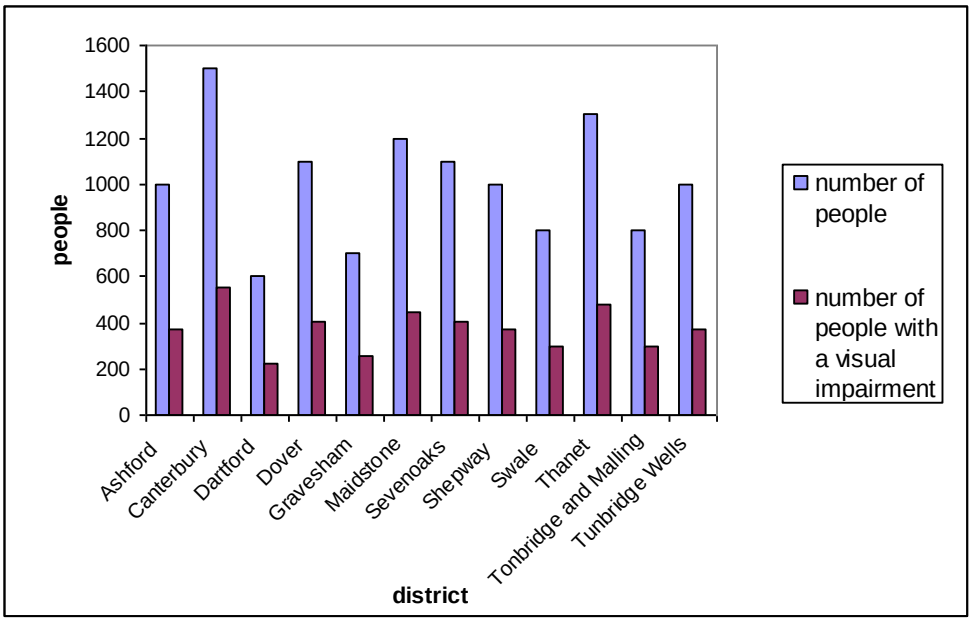
3.6.4 CHART 6: PROJECTED NUMBER OF PEOPLE PREDICTED TO HAVE A VISUAL IMPAIRMENT BY AGE IN KCC AREA



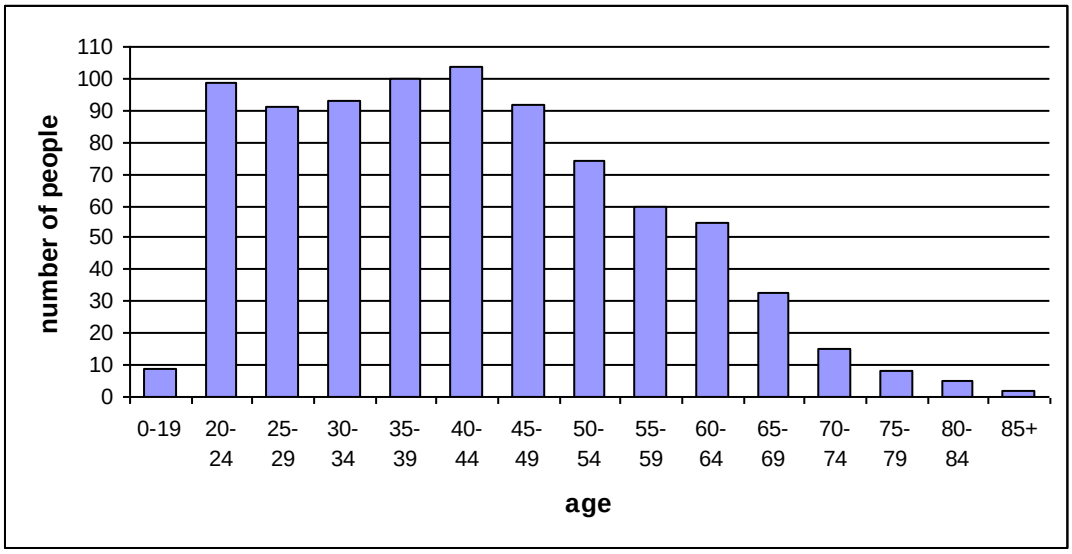
POPPI and PANSI data
Note: two data sets have been used in the graph above; please refer to the explanations under charts 2 & 4 above for definitions.

3.6.5 CHART 5: 90+ POPULATION WITH A SIGNIFICANT VISUAL IMPAIRMENT, BY LOCAL AUTHORITY DISTRICT

For people aged over 90 years 36.9% have a significant visual impairment (Evans et al 2002) in Kent, based on 2010 mid year population estimates, this figure equates to 4,465 people.



3.6.6 CHART 6: THE NUMBER OF PEOPLE IN KENT WITH LEARNING DISABILITIES WHO ALSO HAVE A SIGNIFICANT IMPAIRMENT OF SIGHT BASED ON THE PREVALENCE RATEOF30%(ABOVEPARA3.4.3)



People with Down's syndrome have a higher incidence of medical problems than the general population, 50% have sight difficulties. Therefore, of the 2,243 people in Kent with Down's syndrome, (Learning Disabilities Needs Assessment 2010), it is estimated that 1,122 have sight difficulties.

3.7 Kent and Medway Registrations

3.7.1 Registration as sight impaired is a process following an assessment of vision by a consultant ophthalmologist who will issue a Certificate of Visual Impairment (CVI) which formally certifies that the person as either:

Severe sight impaired

The definition of severe sight impaired is "so blind as to be able to perform any work for which eyesight is essential." A person should be certified as having severe sight impaired if they have:

- Visual acuity less than 3/60 or 1/18 Snellen.
- Visual acuity between 3/60 and 6/60 with a very restricted visual field.

Sight impaired

The definition of sight impaired is "substantially and permanently handicapped by defective vision caused by congenital (present at birth) defect or illness or injury." A person should be certified as sight impaired if they have:

- Visual acuity between 3/60 and 6/60 with a full visual field.
- Visual acuity between 6/24 and 6/60, with a moderately restricted visual field or aphakia (absent lens) or opacities (clouding) blocking vision in the eye itself.
- Visual acuity 6/18 or better with a gross defect of visual fields (of both eyes, such as hemianopia) or marked contraction of the visual field (i.e. in retinitis pigmentosa or glaucoma).

A person (including children aged 4 and over) should be certified as severely sight impaired or sight impaired according to their corrected binocular vision.

The register is held by both Kent County Council and Medway Unitary Authority, but inclusion on the register is optional and decided by the individual.

3.7.2 TABLE 6: BLIND/ SEVERELY SIGHT IMPAIRED PERSONS AND PARTIAL SIGHT/ SIGHT IMPAIRED PERSONS – NUMBERS ON THE KENT REGISTER AND NEW REGISTRATION

Age	Blind/ severely sight impaired persons registered at July 2014	New registrations of blind/ severely persons in 2013-14	Partial sight/ sight impaired persons registered at July 2014	New registrations of partial sight/ sight impaired persons in 2013-14
0-4	2	0	0	0
5-17	-85	0	84	0
18-49	542	23	505	19
50-64	505	27	414	26
65-74	398	21	387	20
75+	3231	184	3498	208
Total	4760	249	4888	279

3.7.3 TABLE 7: REGISTERED BLIND/ SEVERELY SIGHT IMPAIRED PERSONS WHO HAVE AN ADDITIONAL DISABILITY IN KENT – BY AGE (AS AT 31ST MARCH 2011) B3

Additional disability	0-4	5-17	18-64	65+	Total
People who are deaf with speech	NK	NK	6	9	15
People who are deaf without speech	NK	NK	3	0	3
People who are hard of hearing	NK	NK	5	17	22
People with physical disabilities	NK	NK	45	149	194
People with mental health problems	NK	NK	5	13	18
People with learning disabilities	NK	NK	56	7	63
All persons with additional disability - Total	12	45	120	195	372

Data for ages 0-17, split by additional disability, is not available.

3.7.4 TABLE 8: REGISTERED PARTIAL SIGHT/ SIGHT IMPAIRED PERSONS WHO HAVE AN ADDITIONAL DISABILITY - BY AGE IN KENT (AS AT 31ST MARCH 2011)

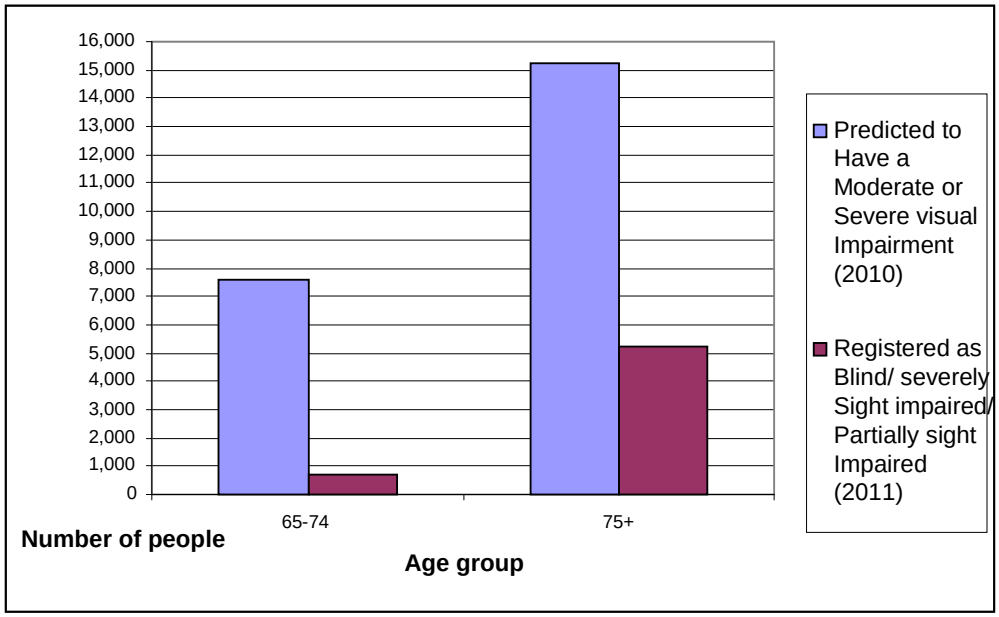
Additional disability	0-4	5-17	18-64	65+	Total
People who are deaf with speech	NK	NK	1	7	8
People who are deaf without speech	NK	NK	2	1	3
People who are hard of hearing	NK	NK	3	13	16
People with physical disabilities	NK	NK	25	156	181
People with mental health problems	NK	NK	1	11	12
People with learning disabilities	NK	NK	47	2	49
All persons with additional disability - Total	3	19	79	190	291

Note: Data for ages 0-17, split by additional disability, is not available.

3.7.5 TABLE 9: REGISTRATIONS AND ESTIMATED POPULATION COMPARISON

Total Kent population registered as sight impaired (2014)	Total number of adults in Kent predicted to have a sight impairment (2010–2030) *(POPPI and PANSI data)*	
9648	**2012**	27,794
----------	**2020**	29,758
----------	**2030**	38,036

3.7.6 CHART 7: NUMBER OF OLDER PEOPLE IN KENT PREDICTED TO HAVE A MODERATE OR SEVERE VISUAL IMPAIRMENT COMPARED TO THOSE REGISTERED AS BLIND, SEVERELY SIGHT IMPAIRED OR PARTIALLY SIGHT IMPAIRED



3.7.7 TABLE 10: BLIND/ SEVERELY SIGHT IMPAIRED PERSONS AND PARTIAL SIGHT/ SIGHT IMPAIRED PERSONS – NUMBERS ON THE MEDWAY REGISTER AND NEW REGISTRATIONS 2011 B1

Age	Blind/ severely sight impaired persons registered at 31/03/2011	New registrations of blind/ severely persons in 2010-11	Partial sight/ sight impaired persons registered at 31/03/2011	New registrations of partial sight/ sight impaired persons in 2010-11
0-4	0	0	5	5
5-17	15	0	30	0
18-49	90	5	115	5
50-64	75	5	75	0
65-74	55	0	70	5
75+	350	20	455	15
Total	585	30	750	30

Source: Health & Social Care Data registered Blind and Partially Sighted People – Year Ending 31/03/11

3.7.8 TABLE 11: BLIND/ SEVERELY SIGHT IMPAIRED PERSONS AND PARTIAL SIGHT/ SIGHT IMPAIRED PERSONS – NUMBERS ON THE MEDWAY REGISTER AND NEW REGISTRATIONS 2014 PS1

Age	Blind/ severely sight impaired persons registered at 31/03/2014	New registrations of blind/ severely persons year ending March 2014	Partial sight/ sight impaired persons registered at 31/03/2014	New registrations of partial sight/ sight impaired persons year ending March 2014
0-4	0	0	5	0
5-17	10	0	25	5
18-49	70	5	140	0
50-64	70	0	85	5
65-74	45	15	95	20
75+	230	0	485	0
Total	420	20	830	30

Source: Health & Social Care Data registered Blind and Partially Sighted People – Year Ending 31/03/14

3.7.9 TABLE 12: REGISTERED BLIND/ SEVERELY SIGHT IMPAIRED PERSONS WHO HAVE AN ADDITIONAL DISABILITY IN MEDWAY – BY AGE (AS AT 31ST MARCH 2014) B3

Additional disability	Total
People who are deaf with speech	10
People who are deaf without speech	5
People who are hard of hearing	20
People with physical disabilities	40
People with mental health problems	0
People with learning disabilities	10
All persons with additional disability - Total	80

Source: Health & Social Care Data registered Blind and Partially Sighted People – Year Ending 31/03/14

3.7.10 TABLE 13: REGISTERED PARTIAL SIGHT/ SIGHT IMPAIRED PERSONS WHO HAVE AN ADDITIONAL DISABILITY - BY AGE IN MEDWAY (AS AT 31ST MARCH 2014) PS3

Additional disability	Total
People who are deaf with speech	10
People who are deaf without speech	5
People who are hard of hearing	35
People with physical disabilities	110
People with mental health problems	0
People with learning disabilities	10
All persons with additional disability - Total	170

Source: Health & Social Care Data registered Blind and Partially Sighted People – Year Ending 31/03/14

3.8 Key messages of Kent and Medway Data

3.8.1 The numbers of people with sight impairment will increase. National figures indicate that between 2010 and 2030 the number of adults with sight impairment will increase by 64%.

By 2021, nationally 40% of the population will be over 50 – a significant proportion of sight impairment is related to age. Over 80% of sight impairment occurs in people over 60. As this population is set to increase by 21% nationally by 2020, there will be a significant increase in the number of people with sight impairment.

3.8.2 OLDER PEOPLE WITHIN KENT

Within Kent, Thanet, Canterbury and Maidstone have the highest populations of over 75's and are therefore more likely to have a larger population of people with a sight impairment (See Table 2).

The number of older people in Kent is projected to increase by 67% by 2033. The largest increases will be in Dartford (32%) and Ashford (31%). However, East Kent coastal districts Shepway, Dover and Thanet will continue to have the largest proportion of older people in their population.

It is often expected that sight will deteriorate with age and therefore, people just 'accept' their sight is failing (UK Vision Strategy).

3.8.3 ADULTS WITH LEARNING DISABILITIES

There is a significant population of people with learning disabilities within Kent who will have some level of sight impairment.

3.8.4 PEOPLE WITH DIABETES– Diabetic Eye Screening Service.

Worldwide, diabetes is a serious long-term condition resulting in significant personal, social and economic costs. Across Kent and Medway the prevalence of diabetes in the population aged 17+ in 2010-2011 was 5.8% [80,163].

Diabetic Retinopathy is one of the major causes of preventable blindness in adults. Early detection and appropriate treatment can prevent severe vision loss and blindness from diabetic retinopathy.

Locally the diabetic eye screening (DES) programme was commissioned formally by the Kent and Medway cluster for the population of NHS Eastern and Coastal Kent, NHS West Kent and NHS Medway but since April 2013 it has been commissioned by NHS England. The service is provided by the Paula Carr Diabetes Care Centre which is hosted by East Kent University Hospitals Foundation Trust. The programme offers screening to all individuals over the age of 12 with a diagnosis of diabetes. From October 2014 diabetic screening across the Area will be transferring from Paula Carr to Medical Imaging UK Ltd.

A Health Equity Audit (HEA) was undertaken in June 2012 to assess variation in the screening uptake across the population, so that these areas can be targeted to improve patient outcome. The HEA identified a difference of 1,943 patients between the diabetic QOF register 2010/11 for Kent and Medway and recorded patients aged 17 and over on the Paula Carr Diabetic Retinopathy Register. This difference may part be due to the different timeframes of the data, however to fully understand where the differences lie further investigation is required at a practice level.

Mosaic analysis highlighted that the majority of patients on the DES register are from group B (residents of small and mid-size towns with strong local roots) and group E (Middle income families living in suburban or semi-rural homes).

The HEA also highlights that the majority of clients (85%) for DES are over the age of 50, with 50% of the total DES clients aged between 60 and 79. As expected there is practice level variation for missed/cancelled appointments with significant differences between practices at the 95% and 99% confidence levels. Nearly 18% of the patients invited for screening either cancel or do not turn up for their appointment, of this the higher proportion is of young males. Clients living in areas of comparatively higher deprivation are 18% more likely to miss their appointment.

The HEA highlighted that the sight threatening outcomes are greater in the younger populations. Although numbers in these age groups are relatively small, it may be indicative of poorer patient management of their diabetes. However, locally, a proportion of patients with a sight threatening outcome compared with the proportion of patients who have good control of their diabetes analysis show little correlation between the two.

Good diabetic control significantly lowers the risk of retinopathy and it is important that keeping fit, maintaining a healthy weight and giving up smoking are all seen as a part of good diabetes control. Those individuals who are not attending the screening programme are missing out on the opportunity for early detection of signs of retinopathy, particularly those from areas of high deprivation and also from ethnic backgrounds. This poses a public health challenge for both commissioners and providers of the service.

The HEA made several recommendations:-

1. Harmonise variation in the diabetic QOF register and DES register. This will require working at practice level to ensure no individual with diabetes is missing an opportunity for retinal screening.
2. Develop an action plan to understand factors for high DNA rates (those which are above 2 SD). These to include:

   Patient level factors such as language barriers, lack of understanding/ education etc.

   Provider level factors such as access issues for timings of screening for the working age population. Develop practice level information to be sent to the GPs quarterly to inform them of their registered patients.
3. Undertake detailed analysis to understand practice level DNA numbers and work with practices to address findings.
4. Ensure ethnicity is recorded for all individuals accessing the eye screening service.
5. To understand equity issues for specific sub populations such as those with learning disabilities.

3.8.5 REGISTRATIONS

There is a significant gap in the numbers of people registered as sight impaired and those who are predicted to have sight impairment.

People aged 65 and over predicted to have a moderate or severe visual impairment by age, and people aged 75 and over predicted to have registrable eye conditions, projected to 2020

	2014	2016	2018	2020
Kent: People aged 65-74 predicted to have a moderate or severe visual impairment	8,954	9,374	9,554	9,593
Kent: People aged 75 and over predicted to have a moderate or severe visual impairment	16,591	17,211	18,253	19,617
Kent: People aged 75 and over predicted to have registrable eye conditions	8,563	8,883	9,421	10,125
Medway: People aged 65-74 predicted to have a moderate or severe visual impairment	1,344	1,406	1,445	1,462
Medway: People aged 75 and over predicted to have a moderate or severe visual impairment	2,182	2,269	2,393	2,579
Medway: People aged 75 and over predicted to have registrable eye conditions	1,126	1,171	1,235	1,331

Figures may not sum due to rounding.

This will mean that services linked to registration are not being received by all those that could be eligible for them.

3.9 Children

3.9.1 Sight Impairment in Children

A baby's eyes should be examined within 72 hours of being born. They will have their second eye examination when they are 6 to 8 weeks old which is usually carried out by the GP. The child's vision will also be tested before they start school at around 4 to 5 years of age where these services are available

Severe sight impairment in childhood is uncommon although there are at least four newly diagnosed sight impaired children each day in the UK. There are many more children with mild sight impairments, unilateral sight problems or eye disease without sight consequences. Children with profound or severe sight impairments require specialist support and interventions from birth in order to ameliorate the developmental setback that results from having little or no vision.

3.9.2 Table 14: Estimates re Prevalence in Children

UK incidence of sight impairment per 1,000 children, including mild impairments	2.4 in every 1000 (Keil 2003)
Projected number of children in the UK aged 0-19 with sight impairment (0-19 UK pop = 14.8 million)	36,000
Number of babies in the UK born each year with severe/profound sight impairment	437 (Rahi et al based on births in 2000)
Incidence of children born with profound or severe sight impairment	Approx 6 in every 10,000

3.9.3 Table 15: Estimates regarding children in Kent:

Projected number of children in the Kent aged 0 -19 with visual impairment (2.4 in every 1000) 0-19 Kent pop = 335,000	804
Actual number of children in Kent aged 0-19 with moderate, severe or profound visual impairment (child level data is not collected on mild visual impairment)	399

Numbers of children and young people in Kent with Visual Impairment (child level data Feb 2014)

District	Moderate	Severe	Profound	Under assessment	Total
Dartford	**9**	**9**	**9**	**8**	**35**
Gravesham	**10**	**8**	**10**	**7**	**35**
Sevenoaks	**13**	**9**	**3**	**6**	**31**
Tunbridge Wells	**3**	**5**	**3**	**6**	**17**
Tonbridge/Malling	**6**	**9**	**7**	**8**	**30**

Maidstone	**13**	**8**	**10**	**10**	**41**
Ashford	**10**	**2**	**9**	**9**	**30**
Shepway	**14**	**9**	**14**	**9**	**46**
Dover	**14**	**5**	**5**	**10**	**34**
Thanet	**14**	**22**	**9**	**8**	**53**
Canterbury	**14**	**9**	**10**	**8**	**41**
Swale	**18**	**15**	**18**	**9**	**60**
Total	**138**	**110**	**107**	**98**	**453**

3.9.4 CAUSES OF SIGHT IMPAIRMENT IN CHILDREN

There are a wide range of sight impairments found in children and young people. Research by Visual Impairment Scotland has provided an overview of the causes of sight impairment in children.

53% of the cases of childhood sight impairment had either the eye or the optic nerve as the anatomical site of the visual impairment. 21% of cases had sight impairment affecting the whole globe with the most common cause being albinism (13.2%) but also includes conditions such as microphthalmia and coloboma. 17% of those responding to the survey had sight impairment due to retinal disorders. This includes many inherited disorders such as retinitis pigmentosa and cone dystrophies as well as retinopathy of prematurity.

Children with sight impairment due to brain disorder are the single largest group (47%). Cerebral Palsy and Cerebral Visual Impairment were the most common of these conditions.

Anatomical site of visual impairment	**Percentage of children (total 333)**
Whole globe	22%
Cornea	1%
Lens	3%
Uvea	4%
Retina	17%
Optic nerve	6%
Brain	47%

Some children are at particular risk of developing sight problems, including those with:

- sensorineural hearing impairment.
- neuro developmental problems (including Downs syndrome).
- a family history of a childhood onset ophthalmic disorder e.g. retinoblastoma.

KCC Specialist Teaching and Learning Services use the definitions from the National Sensory Impairment Partnership namely:-

Vision loss

(NB The following classification applies to corrected vision with both eyes open. Acuity criteria are for guidance purposes only. The professional judgement of a QTVI should be applied as necessary to decide on the classification. For example, a young person may have a mild reduction in visual acuity but be functioning within a different visual category due to an additional ophthalmic condition, e.g. nystagmus, visual field reduction, cerebral visual impairment, and/or additional learning difficulties).

Mild vision loss	Within the range 6/12 - 6/18 Snellen/Kay (LogMAR 0.3 – 0.48)
Moderate vision loss	Less than 6/18 - 6/36 Snellen/Kay (LogMAR 0.5 – 0.78)
Severe vision loss	Less than 6/36 - 6/60 Snellen/Kay (LogMAR 0.8 – 1.00)
Profound vision loss	Less than 6/60 Snellen/Kay (LogMAR 1.02)

Source NatSIP Eligibility Criteria for Scoring Support Levels 2012

Child Vision Screening

Background

From1988 - 2001 Orthoptists from Maidstone and Tunbridge Wells NHS Trust implemented Vision Screening on children in the Medway and Swale areas. The screening this was performed using a converted dormobile van driven by the Orthoptist to one of 13 health centres where children aged 4 –5 years old were invited to attend an eye test; 52% of eligible children attended.
In 2001 the vision screening service was revised and Orthoptists now visit over 100 primary and infant schools in Medway and Swale to test the vision and binocular status of children in reception class. This has resulted in 95% of the eligible population being screened.

Process

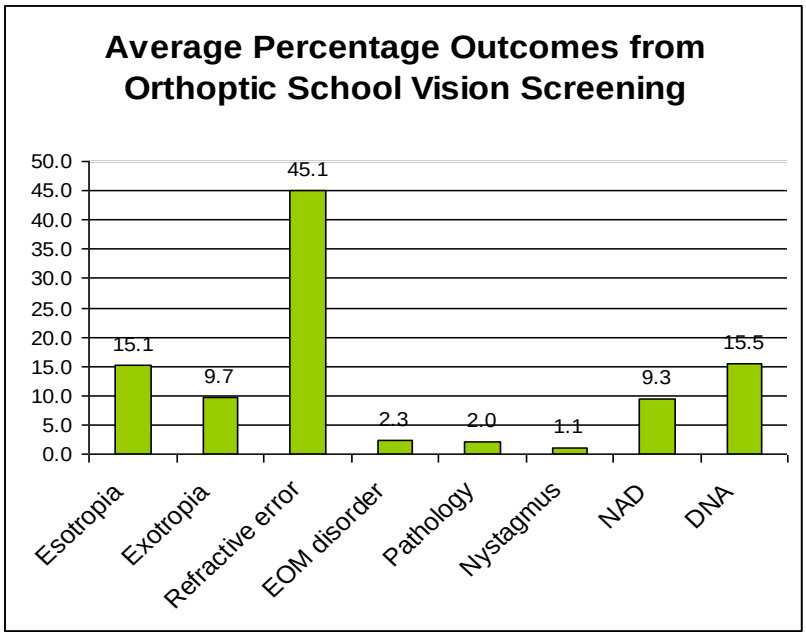
Children with normal vision in each eye and good binocular functions pass the Orthoptic vision screening test. Those whose vision is mildly reduced (0.150 to 0.300 in one or both eyes) are referred to their community Optometrist. Those children with moderate to profound vision loss (0.325 or less in one or both eyes), or a squint and therefore most likely to require Hospital treatment are referred to the Hospital Eye Service for a cycloplegic refraction and fundus examination. A small number of children are unable to complete the standard eye test at school so are referred to the Community Orthoptic clinic for secondary screening. The majority of these children have a special educational need.

Statistics

In the last academic year almost 14% of children failed their Orthoptic eye test at school. Of those 52% were advised to visit their Community Optometrist, 39% were referred to the Hospital Eye Service and 9% to secondary screening. 7% of the children referred to the Hospital Eye Service had vision

below 0.500 with both their eyes open which if left undetected and untreated could make them eligible for registration as sight impaired.

The outcomes of the refraction and fundus examination for all the children have been audited each year and the average percentage results are displayed on the chart below.



Vision Screening across the Area

There is no vision screening for any child of any age in the Maidstone and Tunbridge Wells localities leading to children being referred late to the Maidstone and Tunbridge Wells NHS Trust Eye clinics when their visual development is almost complete and treatment is therefore likely to be less successful.

Child vision screening is commissioned in other parts of the Kent and Medway area but the overall system is not consistent or equitable.

Service Mapping

Social Care

Kent County Council (KCC) Families and Social Care (FSC) Adult Services currently provides services either in house or through contracted services with private and voluntary sector providers for d/Deaf, deafblind and sight impaired adults in Kent. Medway Unitary Authority provides a similar service for their relevant population.

Sight Impairment

There is a service level agreement with Kent Association for the Blind for the provision of a range of services to promote the independence of sight impaired people. This includes:

- Specialist information, advice and guidance.
- Specialist's assessments including setting estimated personal budgets.
- Rehabilitation Services – communication, mobility and daily living skills.
- Registrations as blind (severely sight impaired) or partially sighted (sight impaired).
- Low vision aid assessments and equipment provision.
- Learning disability service.
- Two resource centres in Maidstone and Canterbury.
- Guide Communicator Service.

The KAB Rehabilitation Team, in partnership with Medway Council, also provide a range of services for blind and partially sighted people in the Medway Council area including:

- Information and advice on registration, benefits, low vision and IT
- Emotional Support
- DLS training
- Awareness training
- Social activities
- Orientation and mobility
- Support for children and their families
- Skills group & specialist events
- Assessment of individual needs
- Access to specialist equipment
- Audio services
- Guide Communicator service for deafblind people
- Communication including Braille & Moon

Health Services

As of August 1st 2014 Kent and Medway NHS Area Team had 317 optometrists registered as ophthalmic performers in the Kent and Medway area. This was made up of 137 male performers and 180 female performers. General Ophthalmic Services is the National provision of a basic NHS sight test and does not include other eye health services. In the Kent and Medway area this equates to one optometrist per 5461 people or just over 18 optometrists per 100,000.

Dispensing opticians also provide valuable service to the population with the provision of spectacle dispensing with 177 registered with the Association of British Dispensing Opticians as working within the Kent and Medway area.

General Ophthalmic Services Activity 2013/14

NHS Sight Tests by Area 2013/14

Area	Per 100,000 of area child population (0-15) in England	Per 100,000 of area over 60 population in England
East Kent	25215	45056
West Kent	30552	45449
Medway	27773	39966

Source: Department of Health Unity Data Collection April 2014.

NHS Optical Vouchers issued April 2012 to end September 2012 (6 months)

NHS Vouchers issued by Area

Area	Total of all vouchers issues	Type A	Type B	Type E
East Kent	**30307**	**21747**	**3001**	**4269**
West Kent	**22469**	**16747**	**2258**	**2518**
Medway				

Source NHS Information Centre. GOS Activity Table B1. July 2013

Type A – Single Vision £37.10
Type B – Single Vision £56.40
Type E – Bifocal £64.20

(See NHS Choices leaflet HC12: charges and optical vouchers (PDF, 52 kb).

Additionally, community eye care services are commissioned from a number of different providers and these are commissioned by each individual clinical commissioning group. Examples of such providers can be optometrists who have undergone additional training to provide ophthalmology services in the community or GPs with a special interest in ophthalmology. Those that are provided by optometrists can be viewed compared to the National picture at http://www.locsu.co.uk/enhanced-services-pathways/enhanced-services-map.

The Community Ophthalmology Team (COT) is a primary care service, in West Kent that assess, treat and manage low risk patients with eye conditions.
The members of the COT are 1 GP with a special interest (GPwSI) in ophthalmology and 16 optometrists with special interest (OPwSI). Each member of the COT is trained and qualified to assess minor eye conditions and the GPwSI also performs minor operations such as cyst removals. The members of the COT take independent responsibility for the care of people who are referred to them. The team is led and supervised by a consultant ophthalmologist at Maidstone Hospital. It is an overarching principle that if a COT member is unsure of the correct diagnosis / treatment or if best practice demands the patient will be referred to Hospital Eye Service (HES).
In 2013/14; 14,128 referrals were triaged by the COT of which 4,061 were cataract referrals.
After COT triage (10,067 referrals):

- 384 (3.8%) were returned to referrer as not meeting criteria.
- 1,314 (13.1%) patient either did not attend or cancelled their appointment.
- 3,821 (38%) of referrals were triage as not suitable for the community and forwarded to secondary care.
- 4,548 (45%) patients were seen in the community, of which 655 (6.5%) patients were referred to secondary care after their first appointment.

The Acute Primary Care Ophthalmology Service (APCOS) is designed for recently occurring medical eye conditions such as:

- Sudden and recent reduction in vision in one or both eyes.
- Red eye(s) or eyelids.
- Pain and/or discomfort in the eyes.
- Recent onset or sudden increase in flashes and/or floaters in one or both eyes.
- Mild trauma, for example a scratch to the outer surface of the eye or eyelid.
- Suspected foreign body in the eye.
- Significant recent discharge from or watering of the eye.

There are currently 4 providers for this service held practice in Tonbridge, Staplehurst, Larkfield and Strood. The members of the team are 1 GPwSI and 3 Optometrists who have taken an Independent Prescribing course. Patients are referred to the service by GPs, Optometrists, Pharmacists and are seen within 48 hours.

The Primary Eyecare Acute Referral Service (PEARS) in Medway reduces unnecessary referrals to the hospital eye services (HES), and uses the skills

of primary care optometrists to triage, manage and prioritise patients presenting with an eye condition. Patients are usually referred into the service by their GP but may also self-refer. There are five optical practices within Medway currently offering this service.

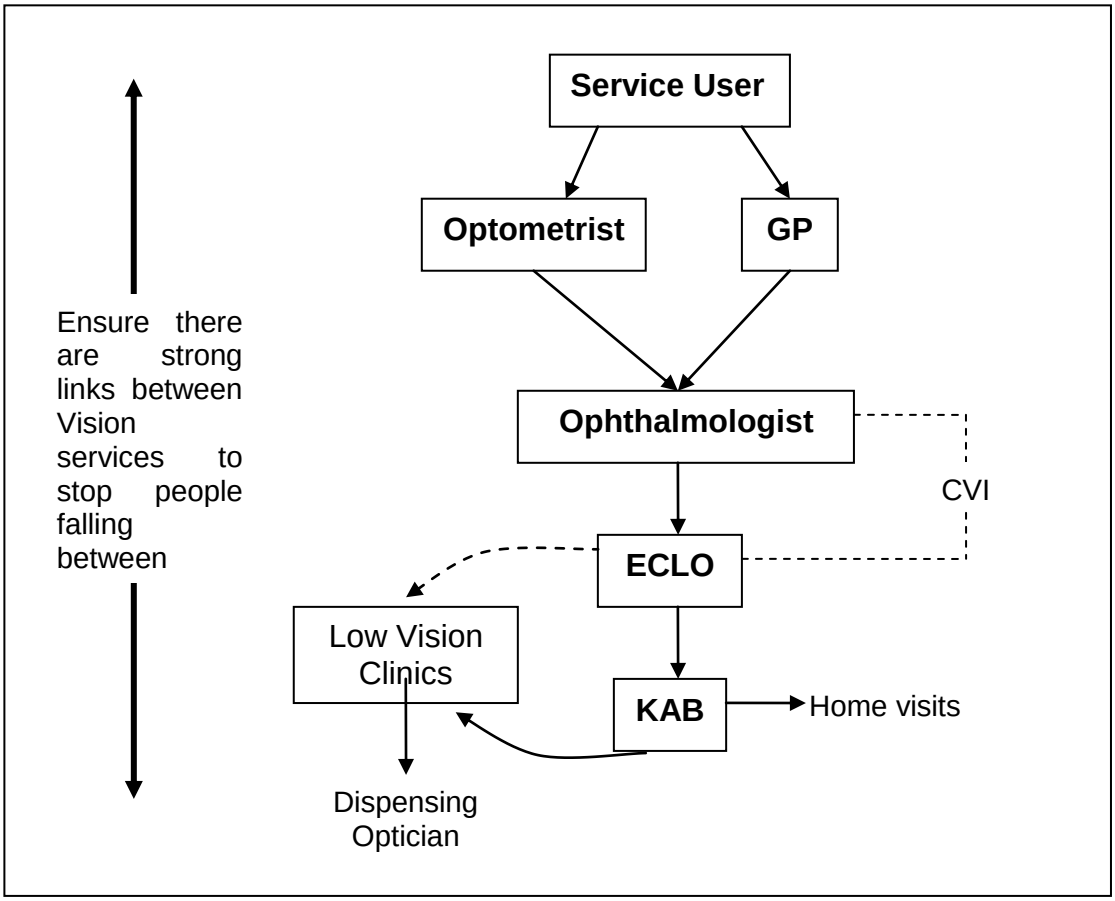
East Kent Hospitals University NHS Foundation Trust offers a comprehensive Ophthalmology service involving 11 consultants, all with specialist interests. The service is provided at seven different sites, which include William Harvey Hospital, Ashford, Queen Elizabeth the Queen Mother Hospital (QEQM), Margate, and Kent and Canterbury Hospital. There are also consultant led outreach clinics at Whitstable, Folkestone, Dover and Sheppey.

Kings NHS Trust provides ophthalmology services in West Kent, centred at Queen Mary's Hospital (QMS) and the Princess Royal University Hospital (PRUH). These are led by 16 consultants supported by middle-grade and trainee medical staff. Outpatient clinics are held at QMS, PRUH and Darent Valley Hospital, Dartford.

The Maidstone and Tunbridge Wells NHS Trust delivers inpatient, day case and outpatient ophthalmology services with the main activity based in Maidstone Hospital and spokes at Tunbridge Wells Hospital, together with Medway, Sittingbourne, Sevenoaks and Edenbridge Hospitals. Surgical inpatient services are offered at Maidstone and day care services at both Maidstone and Tunbridge Wells Hospitals.

On review of the services currently provided, gaps have been identified in the potential range of eye health community services. In 2014 the local eye health network facilitated a meeting with eye health commissioners to define these service gaps and these are included in Section 4.

Sight Impairment



Source KCC Sensory and Autism Services 2013

Low Vision Clinics

Low Vision clinics provide assessment and provision of low vision aids. This service is available for individuals who have some residual vision and treated by maximising the patient's vision beyond what glasses or contact lenses can achieve, and managing individuals' expectations. They provide specialist aids such as illuminated magnifying glasses and monoculars to people with a visual impairment. Low vision clinics are held in The Darent Valley, William Harvey, QEQM, Maidstone, Kent and Canterbury hospitals. In addition the KAB runs low vision clinics at their Maidstone office.

Kent Retinal Screening Service

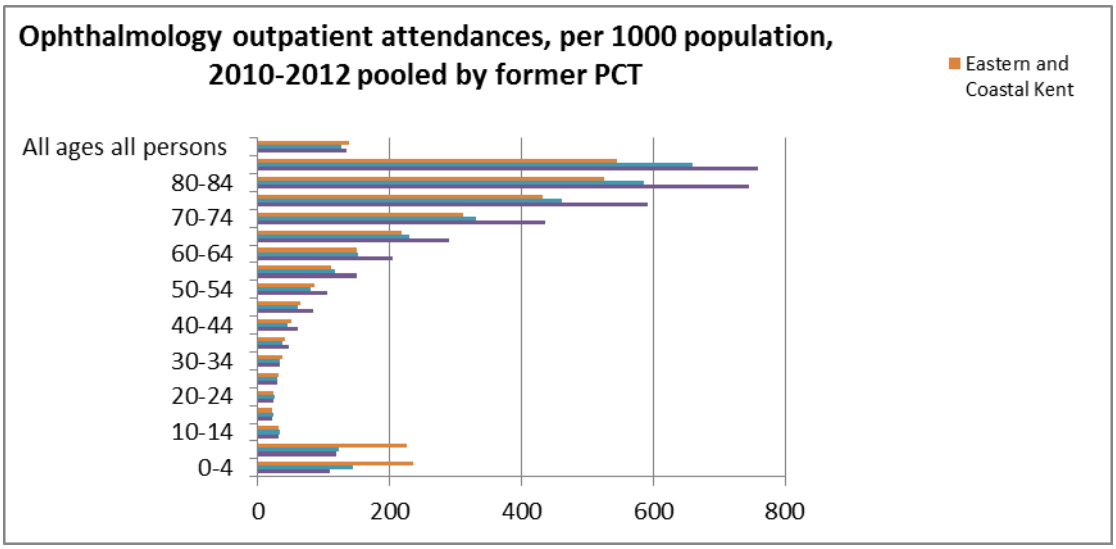
This programme offers screening to all diabetic patients over the age of 12. Newly diagnosed diabetic patients are screened within 3 months and then annually after the initial screening. The eye screening programme aims to detect diabetic retinopathy at an early stage when treatment is most effective. Screenings are taken across 11 mobile screening unit, 3 centres and 9 static units within hospitals across Kent.

Eye Liaison Officer (ELCO)

The KAB employs an ECLO to provide practical and emotional support at the time of diagnosis for patients. The ELCO is based within the hospital eye departments and liaison between the hospital, KAB and Sensory Services.

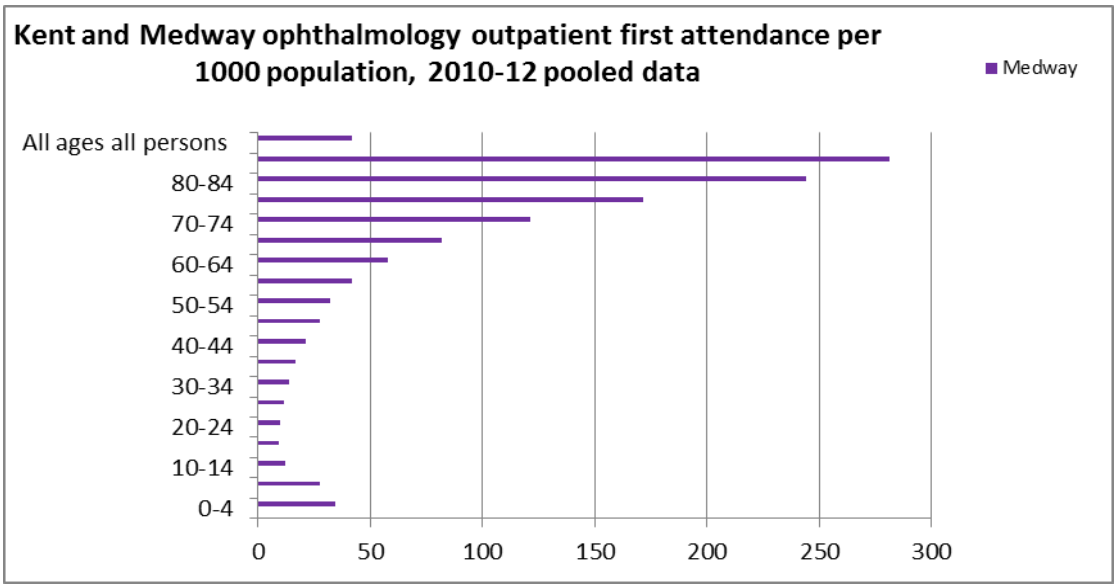
Ophthalmology Outpatient Attendance, 2010-12 pooled data

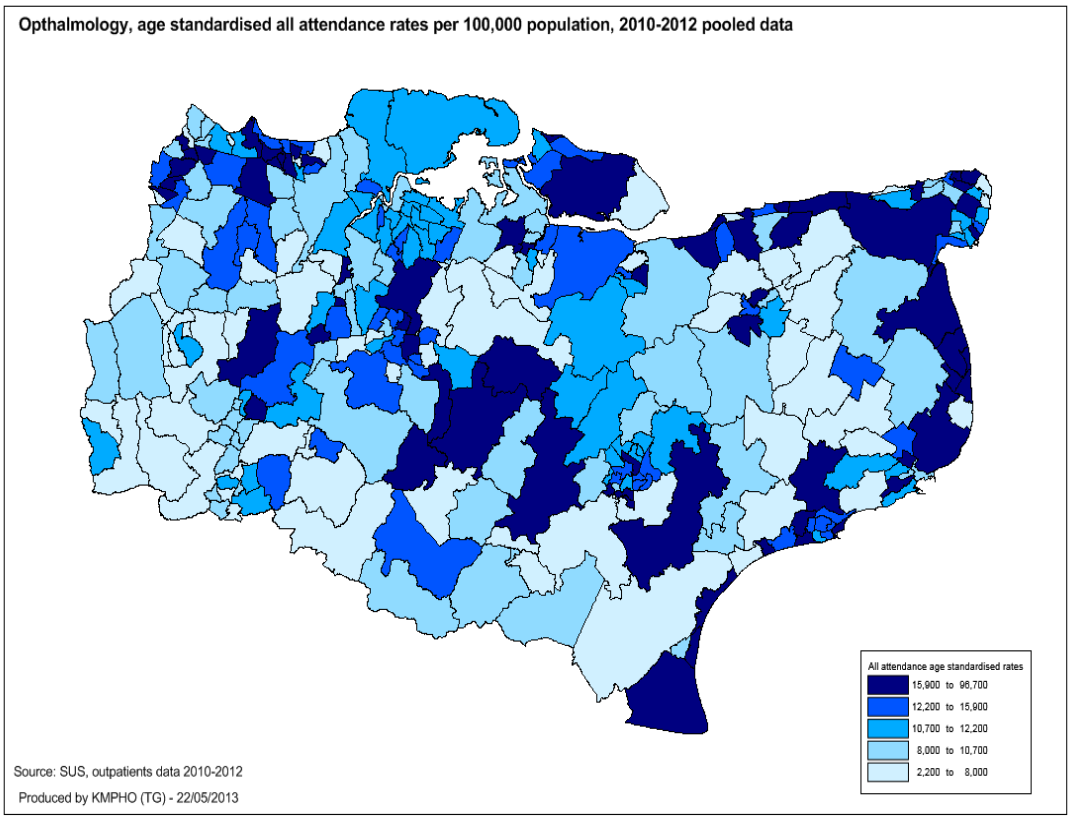
	West Kent		Eastern and Coastal Kent	
	All outpatient attendances	**2010-12 pooled data all outpatient categories attendances per 1000 population**	**All outpatient attendances**	**2010-12 pooled data all outpatient categories attendances per 1000 population**
0-4	19302	143.6	31346	235.3
5-9	15771	123.1	28232	225.1
10-14	4447	33.2	4231	30.4
15-19	3060	22.7	3445	22.4
20-24	2823	25.0	3532	23.5
25-29	3607	29.2	3891	30.8
30-34	4366	33.7	4405	36.7
35-39	5314	37.2	5214	40.0
40-44	7340	44.7	8098	50.6
45-49	9959	60.2	10656	64.3
50-54	11422	80.7	12523	85.2
55-59	14096	116.0	14945	110.5
60-64	19962	152.6	23572	150.5
65-69	24454	230.3	28320	217.5
70-74	27070	331.7	31091	311.2
75-79	32165	462.1	34679	431.3
80-84	30771	586.1	33408	525.3
85+	31283	660.0	34920	543.9
All ages all persons	**267212**	**126.0**	**316508**	**138.8**

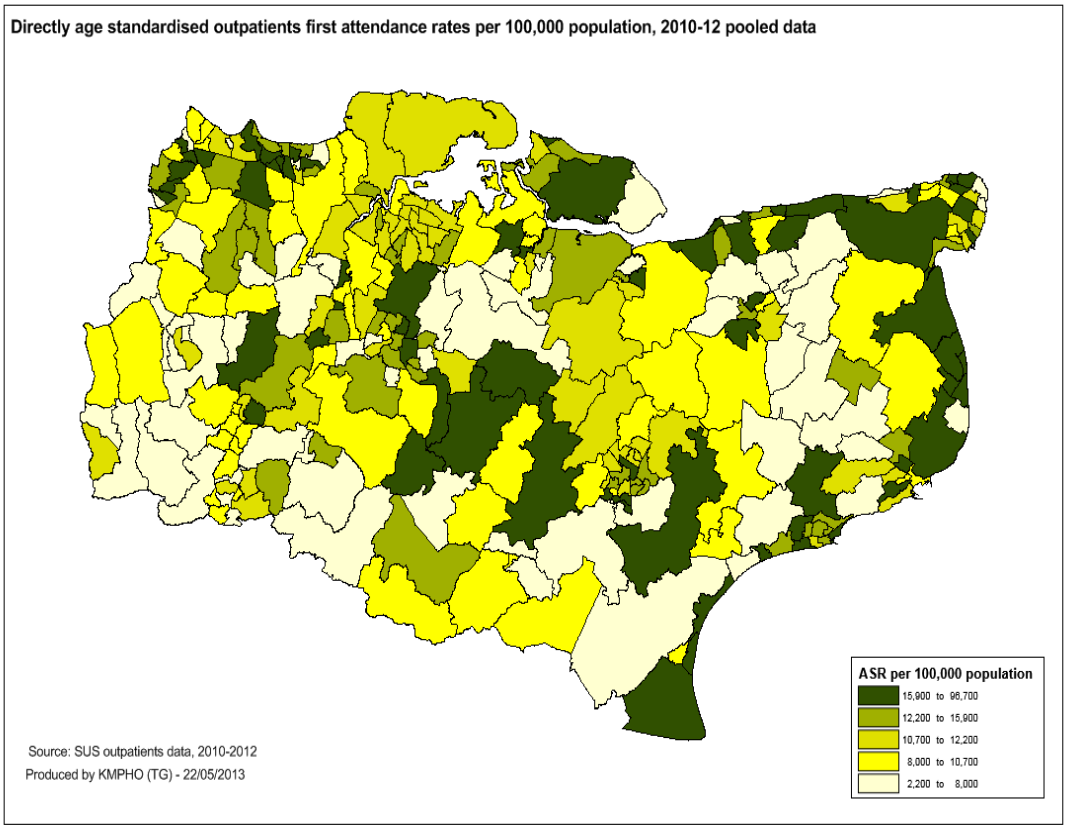


Medway

	First attendance face to face	2010-12 pooled data per 1000 population
0-4	1794	34.6
5-9	1322	27.4
10-14	614	12.3
15-19	513	9.0
20-24	568	9.8
25-29	595	11.2
30-34	705	13.6
35-39	876	16.9
40-44	1260	21.3
45-49	1620	27.4
50-54	1665	31.9
55-59	1835	41.6
60-64	2679	58.0
65-69	2889	81.6
70-74	3270	121.1
75-79	3655	171.6
80-84	3586	243.9
85+	3710	281.1
All ages all persons	**33156**	**41.7**


Kent and Medway ophthalmology outpatient first attendance per 1000 population, 2010-12 pooled data
Medway
All ages all persons
80-84
70-74
60-64
50-54
40-44
30-34
20-24
10-14
0-4
0
50
100
150
200
250
300


Opthalmology, age standardised all attendance rates per 100,000 population, 2010-2012 pooled data
All attendance age standardised rates
15,900 to 98,700
12,200 to 15,900
10,700 to 12,200
8,000 to 10,700
2,200 to 8,000
Source: SUS, outpatients data 2010-2012
Produced by KMPHO (TG) - 22/05/2013



3.10 Key Impact on Quality of Life and Emotional Wellbeing

Sight impairment can have a significant impact on many areas of people's lives. A summary of some of these is in Table 16.

TABLE 16: IMPACT OF SIGHT IMPAIRMENT

Area of Impact	Evidence and Outcomes
Health inequalities	Late presentation in glaucoma is linked with socio-economic status and older age. Significant gaps in the provision of primary eye care services (GP surgeries and Optometrists) in deprived areas. Sight impairment in children is strongly linked to genetic factors or premature/ low birth weights. Smoking and obesity can double the probability of sight impairment.
Falls	Age UK shows poor vision was a factor in 270,000 falls

	in people aged 60+ in the last two years. Evidence suggests that those with sight impairment are 1.7 times more likely to have a fall and 1.9 times more likely to have multiple falls (Legood et al 2002 cited in RNIB). They also suggest that the odds of a hip fracture are between 1.3 and 1.9 times greater for those with sight impairment.
Mental Health	The Thomas Pocklington Trust describes that feelings of isolation among older sight impaired people are not uncommon and sight impairment is often compounded by other functional problems such as mobility. Therefore, older people often need practical, as well as emotional support to maintain their wellbeing. The prevalence of depression is at least twice as high in sight impaired older adults as in older people with good vision (Evans et al 2007). Sight impairment is also associated with a higher risk of suicide.
Housing	Appropriateness of housing and accommodation can have significant impact on any individual's quality of life. There is a graded relationship between sight impairment and poor housing circumstances (Nazroo cited in Mehta 2009). Those who have poor vision or are blind are more likely to have no central heating, cold accommodation, a shortage of space and condensation than those with fair vision. Seven in ten people with sight impairment are in rented accommodation compared with three in ten of the general population (Community Care 2007).

Socio-Economic Status	Evidence suggests a graded relationship between increasing sight impairment and poorer economic circumstances. Among those who are not in paid work (and aged less than 60), 21.6% report a sight impairment, compared with 10.1% of those that have a job. The UK Vision Strategy States that: • Three out of four blind or partially sighted older people live in poverty or on its margins, living on less than half the mean National income. • 34% of blind and partially sighted people are in employment, compared to 75% of the population overall. • 24% of blind and partially sighted people of working age have no qualifications, compared to 15% of the working age population. A report by Douglas et l (2009) outlined that approximately 30% of sight impaired people who were no longer working believed they could have been able to continue in their job if they had been given more support.
Education	If refractive errors in children are not diagnosed, this can lead to a number of problems, ranging from the specific, such as chronic headaches, to underachievement academically.

3.11 What Works? A summary of Policy, Standards, Guidelines, Good Practice and Research

3.11.1 TABLE 17: SUMMARY

UK Vision Strategy	Reference
The RNIB has produced a UK Vision Strategy, which responds to shortfalls in the UK's eye health and sight impairment services by setting out a framework for development. Government representatives have been involved in its development. It identifies and seeks to follow three main outcomes: • improving the eye health of people in the UK. • eliminating avoidable sight impairment and delivering excellent support for people with sight impairment. • Inclusion, participation and independence for people with sight impairment.	http://www.vision2020uk.org.uk/ukvisionstrategy/page.asp?section=32&sectionTitle=About+the+Strategy
Seeing it My Way	
Endorsed by the UK Vision Strategy, Seeing it My Way is a universal quality and outcomes framework for blind and partially sighted people. The following outcomes have been identified: • That I have someone to talk to. • That I understand my eye condition and the registration process. • That I can access information. • That I have help to move around the house and to travel outside. • That I can look after myself, my health, my home and my family. • That I can make the best use of the sight I have. • That I am able to communicate and to develop skills for reading and writing. • That I have equal access to education and life long learning. • That I can work and volunteer. • That I can access and receive support when I need it.	http://www.vision2020uk.org.uk/ukvisionstrategy/
Innovation and Quality in Sight Loss and Blindness Services: Eye Clinic Liaison Officers (2011)	**Reference**
The paper discusses the impact of Eye Care Liaison Officers (ECLO) mainly based in UK eye clinics. Improving staff efficiency and providing accessible information were just some of the outcomes of the ECLO. The author notes that given the increasing numbers of blind and partially sighted people in the UK and the costs associated of sight loss and blindness, the role of ECLO offers commissioners and hospitals an opportunity to improve quality and services.	http://www.rnib.org.uk/aboutus/Research/reports/earlyreach/Pages/ECLO_innovations.aspx
Future Sight Loss UK	**Reference**

Future Sight Loss UK (1): The economic impact of partial sight and blindness in the UK population. Future Sight Loss UK (2): An epidemiological and economic model for sight loss in the decade 2010 to 2020 The results of the study indicate that partial sight and blindness in the adult population places a large economic cost on the UK.	http://www.vision2020uk.org.uk/UKVisionstrategy/page.asp?section=74&sectionTitle=Future+Sight+Loss+UK+Research
Tackling Health Inequalities in Relation to Sight Loss: developing Effective Strategies for Groups Most at Risk (2009)	**Reference**
Key findings of this research are: • Health inequalities are linked to social determinants. They are stubborn, persistent and difficult to change. • Political support, action and evidence and are all needed to make any long-term sustainable impact. • Sight loss is strongly linked with social and economic inequalities. • Ethnicity is also a complex dimension of health inequalities, encompassing social, lifestyle, cultural, environmental, and genetic factors.	http://www.rnib.org.uk/aboutus/Research/reports/prevention/Pages/tackling_health_inequalities.aspx
Primary Care and Community Services: Improving Eye Health Services (2009)	**Reference**
Provides practical advice on how PCTs can: assess their current performance; identify their vision for the future and commission services that meet the needs of their local communities. Eye care and public health professionals need to have a clear voice in key commissioning decisions and a local Eye Care Forum can make a valuable contribution in determining eye care needs. PCTs need to make sure there is appropriate eye care input at Board level whenever decisions about commissioning primary eye health services are taken. In addition, PCTs should have a named Board member with responsibility for primary eye health services.	http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_103083
Good Practice in Sight Guide (2008)	**Reference**
RNIB's 'Good Practice In Sight' guide (October 2008) is designed to assist Local Authorities and their Adult Social Services departments in England achieve best levels of service delivery for blind and partially sighted adults. Key areas of service delivery covered include: • counselling and emotional support. • referrals to low vision and rehabilitation services. • information, advice and advocacy to assist client decision-making. • assessment of needs. • availability of specialist equipment.	http://www.rnib.org.uk/professionals/healthsocialcare/goodpracticeguide/Pages/goodpractice.aspx

• training in the use of equipment. • empowering the service user. • Complaints procedures and inter-agency working.	
Progress in Sight (2002)	**Reference**
Service user-led national standards of social care for visually impaired adults.	http://www.google.co.uk/url?q=http://www.adass.org.uk/old/eyes/progress.pdf&sa=U&ei=eWPzTszVA9DL8QOgkujCAQ&ved=0CBQQFjAC&sig2=UEJNTi0s_QHUHme4jD3P3g&usg=AFQjCNEdvJN83lR1CuZvfCnEyeIZdyarJQ
People from BME Communities and Vision Services: A Good Practice Guide (2008)	**Reference**
Designed to provide information on issues facing people from BME communities with sight loss who would benefit from vision services, as well as suggest ideas to improve BME access to vision services.	http://www.pocklington-trust.org.uk/Resources/Thomas%20Pocklington/Documents/PDF/Research%20Publications/GPG3.pdf
Emotional Support to People with Sight Loss (2009)	**Reference**
Thomas Pocklington Trust research, the key findings of which are: • Sight loss was described by some as devastating, and was linked with an increased need for emotional support. • If a person with sight loss feels that they have good support from family and friends, then they are more likely to adjust well emotionally to sight loss and are less likely to report symptoms of depression. • Whilst there is robust evidence that people with sight loss need emotional support, there is comparatively very little evidence on how to provide that support effectively. Further research is now required to determine effective ways of providing support in response to emotional needs, including the contributions of professional counselling, other psychological therapies, and more informal means of support such as peer groups and befriending schemes.	http://www.pocklington-trust.org.uk/Resources/Thomas%20Pocklington/Documents/PDF/Research%20Publications/RF26.pdf
Optometry - Liberating the NHS: Eye Care – making a reality of equity and excellence (2010)	**Reference**
Eye care can be a key area for delivering on the new kinds of partnership: • in improving information for patients.	http://www.networks.nhs.uk/nhs-networks/healthcar

• in improving outcomes through earlier diagnosis and speeding up both initial access and follow up. • the wider range of therapies now available. • in guaranteeing quality through the use of quality standards. • in delivering an improved service and better value within the new context of more limited funding. • in keeping sight testing as a national service whilst presenting clear development options for GP commissioners on the wider eye care front which can produce better results for local communities, especially in socially deprived areas, very rapidly.	e-professionals-commissioning-network/knowledge-management-centre/opinion-documents/liberating-the-nhs-eye-care-2013-making-a-reality-of-equity-and-excellence
Quick wins and missed opportunities: How local authorities can work with blind and partially sighted people to build a better future (2012)	**Reference**
RNIB research highlights the easy things local authorities can do: • Ensure blind and partially sighted people are at the centre of any decision making which affects their lives and view them as expert voices. • Keep a record of a person's preferred reading format so all council information can be delivered in the correct way. • Provide bedrock of core support to newly diagnosed people to help them adjust to life after sight loss. Delivering practical help and rehabilitation early on will maximise a person's chances of remaining independent and save local authorities money in the long-term.	www.rnib.org.uk/quickwins
Eyes Right	**Reference**
RNIB have developed Eyes Right a screening tool to help anyone identify people living with poor vision in the community. Eyes Right is not a replacement for an eye test carried out by a qualified optician it is designed to give an indication of whether someone needs to see an optometrist.	http://www.rnib.org.uk/eyehealth/lookingafteryoureyes/eyesright/Pages/eyesright.aspx
BIOS Guidelines on Visual Screening in Children	**Reference**
The British & Irish Orthoptic Society (BIOS) supports screening for the detection of visual problems and eye disorders in children at the appropriate age. Early detection is important for improving the provision and outcomes for children with eye disease. The guidelines cite existing national guidelines relating to neonatal period and early infancy as well as primary school age/entry (aged between 4 to 5 years. Published August 2014.	www.orthoptics.org.uk UK retinopathy of prematurity guidelines 2008 http://newbornphysical.screening.nhs.uk http://www.screening.nhs.uk/visiion-child

Environmental and behavioural interventions for reducing physical activity limitation in community-dwelling visually impaired older people (Cochrane Database of Systematic Reviews)	**Reference**
The authors are unable to reach any conclusion about the effectiveness of environmental or behavioural interventions for reducing physical activity limitation in community-dwelling visually impaired older people, as no eligible studies were found. However a number of studies reviewed included only the secondary outcome measures of this review. Although behavioural interventions delivered by occupational therapists have been shown to reduce the rate of falls, they are unable to conclude if this is due to reduced activity restriction (increased mobility) or reduced activity (lessening exposure to risk). There are inconclusive and conflicting results from trials evaluating the effectiveness of behavioural and environmental interventions aimed at improving quality of life. Further research is necessary (such as ongoing Dutch and UK trials considering the effectiveness of orientation and mobility training on activity restriction, physical activity, falls, fear of falling and quality of life in older adults with low vision, and the effect of an occupational therapist delivering home safety modification, coping strategies and exercise with older people with low vision) before any conclusions can be reached. (Skelton DA, Howe TE, Ballinger C, Neil F, Palmer S, Gray L. Environmental and behavioural interventions for reducing physical activity limitation in community-dwelling visually impaired older people. Cochrane Database of Systematic Reviews 2013, Issue 6. Art. No.: CD009233. DOI: 10.1002/14651858.CD009233.pub2.) Published 05/06/2013	http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD009233.pub2/full

Eye diseases and impaired vision as possible risk factors for recurrent falls in the aged : a systematic review (Cochrane Database of Systematic Reviews)	**Reference**
The evidence about poor depth perception/stereoacuity and poor low-contrast visual acuity as risk factors of recurrent falls is quite convincing. Discrepant vision, a decrease in visual acuity, and loss of visual field may be risk factors, but more studies are needed. The results concerning the relationships between poor visual acuity and poor contrast sensitivity and the risk of recurrent falls are controversial. More studies about the relationships between different measures of vision and the risk of recurrent falls are needed before final conclusions about poor vision as a risk factor for recurrent falling can be done. (Salonen L, Kivela SL. (2012) Eye diseases and impaired vision as possible risk factors for recurrent falls in the aged : a systematic review. Current Gerontology and Geriatrics Research 2012: 271481)	http://connection.ebscohost.com/c/articles/87019618/eye-diseases-impaired-vision-as-possible-risk-factors-recurrent-falls-aged-systematic-review
Better data, better care : ophthalmic public health data report 2013	**Reference**
College of Optometrists (01/01/2013) The aim of this report is to stimulate debate and to highlight actions that are needed to improve public eye health.	www.college-optometrists.org/en/.../document-summary.cfm?docid...
Healthy eyes for all : an optical sector strategy to improve ophthalmic public health	**Reference**
College of Optometrists (15/04/14) This document details outcomes from the 2013 roundtable on improving ophthalmic public health and the resulting next steps for the sector.	www.college-optometrists.org/.../393F8450-014B-4745-96699EC1F9929E28

Sight loss UK 2013 : the latest evidence	Reference
Royal National Institute of Blind People (01/05/13) This report brings together the latest evidence relating to sight loss in the UK. "Sight loss UK 2013" is published by RNIB so that everyone working in the sight loss sector, and professionals and policymakers throughout the UK has the most up to date information available to inform their work and decision-making. Indicators are arranged under different themes to help highlight what life is like for people with experience of sight loss, their carers and for those who are at risk of sight loss.	www.rnib.org.**uk**/sites/default/files/**Sight_loss_UK_2013**.pdf
Evidence-based review: Children and young people	**Reference**
RNIB Dec 2013 This review looks in more detail at the experiences of children and young people who are blind or partially sighted. It includes a profile of this group, the policies that govern their access to early support, education, employment, health and social care, and a commentary on what the evidence tells us. There are an estimated 40,000 children and young people (CYP) aged up to 25 years with a vision impairment (VI) of sufficient severity to require specialist support in the UK. Of these approximately 25,000 are under 16 years old.	http://www.rnib.org.uk/sites/default/files/RNIB_evidence_based_review_of_children_and_young_people.pdf
Evidence-based review: People of working age	**Reference**
RNIB Dec 2013 This review looks in more detail at the experience of blind and partially sighted people of "working age". It includes a profile of this group, the policies that govern their employment and economic circumstances, and a commentary on what the evidence tells us. There are almost 80,000 registered blind and partially sighted people of working age in the UK	http://www.rnib.org.uk/sites/default/files/RNIB_evidence_based_review_of_working_age_people.pdf
Evidence-based review: Older people	**Reference**
RNIB Feb 2014	http://www.rnib.org.

In this review we define “older people” as 65 and over, unless otherwise stated. We have used 65 as it is the accepted chronological age of an older person among most developed world countries. However, in a few cases we have been limited by alternative definitions used in the source material. We have also given some statistics relating to people aged over 85 because this is the fastest growing age group in the UK and the incidence of sight loss significantly increases for people aged over 85. An estimated 1,430,000 people aged 65–84, and 580,000 aged 85 and over are living with sight loss in the UK . The leading causes of sight loss in older people in the UK are uncorrected refractive error, age-related macular degeneration (AMD), cataract, glaucoma and diabetic retinopathy.	uk/sites/default/files/RNIB_Evidence_based_review_older_people_0.pdf
ADASS position statement on visual impairment rehabilitation in the context of personalisation. December 2013	**Reference**
This document has been produced jointly by the ADASS Physical and Sensory Impairment and HIV/AIDS network and the ADASS Workforce Development Network. This position statement on visual impairment rehabilitation was first issued in 2011 and has been updated for re-issue. It reflects the content of the ‘Seeing it my way’ outcomes framework and the Adult UK sight loss pathway[3], both of which are core components of the UK Vision Strategy (2013-2018) published in June 2013. It also addresses concerns raised by the Royal National Institute of Blind People (RNIB), which identified a reduction in the availability of local authority rehabilitation services, and also revealed that around 25% of local authorities were not providing rehabilitation services until after a Fair Access to Care Services (FACS) assessment has been conducted[4]. This position statement re-affirms the ADASS position on this issue.	http://adass.org.uk/Phys_Sens_Impair_HIV_AIDS_Home_Page_644.aspx
Guidance for commissioners	**Reference**

[3] Seeing it My Way and Adult UK Sight Loss Pathway
[4] RNIB (2013) Facing Blindness Alone

The College of Optometrists have developed guidance for commissioning, with the Royal College of Ophthalmologists. It has been written by leading eye care clinicians, with support from experienced clinical commissioners at the National Association of Primary Care, Royal College of General Practitioners and the Department of Health's Right Care Team Published Nov 2013 The College of Optometrists	http://www.college-optometrists.org/en/EyesAndTheNHS/guidance-for-commissioners.cfm
Focus on falls	**Reference**
Across the UK, one in three people over 65 will fall every year. Falls are the most common cause of hospitalisation for people aged over 65, and of accidental death in those aged over 75. Fractures from falling cost the NHS approx. £2.2 billion per annum. Failing vision can significantly increase the risk of falling, especially in older people and there is much that can be done to support falls teams in preventing vision-related falls and supporting patients. The College of Optometrists' report, Falls in Focus (PDF, 1MB), provides a clear picture of vision assessment within falls services, highlights variations in care and suggests solutions to policy makers and the optometric profession, which the College will be actively promoting. Published June 2014 The College of Optometrists	http://www.college-optometrists.org/en/EyesAndTheNHS/guidance-for-commissioners.cfm

3.11 WHAT WORKS – KEY THEMES

- Improved pathways between Health and Social Care.
- Importance of good eye care and early intervention.
- Early diagnosis of eye conditions.
- Need for improved access to information.
- Access to assistive technology.
- Sight impairment has an impact on other long term conditions and their self management.
- Services need to consider environmental factors in terms of access.
- The benefits of Eye Clinic Liaison Officers.

3.12 Service User Experiences

A review of previous service user events including the You Share, We Share conference in 2010 and outcomes from Kent Association for the Blind's Service User Group highlighted the following themes.

Access to Information:

- The need for improved access to information in all formats – audio, large print, Braille.
- Increased number of groups and forums as a follow up to events for voicing opinions and views also in order to receive feedback about positive developments being made.
- Lack of communication e.g. when you go to hospital for an appointment there's a lack of information, leaflets and posters, and you have to ask for information and advice.

Access to Services:

- Meetings accessibility: need to be easily accessible by public transport.
- Gateways are not user friendly.
- Difficulty accessing LVA Clinics through KAB when patient is under a hospital with its own LVA Clinic.
- Abolition of Attendance Allowance.

Education:

- Need for sensory education and awareness training for service providers and also within schools.

Transport and Highways:

- Better information and provision on public transport – for example Lack of announcements at train stations and audio services on buses.
- The problems caused by shared spaces and street furniture, such as A-Boards.
- Taxi's refusing to carry and/or charging extra for Guide Dogs.
- Cars parked on footpaths/pavements.
- Cyclists not using their bells.
- Shared surfaces.

Employment

- Greater access to employment in order to overcome the benefit trap.
- Inconsistencies of benefits with regard to returning to work, many people want to return to the workplace.

3.13 Public Health Outcomes Framework

The Public Health Outcomes Framework aims to improve and protect the nation's health and wellbeing and improve the health of the poorest fastest. Two main outcomes cover increased healthy life expectancy and reducing differences in life expectancy and healthy life expectancy between communities.

Domain 4 has an objective of reducing the number of people living with preventable ill health and people dying prematurely whilst reducing the gap between communities. Outcome 4.12 relates to Preventable Sight Loss.

Prevention of avoidable sight loss is recognised as a key priority for the WHO global initiative for the elimination of avoidable blindness by 2020-Vision 2020- The Right to Sight, to which the UK is a signatory and which is also a key priority for Vision 2020UK and the UK Vision Strategy. It is particularly important issue in the context of an ageing population.

The indicator has four components:-

i. Crude rate of sight loss due to Age-Related Macular Degeneration (AMD) in persons aged 65 and over per 100,000 population.
ii. Crude rate of sight loss due to glaucoma in persons aged 40 and over per 100,000 population.
iii. Crude rate of sight loss due to Diabetic Disease in persons aged 12 and over per 100,000 population.
iv. Crude rate of sight loss certifications per 1000,000 population.

Data for Kent and Medway has recently been published (April 20114) which shows indicators 4.12.i and iv as "green" and indicators 4.12.ii and iii as "amber" for both areas.

Kent & Medway's Public Health Outcomes Framework July 2013

PHOF Indicator:	Figures need to be:	England	Published KCC	Published Medway	Time period
4.12i Preventable sight loss – age related macular degeneration (AMD) in those aged 65+ years (per 100,000)	**Low**	**109.4**	**93.6**	**34.8**	**2010/11**
4.12iv Preventable sight loss – sight loss certifications(per 100,000)	**Low**	**43.1**	**37.5**	**19.3**	**2010/11**

Source: Public Health England -July 2013.

PHOF Indicator:	Figures need to be:	England	Published Medway	Published KCC	Time period
4.12i Preventable sight loss – age related macular degeneration (AMD)) in those aged 65+ years (per 100,000)	**Low**	**104.4**	**76.7**	**87.0**	**2012/13**
4.12iv Preventable sight loss – sight loss certifications(per 100,000)	**Low**	**42.3**	**23.9**	**34.2**	**2012/13**

PHOF Indicator:	**Figures need to be:**	**England**	**Published KCC**	**Published Medway**
4.12ii - Preventable sight loss – glaucoma (in those aged 40+ years) (per 100,000)	**Low**	**11.8**	**10.5**	**4.8**
4.12iii - Preventable sight loss - diabetic eye Disease (in those aged 12+ years) (per 100,000)	**Low**	**3.6**	**2.6**	**5.3**

Source: Public Health England –May 2014.

Kent & Medway's Public Health Outcomes Framework May 2014

PHOF Indicator:	**Figures need to be:**	**England**	Published Medway	**Published KCC**
4.12ii - Preventable sight loss – glaucoma (in those aged 40+ years) (per 100,000)	**Low**	**12.5**	**8.7**	**8.9**
4.12iii - Preventable sight loss - diabetic eye Disease (in those aged 12+ years) (per 100,000)	**Low**	**3.5**	**No data – small count**	**2.6**

Source: Public Health England -July 2013.

3.14 Improving eye health and reducing sight loss – a Call to Action

The Area Team with the support ofthe Local Eye Health Network (LEHN) held an event on the 16th July 2014 with the aim of bringing together representation of all stakeholders from across Kent and Medway locality which have an interest in eye health.
The Area Team invited representatives from public bodies, commissioners, hospitals, charities and support networks to gather responses and suggestions on the questions posed Nationally by NHS England. The aim was to stimulate discussion on developing better and more integrated care. Discussion particularly focussed on establishing where current services work well and how they can be improved from the perspective of the most important stakeholder of all, the patient.
Key points highlighted were:

- Community-based services to best use the skills mix available – it was felt by those present that some patients could be seen within the community and not in hospital if the skills already held by the eye health professionals were better utilised.
- Same service and pathway across the area/CCGs working in a consistent way – this was felt to be important to ensure continuity of service provision across the locality so that the current 'post-code lottery' for patient services were removed. Fewer errors would occur if the correct pathway was being followed if across the locality all were using the same pathway.
- Use of IT to improve communication and speed up processes – nhs.net across all practices (this has been arranged within Kent and Medway and are being disseminated) and the possibility of one IT system so that patient data could be shared between practice and hospitals.
- Education of patients (children and adults)- TV or newspaper campaigns to advise patients to look after their sight.
- Education of professionals - not only in the field of eye health but also GP's, health visitors etc to ensure eye health is discussed with patients along with other health issues.
- Wider social context of importance of eye health – education of carers
- Improvement of inter-professional relationships and support organisations
- Change the GOS contract to improve Primary Care – a large number of delegates felt that the current GOS contract does not reflect a good use of the skill-set available within Primary Care. It was felt the GOS contract required a re-design to best answer patient needs.

4 UNMET NEEDS AND SERVICE GAPS

By comparing the overall need within Kent and Medway and comparing it with the level of service provision currently in place it is possible to identify gaps in service provision or where there is over-provision of services.
The General Ophthalmic Services (GOS) contract is managed by NHS England and is for sight test only. Further services are commissioned by the eight Clinical Commissioning Groups (CCGs) that cover the Kent and Medway Area.
The following table lists the current service provision for eye conditions outside of the across the area by Clinical Commissioning Group as of August 2014. The table also highlights gaps in the service provision across the Area.

A recommendation of this Needs Assessment is that future Commissioning Strategies use the table to focus on streamlining services across the Area and reduce health inequalities by eliminating gaps in service provision.

OPHTHALMOLOGY SERVICES BY CCG MAPPING

CCG		Glaucoma		Acute Eye Conditions	
		To reduce inward referrals	To repatriate secondary care to primary care.	Community providers	Acute Trust provider
Area	**Lead**				
West Kent	Caroline Friday	1. Repeat fields and pressures scheme 2. COT triage & COT clinics	Stable glaucoma cases repatriated from Acute Trusts to COT.	APCOS service	Maidstone Hospital Eye Department "Rapid Access"
Swale* DMC ophthalmology clinics cut across a number of these services	Jim Loftus	Repeat IOP scheme (pilot)	No current provision	PEARS (pilot stage)	Maidstone Hospital Eye Department "Rapid Access"
Medway	Tracy Bishop	COT triage & COT clinics	No current provision	PEARS	Maidstone Hospital Eye Department "Rapid Access"
Dartford & Gravesham	Chris Singleton	COT triage & COT clinics	No current provision	PEARS to be initiated later in the year	Queen Mary's Sidcup (managed by King's) "Rapid Access"
Canterbury & Coastal	Paula Smith	Repeat IOP scheme	Community Glaucoma Network Service		William Harvey Hospital Emergency Eye Clinic.
Ashford	Paula Smith	Repeat IOP scheme	Community Glaucoma Network Service		William Harvey Hospital Emergency Eye Clinic.
Thanet	Paula Smith	Repeat IOP scheme	Community Glaucoma Network Service		William Harvey Hospital Emergency Eye Clinic.
South Kent Coast	Paula Smith	Repeat IOP scheme	Community Glaucoma Network Service		William Harvey Hospital Emergency Eye Clinic.

OPHTHALMOLOGY SERVICES BY CCG MAPPING EXERCISE (Cont')

CCG		Eye Health Care for the Learning Disability/ those with reduced mental capacity	Cataract Services	
		(note: see ability campaign)	Community Providers	Acute Trust Provider
Area	**Lead**			
West Kent	Caroline Friday	Check with NHS England/PH England.	Community Optometry Two Week post op assessment service	MTW Acute Trust and alternative providers
Swale* DMC ophthalmology clinics cut across a number of these services	Jim Loftus		Swale patients have access to East Kent services _ GP practices with a community contract to provide.	MTW Care UK
Medway	Tracy Bishop		Hospital Eye Service Refractive Audit Scheme by community optometrists – further information being sought.	MTW Care UK
Dartford & Gravesham	Chris Singleton		No current provision	Queen Mary's Sidcup Will Adams BMI Fulcom Manor MTW
Canterbury & Coastal	Paula Smith		1 Community Optometry Referral Scheme 2 GP Practices with a community contract to provide.	Acute Trust Alternative provider
Ashford	Paula Smith		As above	As above
Thanet	Paula Smith		As above	As above
South Kent Coast	Paula Smith		As above	As above

OPHTHALMOLOGY SERVICES BY CCG MAPPING EXERCISE (Cont')

CCG		Children's Vision Screening and services	Low Visions services	
Area	**Lead**	Community Providers	Community providers	Acute Trust Provider
West Kent	Caroline Friday	Awaiting clarification from NHS England/PH England		MTW Acute Trust
Swale* DMC ophthalmology clinics cut across a number of these services	Jim Loftus	Awaiting clarification from NHS England/PH England		MTW Acute Trust – gap in service for DMC patients
Medway	Tracy Bishop	Reception class orthoptist led vision screening. Additional information being sought.		MTW Acute Trust.
Dartford & Gravesham	Chris Singleton			Queen Mary's Sidcup
Canterbury & Coastal	Paula Smith	Pre-school and school entry orthoptist led vision screening.		Kent & Canterbury & QEQM Margate
Ashford	Paula Smith	Pre-school and school entry orthoptist led vision screening.		Kent & Canterbury & QEQM Margate
Thanet	Paula Smith	Pre-school and school entry orthoptist led vision screening.		Kent & Canterbury & QEQM Margate
South Kent Coast	Paula Smith	Pre-school and school entry orthoptist led vision screening.		Kent & Canterbury & QEQM Margate

5. RECOMMENDATIONS FOR COMMISSIONING

5.1 In policy terms the outcome of this Needs Assessment will be the development of a joint commissioning strategy and plan. This will include a detailed action plan which will provide a framework to implement the recommendations listed below:

- Ensure the impact and burden of glaucoma care is managed with appropriate use of step down care to primary care practitioners / optometrists. Ensure equitable consistent and timely access to care for glaucoma.

- Ensure the burden of age-related macular degeneration care is managed with appropriate use of step down care to primary care practitioners / optometrists. Ensure equitable consistent and timely access to care for macular degeneration care.

- Ensure the burden to the health economy is minimized when commissioning services for age-related macular degeneration by using safe and effective therapies.

- Ensure equitable consistent and timely access to care for cataract services with appropriate primary care practitioners / optometrists for pre and post-operative assessments.

- Ensure consideration of sight impairment issues and services in DH Long Terms Condition agenda, including risk stratification and integrated health and social care teams.

- As part of any Sensory Public Health Improvement Strategies carry out health improvement campaigns aimed at raising people's awareness of the need for regular sight tests, targeted particularly at risk groups.

- Improve the provision of information on services and support available, ensuring it is available at key locations and is available in accessible formats.

- Develop and implement clearer pathways for accessing services; and improve processes for joined up assessment and delivery of services, for example Eye Clinic Liaison Officer posts.

- Carry out sensory impairment awareness training of health and social care staff to help identify individuals with sight impairment and refer on to appropriate services.

- Transform services by developing new ways of working e.g, clinical approach for equipment assessment and provision to achieve efficiencies and meet increasing demand.

- Establish on an on-going basis for self-management and peer support programmes for vision impaired people.

- Continue to develop personalised services for vision impaired people, maximising opportunities for choice and control.

- Ensure vision impaired people benefit from the opportunities to be gained from new technologies including Telecare and communication aids.

- Ensure the development of appropriate health and social care services to meet the specific eye health needs of people with learning disabilities.

- Ensure the development of appropriate emotional support and mental health services for sight impaired at the point of diagnosis.

- Ensure effective joint working between health and social care services for vision impaired people.

- Ensure an effective low vision service for sight impaired adults and children.

- Establish child centred clinics, with a multi-disciplinary approach facilitating access to a range of services.

- Develop consistent and equitable vision screening for children.

- Further work to be carried out on locality prevalence rates, service mapping, current levels of activity, pathways and the identification of additional unmet needs and gaps in services.

- Wider engagement with service users and other stakeholders.

- Development of a Vision Commissioning Strategy and Implementation Plan.

- Closer working with the Falls Service to better understand the impact that vision impairment has upon falls prevalence.

- Health and Social Care partners to support any current plan(s) developed by the diabetic screening service Commissioners and Providers so as to reduce DNA rates.

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