British and Irish Orthoptic Society

Consensus statement on Visual Impairment Guidelines for Stroke





2024

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Acknowledgements

This document has been compiled by the BIOS Stroke and Neuro-Rehabilitation Clinical Advisory Group.

Introduction

This document provides a position statement for Orthoptists involved in the commissioning, organisation and/or delivery of orthoptic and vision services for stroke survivors.

This is complementary to the "BIOS position statement for vision services in stroke practice" which provides an overview of orthoptic practice for individuals who have had a stroke, their carers and health care practitioners, and includes recommendations for the staffing input required from orthoptists for hyper-acute, acute stroke and neuro-rehabilitation units.

In 2023, there were two major updates to National Guidelines specific to stroke care in the UK and Ireland. The National Clinical Guidelines for Stroke were updated in April 2023 and the National Institute for Health and Care Excellence (NICE) Guidelines for Stroke rehabilitation in adults were updated in October 2023. Subsequent to these updates, changes were proposed to the Sentinel Stroke National Audit Programme (SSNAP) which introduced new vision/orthoptic questions for the first time to this audit. More recently, the European Stroke Organisation commissioned a Vision Guideline which will further shape provision of services for stroke survivors with visual problems, internationally.

The following sections will extract, verbatim (copyright acknowledged for each Guideline to its respective originator) the relevant vision sections from the various Guideline documents and outline BIOS consensus position for Orthoptists.

National Clinical Guidelines for Stroke

https://www.strokeguideline.org/

These guidelines were produced by the UK Intercollegiate Stroke Working Party and are adopted by the four nations (England, Northern Ireland, Scotland and Wales) and the Republic of Ireland.

The process of updates commenced in 2021 with multi-professional representation, patient and public involvement and health economic input. Updates to vision/orthoptic content¹ were in sections 2 (Organisation of care) and 4 (Rehabilitation).

Section 2.5 Resources – inpatient stroke services

Recommendation J

A stroke rehabilitation unit should have a single multidisciplinary team including specialists in:

- medicine;
- nursing;
- physiotherapy;
- occupational therapy;
- speech and language therapy;
- dietetics;
- clinical psychology/neuropsychology;
- social work;
- orthoptics;

with timely access to rehabilitation medicine, specialist pharmacy, orthotics, specialist seating, assistive technology and information, advice and support (including life after stroke services) for people with stroke and their family/carers.

¹ Extracts for sections 2.5 and 4.48 are verbatim from these Guidelines. We acknowledge copyright is held by the National Clinical Guidelines for Stroke.

Table 2.5 Recommended levels of staffing for hyperacute, acute and rehabilitation units

	St. Astrones	Occupational therapy	Speech and language therapy	Clinical psychology/ neuro- psychology	Dietetics	Nursing	Consultant stroke physician	Consultant- level practitioner- led ward rounds
Hyper- acute stroke unit	Whole-time equivalents (WTE) per 5 beds*				WTE per bed	24/7 availability;		
	1.02	0.95	0.48	0.28	0.21	2.9 (80:20 registered: unregis -tered)	minimum 6.0 thrombolysis- trained physicians on rota	
Acute stroke unit & stroke rehab- ilitation unit	1.18	1.13	0.56	0.28	0.21	1.35 (65:35 registered: unregis -tered)	Acute stroke unit: 7 day cover with adequate out of hours arrange- ments**	Acute stroke unit: daily ward round**Stroke rehabilit- ation unit: twice- weekly ward round**

Table 2.5 Recommended levels of staffing for hyperacute, acute and rehabilitation units

For recommendations regarding orthoptist staffing, see Section 4.48 Vision.

Section 4.48 Vision

Note additional content on visual perceptual disorders and visual neglect is discussed in sections 4.36 and 4.37. Further information on vision and driving is discussed in section 4.14.

Recommendation A

People with stroke should be screened for visual changes by a professional with appropriate knowledge and skills, using a standardised approach.

Recommendation B

People with stroke should be:

assessed for visual acuity whilst wearing their usual glasses or contact lenses to check their ability to read newspaper text and see distant objects clearly;

examined for the presence of visual field deficit (e.g. hemianopia) and eye movement disorders (e.g. strabismus and motility deficit);

assessed using adapted visual tests for those with communication impairment.

Recommendation C

People with altered vision, visual field defects or eye movement disorders after stroke should receive information, support and advice from an orthoptist and/or an ophthalmologist.

Recommendation D

People reporting visual disturbance following stroke should be assessed by an occupational therapist to assess its impact on their ability to carry out functional tasks independently, their confidence and safety.

Recommendation E

People with visual loss due to retinal artery occlusion should be jointly managed by an ophthalmologist and a stroke physician.

Recommendation F

Multidisciplinary treatment programmes should be developed with an orthoptist and should include restorative and compensatory approaches to maximise safety and independence, in accordance with the person's presentation, goals and preferences. For people with visual field loss due to stroke, compensation training such as visual scanning or visual search training should be considered.

Recommendation G

People with visual deficits following stroke should be advised about driving restrictions and receive accessible written information regarding the process of assessment and decision making.

Evidence to recommendations

All patients with stroke should be screened for visual impairment early after their stroke. Given that visual impairment is frequently asymptomatic, screening should be carried out by those with the appropriate knowledge and skills, such as an occupational therapist, or with specialist skills in visual assessment, such as an orthoptist or optometrist. These specialists can carry out further assessment and targeted treatment specific to the type of visual impairment (Rowe, 2017). One study found that it is feasible to undertake a visual screen for most patients within the first 3 days after stroke and a full visual assessment within 4 days (Rowe et al, 2019). Therefore, a visual screen could be completed in the same 72-hour time frame as other therapy assessments, given that visual problems can impact on delivery of other rehabilitation interventions.

An agreed visual care pathway is required to ensure appropriate access to a range of specialists, including orthoptists, ophthalmologists, optometrists and low vision rehabilitation workers. Recommendations for orthoptist staffing levels in hyperacute and acute stroke units are set out in a British and Irish Orthoptists Society consensus document (British and Irish Orthoptic Society, 2021) which advises orthoptic staffing for hyperacute units as 0.4 WTE/10 beds, and for acute units as 0.2 WTE/10 beds. Specialists are required for identification of post-stroke visual impairment, diagnosis

of eye movement disorders and the assessment of functional and driving implications (also see Section 4.14 Driving).

With regard to visual impairment of central vision and eye movement deficits, management may include interventions such as compensatory (e.g. head scanning training to adjust for poor eye movements), substitutive (e.g. magnifiers to increase print size) and restitutive (e.g. botulinum toxin/eye muscle surgery to correct strabismus) approaches, which require referral to specialist eye services.

For people with visual field loss after stroke, interventions are proposed to work by either compensating for the visual field defect by changing their behaviour or activity, substituting for the defect by using devices such as prisms to shift the field of view from the affected side, or restoring the visual field through repetitive stimulation of the affected field of vision. Compensatory training includes both visual scanning training, which involves repetitive symmetrical movements to each (right/left) side and visual search training, which involves repeatedly looking for (searching) for objects on each side. A Cochrane review found that there is limited, low quality evidence that compensatory training, and in particular visual scanning and search training, may be more beneficial than placebo, sham or control at improving quality of life, but not other outcomes (Hanna & Rowe, 2017; Howard & Rowe, 2018; Liu et al, 2019; Pollock et al, 2019). There is insufficient evidence to reach any generalised conclusions about the effect of substitutive interventions (prisms) or restitutive interventions as compared to placebo, control, or no treatment. There is low-quality evidence that prisms may cause minor adverse events (Pollock et al, 2019). All these areas warrant further research.

NICE Guidelines on Stroke rehabilitation in adults

https://www.nice.org.uk/guidance/ng236

Proposal for revisions and subsequent consultation response from BIOS were outlined in 2020. The NICE Update question was released in 2021: What is the clinical and cost effectiveness of routine specialist orthoptist assessment?²

1.8 Vision recommendations

1.8.1 Offer people who are in hospital after stroke a specialist orthoptist assessment as soon as possible. If this cannot be done before discharge, offer the person an urgent outpatient appointment.

1.8.2 Offer eye movement therapy to people who have persisting hemianopia (blindness in 1 half of the visual field of 1 or both eyes) after stroke.

1.8.3 When advising people with visual problems after stroke about driving, consult the Driver and Vehicle Licensing Agency (DVLA)³ regulations.

Why the committee made the recommendation

No evidence that specifically addressed the clinical and cost effectiveness of visual screening after stroke was identified, so the committee made conclusions based on their own knowledge and experience.

Many people experience problems with their eyesight after stroke. These are often identified by stroke units during either an examination by an orthoptist or an assessment carried out by another healthcare professional using basic methods or a validated screening tool. The committee agreed that eyesight problems were more likely to be identified during an orthoptist assessment when compared to other forms of assessment. Significant issues are often identified at a later stage if they were

² Extracts for sections 1.8 are verbatim from these Guidelines. We acknowledge copyright is held by NICE.

³ DVLA for England, Scotland and Wales. DVA in Northern Ireland. RSA medical fitness to drive guidelines for the Republic of Ireland.

missed initially, but by this time they may have already affected the person's quality of life and their ability to fully participate in stroke rehabilitation. Eyesight problems also pose potential safety risks, including the possibility of driving accidents.

Where possible, the committee agreed that people should be assessed by an orthoptist before leaving hospital. However, they recognised this might not be possible and would cause significant delays at discharge if it was the only option available. Therefore, they agreed that people who do not have the assessment before discharge should instead be given an urgent referral so they can have the same assessment as an outpatient.

How the recommendation might affect practice

Current practice is inconsistent across the country because many stroke units do not have a designated orthoptist. Therefore, the recommendation will lead to a change in practice. However, the time and costs involved in offering an orthoptic assessment on the stroke unit is the same as that for assessment using basic screening and validated screening tools.

For full details of the evidence and the committee's discussion, this can be found in the evidence review C: routine orthoptic assessment. This includes details of health economics overview for orthoptic assessments.

https://www.nice.org.uk/guidance/ng236/evidence/c-routine-specialist-orthoptistassessment-pdf-13191947683

Cost implication discussion

Full orthoptic assessment on the stroke ward is considered to take either the same time (complex cases) or less (mild/normal cases) as screening by non-specialists, with assessments typically taking 10-30 minutes per person. More limited non-specialist vision assessment may take less time as less aspects of vision are assessed. Orthoptists that do vision assessments on the stroke unit will usually be the same salary band (6/7) as the non-specialist member of the rehab team undertaking the vision screening.

However, if people are screened by non-specialists, people who are identified as having vision problems will then also need to have a full orthoptic assessment to confirm the vision problem, make a diagnosis and make a management plan. Screening by a member of the rehab team prior to referral for full orthoptist assessment would not reduce the time needed for the full orthoptist assessment as all assessments would still be done.

Given these considerations, overall staff time costs associated with routine orthoptist assessment on the stroke ward should be lower compared to routine vision screening by a member of the rehab team combined with selective referral for orthoptist assessment. This may also be the case compared to more limited nonspecialist vision assessment but is less clear cut as the initial assessment is likely to take less time.

In addition, if referral for orthoptist assessment currently requires people to attend an eye clinic away from the stroke ward, they may need to be accompanied by a staff member and so there would be time savings if routine orthoptist assessment takes place on the stroke ward.

Other differences in resource use could also potentially occur:

• There may be a reduction in costs associated with training non-specialist rehab team members in vision screening. Some orthoptists do provide training, but it is generally ad hoc and not routine in the NHS – usually band 7 giving a 1-hour training session every 6 months.

However, some of the newer vision screening methods have been designed to be standalone with built-in instructions and training manuals. This was done deliberately to offset against services who do not have access to orthoptic training.

• If more vision problems are identified (screening relies on what can be observed or what the patient communicates, whereas full orthoptic assessment does not only rely on this) downstream management costs may increase. However, management may just involve information and advice at the time of the assessment on strategies to adapt to changes in vision and visual field and only some people will require further follow-up or referral, for example if glasses are needed the individual would be sent to the opticians.

• There could potentially be cost savings downstream if better and earlier identification, and so management, of vision problems allows more people to better engage in rehabilitation and so reduce disability, or if better management of vision problems helps avoid falls and people driving when visually impaired that could result in accidents.

The committee consensus was that routine orthoptist assessments would likely require less staff time overall. Although an orthoptist's time on stroke units will be greater, it will reduce the staff time required from the rehab team to provide the initial vision screen. This would make for an overall more efficient use of each staff member's skillset.

Orthoptic assessment uses specialist equipment which can identify vision problems that are not outwardly apparent and do not rely on a person's ability to communicate their vision problems. Greater identification and management of vision problems should benefit people with stroke, and while management costs may increase as well if more vision problems are identified, the subsequent benefits to patients should not be ignored. There is also the possibility of downstream savings due to falls and driving accidents prevented as vision impairment is a significant risk factor for these events. In terms of clinical differences, no evidence was identified, but pragmatically the committee agreed it was plausible that people will receive a faster diagnosis if they are given one full assessment rather than two.

Furthermore, it was noted that the Intercollegiate Stroke Working Party National Clinical Guideline for Stroke recommends that a stroke rehabilitation unit multidisciplinary team should include orthoptists.

For these reasons, the committee made an 'offer' recommendation for all people after a stroke to receive a specialist orthoptic assessment as soon as possible after stroke.

Sentinel Stroke National Audit Programme (SSNAP)

https://www.strokeaudit.org/

The Sentinel Stroke National Audit Programme (SSNAP) is a major national healthcare quality improvement programme. The programme measures how well stroke care is being delivered in the NHS in England, Wales and Northern Ireland. It provides timely information to clinicians, commissioners, patients and the public so it can be used to improve the quality of care that is provided to patients.

The clinical audit measures the processes of care provided to stroke patients in inpatient and community settings. Organisational audits measure the structure of stroke services in acute hospital settings (acute organisational audit) and the structure of stroke services in community settings (post-acute organisational audit). All audits measure stroke care against evidence-based standards.

Following the publication of the National Clinical Guideline and updated NICE guidelines for Stroke in 2023, the SSNAP dataset will be updated on 1st October 2024. Registered SSNAP users can view the new dataset, access further information and resources, and register to attend upcoming webinars by logging in and viewing the SSNAP webpages⁴. The new vision questions are in two sections: acute inpatient settings and acute/sub-acute community settings.

In-patient dataset questions

6.13. Date patient screened for visual impairment using a standardised tool,

or Not screened

6.13.1 If not screened, what was the reason?

Organisational reasons

Patient refused

Patient medically unwell for entire admission \Box

⁴ Extracts for in-patient and community datasets are verbatim from SSNAP. We acknowledge copyright is held by SSNAP.

Not known

6.14. Date/time first assessed by an Orthoptist

or No assessment by discharge \square

6.14.1 If no assessment, what was the reason?

Help notes:

A standardised tool is one that is completed the same way by all users, covering all required domains of impairment and activity limitation. A published screen such as VISA, or a locally developed tool, agreed by your orthoptist dept for use with all patients, by staff with appropriate training are applicable.

Available if 6.13 = "Not screened"

Patient medically unwell should be answered if the patient was unconscious or deemed to be unable to tolerate vision screening by clinical staff.

Organisational reasons mean any issues with the service which meant that the screening was not performed by discharge e.g. unavailability of staff.

There is no "Patient had no relevant deficit" answer option as this is a screening, and the screening is required to determine if the patient had a deficit.

Available if 6.14 = "No assessment by discharge"

Organisational reasons mean any issues with the service which meant that the assessment was not performed by discharge e.g. unavailability of staff.

Patient medically unwell should be answered if the patient was unconscious or deemed to be unable to tolerate an assessment by clinical staff.

Patient had no relevant deficit should be answered if, after screening by an appropriately skilled clinician, the patient was not considered to have any relevant impairment requiring orthoptic input.

Community Dataset

4.15. Date patient screened for visual impairment using a standardised tool

or Not screened

4.15.1 If not screened, what was the reason?

Organisational reasons □
Patient refused □
Patient medically unwell for entire admission □
Not known □
Screened by previous team □

Help notes:

A standardised tool is one that is completed the same way by all users, covering all required domains of impairment and activity limitation. A published screen such as VISA, or a locally developed tool, agreed by your orthoptist dept for use with all patients, by staff with appropriate training are applicable.

Available if 4.15 = "Not screened"

Patient medically unwell should be answered if the patient was unconscious or deemed to be unable to tolerate vision screening by clinical staff.

Organisational reasons mean any issues with the service which meant that the screening was not performed by discharge e.g. unavailability of staff.

There is no "Patient had no relevant deficit" answer option as this is a screening, and the screening is required to determine if the patient had a deficit.

Screened by previous team should be used when the patient has been previously screened for visual impairment by a previous team.

European Stroke Organisation Vision Guideline

https://eso-stroke.org/guidelines/eso-guideline-directory/

Visual problems in stroke

The purpose of these guidelines is to provide evidence-based recommendations to assist clinicians in decision making around diagnosis and treatment on visual problems after stroke⁵. The intention is that these guidelines will be of use to any clinician working with stroke survivors, for example, stroke physicians, neurologists, ophthalmologists, occupational therapists, physiotherapists, neuro-psychologists, orthoptists, optometrists, etc.

Visual problems after stroke are now commonly categorised into;

- Central vision impairment
- Visual field loss
- Visual attention or visual processing/perceptual/construct disorders
- Eye movement disorders

This new guideline adheres to these categories. However, it is acknowledged these visual problems do not occur in isolation but often, multiple visual problems can be present across these categories. Further, these categories include many different types of condition and these will be further defined in the main guideline. These visual problems, regardless of type, are important to identify and manage from the early stages of acute stroke as they can impact significantly on activities of daily life and engagement with stroke rehabilitation.

For the purpose of this guideline these categories are defined as;

 Central vision impairment – reduced (monocular or binocular) visual acuity worse than 0.3logMAR (reflective of driving (functional consideration) visual acuity, rather than 0.5logMAR cut-off as sometimes used), reduced contrast sensitivity, reduced colour vision (distinct from perceptual loss of colour

⁵ Extracts for PICO questions are verbatim from the ESO Guidelines. We acknowledge copyright is held by ESO.

processing), glare and photophobia (very common symptoms). Category is distinct from ocular stroke.

- Visual field loss loss of uniocular (ocular stroke defined as acute retinal artery occlusion/ischaemia) or binocular (pathway) visual field*
- Visual processing/perceptual disorders ventral stream disorders (typically recognition perception [ability to identify components of objects: e.g. object agnosia, achromatopsia] and construction [ability to perceive objects/scenes in their component parts and ability to replicate this, e.g. drawing, bed-making]) and dorsal stream disorders (typically visuo-spatial attention/neglect and identifying location of objects. For this guideline, we exclude other non-visual attention deficits such as spatial neglect that is not visual in nature (e.g. auditory neglect, motor neglect), Balint's syndrome, optic ataxia, etc.)
- Eye movement disorders strabismus, ocular motility and binocular vision

* Note: for all categories other than ocular stroke, the cause of post-stroke visual disturbances are due to stroke, defined as cerebral ischaemia and/or haemorrhage.

Population, Intervention, Comparator, Outcome (PICO) questions and outcomes

The following is a list of questions being considered in this vision guideline. In the assessment section, routine stroke screen is defined as standard care assessment (e.g. use of NIH stroke scale), vision screening is defined as use of a screening checklist/tool by a non-eye trained clinician, and detailed assessment is defined as visual assessment by an eye-trained clinician. One week for screening/assessment cut-off is chosen on the basis of recommendations for assessments by other members of the therapy team being completed within 72 hours of admission, or as soon as possible thereafter. In the management section, the terms used by the Cochrane Library for intervention have been adopted (e.g. Compensatory [intervention that is a device or environment modification that aims to improve adaptation to the visual deficit], Restitutive [intervention that aims to restore visual function]). Visuospatial inattention/neglect is considered separate to visual perception disorders; the latter referring to other perceptual visual conditions such as alexia, visual hallucinations, visual agnosia, prosopagnosia, etc.

<u>Screening</u>

1. For adults with visual problems due to stroke, does routine use of vision screening, compared to no routine screening, improve detection rate?

<u>Timing</u>

2. For adults with visual problems due to stroke, does early assessment within one week of stroke admission, compared to later assessment, improve activities and quality of daily life?

<u>Assessment</u>

- 3. For adults with visual field loss due to stroke, does identification of visual field loss by vision screening or specialist eye team, compared to routine stroke screen, improve detection rates and activities/quality of life?
- 4. For adults with central vision impairment due to stroke, does identification of visual acuity loss by vision screening or specialist eye team, compared to routine stroke screen, improve detection rate and activities/quality of life?
- 5. For adults with eye movement disorders due to stroke, does identification of strabismus and/or ocular motility deficit loss by vision screening or specialist eye team, compared to routine stroke screen, improve detection rate and activities/quality of life?
- 6. For adults with visuospatial inattention (visual neglect) due to stroke, does identification of inattention/neglect by screening proforma/tool or specialist team, compared to routine stroke screen, improve detection rate and activities/quality of life?
- 7. For adults with visual processing/perceptual/construction disorders due to stroke, does identification of visual perception deficit by screening proforma/tool or specialist team, compared to routine stroke screen, improve detection rate and activities/quality of life?

<u>Management</u>

- 8. For adults with homonymous visual field loss due to stroke, does compensatory, substitute or restitutive intervention, compared to no intervention, improve activities and quality of daily life?
- 9. For adults with ocular stroke, does compensatory, substitute or restitutive intervention, compared to no intervention, improve activities and quality of daily life?

- 10. For adults with central vision impairment due to stroke, does compensatory, substitute or restitutive intervention, compared to no intervention, improve activities and quality of daily life?
- 11. For adults with eye movement disorders due to stroke, does compensatory, substitute or restitutive intervention, compared to no intervention, improve activities and quality of daily life?
- 12. For adults with visuospatial inattention/neglect due to stroke, does compensatory, substitute or restitutive intervention, compared to no intervention, improve activities and quality of daily life?
- 13. For adults with visual processing/perceptual/construction disorders due to stroke, does compensatory, substitute or restitutive intervention, compared to no intervention, improve activities and quality of daily life?

Implications for Orthoptists

For the available guidelines reported in this statement, the National Clinical Guidelines for Stroke are considered recommendations for practice and service. NICE Guidelines are regarded as requirements for practice and service. SSNAP questions are a mandatory return to the national audit programme. ESO Guidelines are considered international recommendations which we regard as important for collaboration with our European orthoptic colleagues.

Orthoptists are a named member of the stroke unit. The British and Irish Orthoptists Society recommends specific staffing levels for orthoptists in hyperacute (0.4FTE per 10 beds), acute stroke units (0.2FTE per 10 beds) and rehabilitation units (0.1FTE per 10 beds).

All stroke survivors should be screened for visual changes regardless of whether they display visual signs and/or symptoms, or not. BIOS advises blanket orthopticdelivered visual assessment for all stroke survivors, in accordance with NICE guidelines, to provide early diagnosis and initial management plans (if the latter are required). This should be done within 72 hours of admission, commensurate with other therapy professions, or as soon as it is possible dependent on the stroke survivor's circumstances and abilities. Where this is not possible (e.g. early discharge with weekend admission) an urgent out-patient appointment should be arranged and vision screening delivered by a member of the stroke team prior to discharge.

Orthoptic-delivered vision assessments should follow practice according to the BIOS competency framework and as additionally outlined in the BIOS consensus statement document. Orthoptists should not use vision screening tools as orthoptic assessment must be used as per BIOS competencies. Orthoptic vision assessments must be undertaken by orthoptists and not by orthoptic assistants.

For vision screening undertaken by members of the stroke team, BIOS does not advise the use of a locally developed tool agreed by orthoptic departments, as this does not attain standardisation or validation in terms of valid methodological development and integrity. BIOS recommends the use of a standardised, validated vision screening tool (in agreement with NICE) such as the Vision Screening Assessment (VISA) tool.

Crucially, BIOS does not advise use of the V-FAST tool as this was developed for pre-hospital and/or A&E admission screening as an adjunct to the FAST screen. It is not validated for acute stroke unit assessments.

An agreed visual care pathway is necessary to ensure appropriate access to a range of specialists, and to facilitate close liaison among professionals, e.g. to share vision assessment results to therapists; to liaise with ophthalmology for retinal artery occlusion.

People with altered vision, visual field defects, or eye movement disorders after stroke should receive information, support, and advice from an orthoptist, optometrist and/or an ophthalmologist. This specialist support is crucial for proper diagnosis and management of specific visual impairments.

People with visual deficits following stroke should be advised about driving restrictions. They should receive accessible written information regarding the process of assessment and decision making related to driving. This information is crucial for ensuring patient safety and compliance with legal requirements.

Multidisciplinary treatment programmes should be developed with an orthoptist. A focus is required on maximizing safety and independence, in accordance with the person's presentation, goals, and preferences. Use compensatory, substitutive, and restitutive approaches as appropriate for specific visual impairments. The assessment of functional and driving implications of visual impairments requires input from specialists. Proper guidance on driving restrictions is essential for both the safety of the individual and other road users.

Bibliography

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European Stroke Organisation Vision Guideline

https://eso-stroke.org/guidelines/eso-guideline-directory/

National Clinical Guidelines for Stroke

https://www.strokeguideline.org/

NICE Guidelines on Stroke rehabilitation in adults <u>https://www.nice.org.uk/guidance/ng236</u>

Sentinel Stroke National Audit Programme (SSNAP) https://www.strokeaudit.org/