



CLINICAL COUNCIL
FOR EYE HEALTH COMMISSIONING

Vision screening provision in children aged 4-5 years in England

Findings from a Freedom of Information Request 2019

March 2020

Executive Summary

The UK National Screening Committee recommends orthoptic-led screening for reduced vision for all 4-5-year old children (<https://legacyscreening.phe.org.uk/vision-child>)¹. Children may not complain of reduced vision particularly if it is in one eye. Common causes for reduced vision detected by screening include refractive error (long or short sight) and strabismus (squint) which interfere with focusing and the development of pathways between the eye and the brain in early childhood, resulting in reduced vision. This development disorder is known as amblyopia (“lazy eye”).

Amblyopia is largely correctable up to the age of 8 years. Reduced visual acuity at school entry has been shown to be associated with reduced early literacy^{2, 3}, and persistent amblyopia has been associated with a higher risk of bilateral vision impairment in later life due to reduced vision in the non-amblyopic eye from a variety of causes^{4, 5}.

Since 2015 local authorities have been responsible for delivering a screening service to detect reduced vision in children at school entry (age 4-5yrs) as part of the healthy child programme. A Freedom of Information request (FOI) in October 2015 sent to Local Authorities (LA) in England by the Clinical Council for Eye Health Commissioning (CCEHC) found that 55% (n=83/151) directly commissioned a vision screening service. Anecdotally at that time, the British and Irish Orthoptic Society (BIOS) were also aware of a number of orthoptic-led screening services that continued to be commissioned by Clinical Commissioning Groups (CCGs), but this remained unquantified.

Public Health England (PHE) subsequently developed service specifications and information materials for parents, carers and teachers. These were first published in 2017 and updated in 2019.⁶ (<https://www.gov.uk/government/publications/child-vision-screening>)

BIOS and the CCEHC present here the current provision of children’s vision screening across England, using data from a FOI request in 2019.

Key findings

- A response of 98% from local authorities and from 98% of NHS Trusts was obtained
- 94% of local authority *areas* provided some form of a child vision screening service
- Where screening services are provided, less than half (47%; n=47/148) are *fully* compliant with PHE service specifications⁶
- Transfer of responsibility for commissioning vision screening services remains incomplete. 30% of services continue being commissioned by CCGs, and a further 5% of services are either not formally commissioned or there is uncertainty over who commissions the service
- There are significant gaps in the information on the availability of screening services for eligible children in different school or educational settings, and on the uptake of the screening offer.

Background

Common causes of reduced vision in young children include refractive error (long or short sight) and strabismus (squint), which can lead to amblyopia (lazy eye). Amblyopia is largely correctable up to the age of 8 years. Children may not complain of reduced vision particularly if it is in one eye, so there may be few signs and symptoms to observe making detection difficult for parents/carers.

Recent research findings from participants attending school vision screening has demonstrated an association between reduced vision at school entry and developing literacy^{2, 3}. Early literacy is a key indicator of future educational attainment⁷. Therefore, equitable access to population-based screening for vision defects in early childhood is an important factor towards achieving this. Persistent amblyopia has been associated with a higher risk of bilateral vision impairment in later life due to reduced vision in the non-amblyopic eye from a variety of causes^{4, 5}.

The UK National Screening Committee recommends that screening for reduced vision is offered to all children aged 4 – 5 years and this screening service should be organised and led by orthoptists¹. This will ensure that every child has the opportunity to have their vision assessed using standardised, validated methods. The screening results should be recorded on the child health information system⁸ which can also provide a means to ensure all eligible children are screened, especially those who are vulnerable or at particular risk e.g. learning disabilities. Public Health England (PHE) first published service specifications and information materials for parents, carers, and teachers in 2017, with a recent update in 2019⁶.

The transfer of responsibility from Clinical Commissioning Groups (CCGs) to Local Authorities (LA) for commissioning vision screening in 2015 posed a potential risk to continuity of service provision. The Clinical Council for Eye Health Commissioning (CCEHC) conducted a Freedom of Information (FOI) request in October 2015 to assess this risk. The question put forward to the LAs was whether they commissioned vision screening or not; and if not why? 55% (n=83/151) of LA reported that they directly commissioned a vision screening service. Anecdotally at the time, the British and Irish Orthoptic Society (BIOS) were aware that many orthoptic-led screening services were being commissioned by CCGs, but this remained unquantified.

In 2019, BIOS and the CCEHC considered that it was timely to repeat a FOI request to LAs combined with a more detailed FOI request to all heads of orthoptic services in NHS Trusts to obtain a more complete picture of current screening service provision. This would include identifying those areas where services were commissioned by CCGs, those services which were compliant with PHE service specifications, and to gather some information on the arrangements for onward care of children who were found to have reduced vision during screening.

Aim of the report

This report illustrates the current provision and commissioning of services for vision screening in children aged 4-5 years in England, and their compliance with PHE service specifications⁶. A summary of the vision screening specification is provided below (a more complete overview is provided in Appendix A).

PHE advise that child vision screening services should:

- Be offered to all eligible children who turn 4 in the year preceding the beginning of the school year, including those who are home schooled or in private schools.
- Be orthoptic-led. i.e. performed by **either**
 - a registered orthoptist
 - or**
 - a vision screener with competency confirmed by a registered orthoptist
- Provide screening training and competency assessment for all screeners.
- Use the Keeler crowded logMAR test to measure visual acuity.
- Refer all children with a visual acuity of less than 0.20 logMAR in one or both eyes for a detailed diagnostic assessment which could take place in the hospital eye service or at the local optical practice⁹.
- Have internal quality assurance and risk management processes.
- Undertake regular and accurate data collection and audit and identify, as early as possible, children that may have been missed or where screening results are incomplete.

Methodology

- FOI requests were sent during the latter half of 2019 to both LAs and heads of orthoptic services in NHS Trusts.
- 150 local authorities were contacted by the CCEHC (Appendix B):
 - 27 County councils
 - 54 English Unitary Authorities
 - 33 London boroughs
 - 36 Metropolitan Councils
- 117 NHS Trusts with Orthoptic Services were contacted by BIOS (Appendix C)

Health services for the Isle of Scilly are shared with Cornwall and therefore no separate FOI was sent to the local authority there.

The commissioning source of vision screening services was mapped between the data provided by the LA and the heads of orthoptic services. Therefore, the data on vision screening services will be presented by *local authority areas* despite some services being commissioned by CCGs.

Findings

Responses were received from 98% of LAs (n=147) and 98% of NHS Trusts (n =115), providing information on vision screening services for 148 *local authority areas*. Vision screening was commissioned by LAs in 90 areas and CCGs in 42, with commissioning unclear in the remaining 7 areas. Data was not received from three LAs. Of the 148 local authority areas, 139 (94%) had some form of vision screening service, either commissioned by the LA or by the CCG, with 70 (47%) of these being fully compliant with PHE service specifications⁵. Nine local authority areas (6%) offer no vision screening service at all Table 1.

Vision screening services in local authority areas (n=148):

Table 1: Nature of vision screening service commissioned in local authority areas

Orthoptic-led, PHE Compliant vision screening	70
Non-PHE compliant vision screening	58
Screening Service exists but is unclear if PHE-compliant	11
No service	9

Of the 58 non-PHE compliant services, 8 were orthoptic-led (i.e. children were being screened either by an orthoptist or a screener trained by an orthoptist), but failed to meet the PHE service specification in other areas, for example use of a non-standardised vision test or lack of appropriate internal governance.

Vision screening service data:

Key features of the commissioned programme:

In addition to establishing the provision of vision screening we obtained data regarding the service, for example the settings and screening personnel (Table 2, 3 and 3a).

Table 2: Settings for vision screening service delivery (n=139)

State schools only	37
State schools and screening in private/independent schools	7
State schools and screening in the community or at home for those who are home educated	28
State schools and in both private/independent schools and in community or at home for those who are home educated	14
No specific details of service	53

As shown in Table 2, there are significant gaps in the information on the availability of screening services in different school or educational settings.

Table 3: Screening personnel - Orthoptic-led (n=78)

Carried out by orthoptists	33
Carried out other staff – mainly school nurses or health care assistants – trained or supervised by an orthoptist	44
No details provided	1

Whilst, the screening personnel for 78 services was led by orthoptists (Table 3), as indicated earlier eight of these were not compliant with the PHE service specification.

Table 3a: Screening personnel - other (n=61)

School nurses	28
School nurse assistants	6
Health care assistants overseen by school nurses	9
Support workers overseen by school nurses	2
School health screeners	6
Community nursery nurses	1
No details provided	9

Monitoring process for vision screening

Trusts and LAs were asked to describe the monitoring procedures for ensuring every eligible child in the LA or CCG has been screened. Over a third of the services provided either no information on monitoring procedures or had no mechanism in place (Table 4). Monitoring mechanisms included cross referencing children with school lists or authorities producing performance reports. However, a number of services highlighted that there was difficulty in accessing children who were in private schools or home schooled.

Table 4: Monitoring processes for vision screening of all eligible children in each LA area (n=139)

Monitoring process in place but no details provided (i.e. performance reports, contract monitoring meetings)	46
Monitoring in place eg. named children to be screened cross referenced with school lists of children in school	45
No monitoring in place	9
No information provided	39

Vision screening commissioning for 2020/21 (n=139)

The data from LAs and the heads of orthoptic services in NHS Trusts indicated that vision screening was being recommissioned by either the LAs or CCG in 90.6% (N=126) of the areas in England. However, six LAs were reviewing the services and were under threat of decommissioning (Table 5). Insufficient funding and that vision screening is not a mandated service were the main reasons given by nine LAs for not commissioning the service (Table 6). Of these services, one service indicated that it had recently been decommissioned and only one LA indicated that a new vision screening programme was being considered for the next financial year (2020/21).

Table 5: Vision screening commissioning for financial year 2019/20 (N=139)

Yes or multi-year programme	126
No	1
Programme being reviewed	6
No information provided	6

Table 6: Reasons for no vision screening service (N=9)

Not a mandated local authority responsibility	2
Insufficient funding	4
No detail provided	3
No response	0

Conclusion

Vision screening is currently available in 94% of LA areas in England, commissioned by either LA or CCGs. This is a much better picture of service availability than was expected, and given the current financial constraints this is welcomed.

However, transfer of responsibility for commissioning the screening service remains incomplete and there is considerable variation in the compliance of vision screening services with PHE service specifications, leading to disparities in service provision and quality assurance. Less than half (47%) of the vision screening services currently provided are fully compliant with PHE screening service specifications⁶. These services specifications currently sign-post to a detailed diagnostic pathway for children who are found to have reduced vision, without further details on the necessary post-screening arrangements or standards for this, or how it is to be commissioned or provided.

Six of the currently commissioned services indicated that the vision screening service is under review and nine areas have no provision.

There is uncertainty and inconsistency in the monitoring processes of children being offered vision screening across different types of school or educational settings, and their uptake of the screening offer. The development of standards to monitor coverage and other key performance indicators (KPIs) will ensure that all children who are eligible for vision screening are offered this service.

Recommendations and Next Steps

1. Child Vision Screening Services must comply with the PHE service specifications for vision screening.

Action:

BIOS to raise awareness amongst commissioners and providers to address the variations in meeting PHE service specifications and the gaps in service availability for all eligible children in different school or educational settings.

BIOS to follow up non-compliant services and provide information and support to commissioners to allow them to make necessary changes to service specifications

2. Standards for the coverage, uptake and outcomes of screening, and the processes for their reporting and quality assurance are urgently required.

Action:

This is currently being undertaken by the PHE Standards Development Group, which is also planning to establish a minimum data set and KPIs for vision screening services

3. With the merger of CCGs clarity from PHE and NHS England is needed on the responsibility for commissioning vision screening services and their transition within STP and ICSs, to maintain existing service provision for children.

Action:

CCEHC to seek clarity

4. There is a need for a post-screening pathway for children who are found to have reduced vision. This should include service standards (waiting times for a post-screening assessment, clinical management and outcomes), and will be a multi-disciplinary pathway across primary and secondary care.

Action:

CCEHC to develop and publish service requirements for a post-screening pathway

References

1. UK National Screening Committee. Screening for vision impairment for 4-5-year old children. (<https://legacyscreening.phe.org.uk/vision-child>.)
2. Bruce A, Fairley L, Chambers B, Wright J, Sheldon TA. Impact of visual acuity on developing literacy at age 4-5 years: a cohort-nested cross-sectional study. *BMJ Open*. 2016 Feb 16;6(2):e010434. doi: 10.1136/bmjopen-2015-010434
3. Bruce A, Kelly B, Chambers B, Barrett BT, Bloj M, Bradbury J, Sheldon TA. The effect of adherence to spectacle wear on early developing literacy: a longitudinal study based in a large multiethnic city, Bradford, UK. *BMJ Open*. 2018 Jun 12;8(6):e021277. doi: 10.1136/bmjopen-2017-021277
4. van Leeuwen R, Eijkemans MJC, Vingerling JR, et al. Risk of bilateral visual impairment in individuals with amblyopia: The Rotterdam Study. *Br J Ophthalmol* 2007; 91(11):1450–1451.
5. Rahi J, Logan S, Timms C, et al. Risk, causes, and outcomes of visual impairment after loss of vision in the non-amblyopic eye: a population-based study. *Lancet* 2002;360: 597–602.
6. PHE Child Vision Screening Service Specifications and Resources. <https://www.gov.uk/government/publications/child-vision-screening> (accessed February 2020)
7. Marmot M. Fair Society, Healthy Lives. The Marmot review Executive Summary. London: The Marmot Review 2010.
8. PHE Child Vision Screening Pathway. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/652699/Child_vision_screening_pathway.pdf (accessed February 2020)

The British and Irish Orthoptic Society is the professional body and trade union for orthoptists, orthoptic students and orthoptic technicians and assistants across the UK and Ireland. It oversees standards and professional practice guidelines for orthoptists and its clinical advisory group on Vision Screening promotes equitable access to evidence-based services. Orthoptists are the experts in diagnosing and treating defects in eye movement and problems with how the eyes work together, called binocular vision. These can be caused by issues with the muscles around the eyes or defects in the nerves enabling the brain to communicate with the eyes. <https://www.orthoptics.org.uk/>

The Clinical Council for Eye Health Commissioning (CCEHC) is an independent advisory body providing evidence-based national clinical leadership, advice and guidance to policy makers in health, social care and public health, and those commissioning and providing eye health services in England

Appendix A

Public Health England Child Vision Screening Service Specifications and Resources

Vision Screening Specification	
Aims	Descriptor
To identify children aged 4 to 5 years with impaired sight enabling timely intervention	Provision of an orthoptic provided/orthoptic led service meeting recommended standards , guidance and policies
Roles and accountabilities	
Local Authority (previously CCG)	Responsible for commissioning this service and managing performance of the pathway
The Service Provider	Responsible for the provision of a robust pathway to provide: <ul style="list-style-type: none"> • day to day oversight of all aspects of the programme • prompt and safe onward referral to the appropriate service • a local coordinator: the operational lead for the local programme • a clinical lead: a clinician trained in the diagnosis and management of visual function and eye movement disorders, providing support and clinical oversight
Objectives	
Identify the eligible population	The eligible population of children aged 4 to 5 years is identified by the appropriate local authority (LA). Eligible children are identified as all children who turn 4 in the year preceding the beginning of the school year.
Invite all eligible children for screening	Offer parents/carers/guardians the opportunity to have their children screened for reduced vision ensuring fair access for all children (includes private schools & home schooled children).
Provide written information	Written information with a choice regarding their child's participation in the screening programme is provided to parents/carers with the offer of vision screening.
Informed consent (opt-in or opt-out)	The commissioner should determine whether to provide an opt-in or an opt-out service. The screening offer and any subsequent declined offer is recorded, with decline being a recorded outcome of the screening offer.
Personnel	Providers should have one or more named individuals responsible for co-ordinating the programme. All children who participate are tested by an orthoptist-led screening service. Either: a. screening performed by a registered orthoptist or b. a vision screener with competency confirmed by a registered orthoptist
Competence	Providers must arrange orthoptic-led screener training and competency assessment of vision screeners. It is recommended that annual online e-learning is undertaken. https://www.e-lfh.org.uk/programmes/nhs-screening-programmes/
Visual Acuity Testing	The Keeler crowded logMAR test is the only recommended test for vision screening in the UK. Every child should have each eye tested separately and their visual acuity measured using this test.

Onward referral	<p>All children with a visual acuity less than 0.20 logMAR (Keeler crowded logMAR) in one or both eyes must be referred on for a detailed diagnostic assessment. This includes: ocular motility, binocular function, cycloplegic refraction, and examination of optical media and retina/fundus.</p> <p>Children unable to complete the screening test due to lack of co-operation either undergo a second testing attempt or are referred directly onto community or hospital eye service or local optical practice ^{a,b}.</p>
Risk assessment	<p>Providers should have an internal quality assurance and risk management process that assures the commissioners of their ability to manage the risks of running a screening programme</p>
Deliver a safe, effective service	<p>Providers must co-operate in undertaking regular and accurate data collection and audit and respond in a timely manner to their recommendations.</p> <p>All providers should operate failsafe systems that can identify, as early as possible, children that may have been missed or where screening results are incomplete</p>

- a. Vision Screening for 4-5 year olds. Information for parents. Public Health England. 2017.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/653434/vision_screening_parent_leaflet.pdf
- b. Diagnostic Pathway following child vision screening. Royal College of Ophthalmologists. <https://www.rcophth.ac.uk/wp-content/uploads/2017/10/Diagnostic-Pathway-following-Child-Vision-Screening-Oct-2017.pdf>

Appendix B

FOI request to Local Authorities in England

Dear FOI officer

The British and Irish Orthoptic Society on behalf of the Clinical Council for Eye Health Commissioning are writing to make an open request for information under the Freedom of Information Act 2000.

There is a national recommendation, by the UK National Screening committee, to offer orthoptic-led vision screening to children at aged 4-5 years, mainly to ensure that amblyopia (reduced vision), is detected and treated at an age where treatment has the potential to improve vision.

Public Health England introduced service specifications for a Vision Screening Service in 2017. We are concerned that a Vision Screening service is currently not being offered to all children aged 4-5 years in England leading to inequality of eye health care provision.

We are aware that the responsibility for commissioning 0 - 5 year children's public health services has transferred from the NHS to Local Authorities; and that in addition there are to be significant cuts to Local Authority Public Health funding which may affect these services

We would be grateful if you could answer the following questions (for the financial year 2019/2020) to determine the arrangements made by your local authority to commission vision screening for your eligible resident population and it's quality assurance.

We look forward to hearing from you.

Yours sincerely,

Olivier Denève

Secretary to the Clinical Council for Eye Health Commissioning

Questions

1. Do you currently commission vision screening in school of children aged 4-5 years old? Y / N

If YES, would you please:

2. List the key features of your commissioned screening service:

a. Settings (e.g. school).

- b. Screening personnel (e.g. orthoptist, school nurse or other health professional).
 - c. The onward care pathway for children who fail the vision screening.
 - d. The quality assurance (QA) processes (audit) and identified clinical lead for the vision screening service
3. Tell us how you monitor if every child in your Local Authority has been tested (including those in private schools or those who are home-schooled).
4. Tell us whether the programme will be commissioned again in the next financial year
5. If NO- you do not currently commission a vision screening service in your area, would you please tell us:
- a. why you do not commission vision screening?
 - b. whether a service is planned for the next financial year (2020/21)?
 - c. whether an existing service in your area has been recently decommissioned?

Appendix C

FOI request to Heads of Orthoptic Services in NHS Trusts, England

Dear Head of Orthoptic Service,

The British and Irish Orthoptic Society on behalf of the Clinical Council for Eye Health Commissioning are writing to make an open request for information under the Freedom of Information Act 2000.

The purpose of this FOI request is to establish the provision of 'orthoptic-led' and/or 'non-orthoptic-led' vision screening across England.

Definition of 'Orthoptic-led':

A service that is led by a designated Orthoptist who is responsible for all aspects of delivery of vision screening to all eligible children. This includes leadership of the personnel delivering the screening, the care pathway and audit and quality assurance mechanisms. The testing of children may be either Orthoptist delivered or delivered by a vision screener trained by an orthoptist.

We would be grateful if you could please answer the following questions and their subsections (where applicable) for the financial year 2019/20 to allow us to establish current provision and support orthoptists in the future to deliver an 'orthoptic led' service.

Many thanks for providing this information, it will be extremely useful to support the objective of delivering equitable orthoptic led vision screening for ALL 4-5 year old children by mapping out current provision. If you have any further queries, please do not hesitate to contact [email address]. We look forward to hearing from you.

Questions

1. How many LA and CCGs are served by your organisation for all acute, community and specialist services?

Please list them all.

2. Does your organisation provide the Orthoptic Services for the resident populations of these LAs and CCGs? Y/N

3. Is a vision screening service currently available in the area (by LA or CCG) served by your organisation for providing Orthoptic Services? Y / N

If NO - please list the LA/CCG that do not provide a vision screening service

If YES – For each commissioned screening service please indicate:

- a. Who commissions it - LA or CCG?
- b. Its compliance with the PHE service specifications i.e. Orthoptic-led and delivered with Quality Assurance and clinical audit processes (<https://www.gov.uk/government/publication...>)
 - i. Compliant
 - ii. Not compliant

4. List the key features of each commissioned screening service :

- a. Settings (e.g. school).
- b. Screening personnel (e.g. orthoptist, school nurse or other health professional).
- c. The onward care pathway for children who fail the vision screening.
- d. The quality assurance processes (audit) and identified clinical lead for the vision screening service.

5. Tell us how you monitor if every eligible child in the Local Authority or CCG commissioning the service has been tested (including those in private schools, or those who are home schooled).

6. Tell us whether a vision screening programme has been commissioned for the current financial year

7. If a vision screening service is not currently available, in a Local Authority or CCG served by your Organisation could you please tell us for each of these LA or CCGs –

- a. why it has not been commissioned?
- b. whether a service is planned for the next financial year (2020/21)?
- c. whether an existing service has been recently decommissioned?

Yours faithfully,

Veronica Greenwood

Chair of British and Irish Orthoptic Society

Parul Desai

Chair of Clinical Council for Eye Health Commissioning