NICE National Institute for Health and Care Excellence

NICE quality standard

Glaucoma in adults

Quality standard

Published: 30 March 2011
nice.org.uk/guidance/qs7

Contents

This standard is based on NG81.

This standard should be read in conjunction with QS15.

Introduction and overview

This quality standard covers care for people with chronic open angle glaucoma (COAG), suspected COAG or with ocular hypertension (OHT).

Introduction

Chronic open angle glaucoma (COAG) is a common and potentially blinding condition. It is usually asymptomatic until advanced and many people will be unaware there is a problem with their eyes until severe visual damage has occurred. Ocular hypertension (OHT) is a major risk factor for developing COAG, although COAG can occur with or without raised eye pressure. Approximately 10% of UK blindness registrations are attributed to glaucoma and it accounts for over one million hospital eye service visits each year. Once diagnosed people with COAG need lifelong monitoring so that any progression of visual damage can be detected. Once lost, sight cannot be restored, and controlling the condition together with prevention, or at least minimisation of ongoing damage, is crucial to maintaining a sighted lifetime.

COAG, suspected COAG and OHT are common conditions which, if not diagnosed and managed correctly, can lead to partial sightedness (sight impairment) and blindness (severe sight impairment). This quality standard describes markers of high-quality, cost-effective care that, when delivered collectively, should contribute to improving the effectiveness, safety and experience of care for people with COAG, suspected COAG or with OHT in the following ways:

- Enhancing quality of life for people with long-term conditions.
- Ensuring that people have a positive experience of care.
- Treating and caring for people in a safe environment and protecting them from avoidable harm.

The NHS Outcomes Framework 2011/12 is available.

Specifically, it is expected that achieving the high quality care set out in this quality standard will contribute to a reduction in Certificate of Visual Impairment registration rates for glaucoma (CVI: sight impaired and severely sight impaired).

Overview

The quality standard for glaucoma requires that services should be commissioned from and coordinated across all relevant agencies encompassing the whole glaucoma care pathway, including primary, secondary and social care. An integrated approach to provision of services is fundamental to the delivery of high quality care to people with glaucoma. A local register of glaucoma-related conditions organised according to diagnosis (for example, chronic open angle glaucoma (COAG), suspected COAG, ocular hypertension (OHT), angle closure, secondary glaucoma) and sight impairment could be used to facilitate such integration.

List of statements

Statement 1 People are referred to a consultant ophthalmologist for further assessment and definitive diagnosis if the optometrist or other healthcare professional suspects COAG. There are local agreements in place for referral refinement.

Statement 2 People with elevated IOP alone are referred to an appropriately qualified healthcare professional for further assessment on the basis of perceived risk of progression to COAG. There are agreements in place for repeat measures.

Statement 3 People referred for definitive diagnosis in the context of possible COAG or with OHT receive all relevant tests in accordance with NICE guidance.

Statement 4 People with COAG, suspected COAG or with OHT are diagnosed and have a management plan formulated by a suitably trained healthcare professional with competencies and experience in accordance with NICE guidance.

Statement 5 People diagnosed with COAG, suspected COAG or with OHT are monitored at intervals according to their risk of progressive loss of vision in accordance with NICE guidance.

Statement 6 People with suspected COAG or with OHT are managed based on estimated risk of conversion to COAG and progression to visual impairment using IOP, in accordance with NICE guidance.

Statement 7 People with COAG, suspected COAG or with OHT have a regular review of management options with their healthcare professional, taking into account comorbidity and other changed circumstances, including a discussion of the benefits and risks of stopping treatment for those at low risk of progressing to visual impairment.

Statement 8 People diagnosed with COAG, suspected COAG or with OHT have access to timely follow-up appointments and specialist investigations at intervals in accordance with NICE guidance. Sufficient capacity is put in place to provide this service, and systems are developed to identify people needing clinical priority if appointments are cancelled, delayed or missed.

Statement 9 Healthcare professionals involved in the care of a person with COAG, suspected COAG or with OHT have appropriate documentation and records available at each clinical encounter in accordance with NICE guidance.

Statement 10 People with COAG who are progressing to loss of vision despite treatment or who present with advanced visual loss are offered surgery with pharmacological augmentation (MMC) as indicated and information on the risks and benefits associated with surgery.

Statement 11 People with COAG, suspected COAG or with OHT are given the opportunity to discuss their diagnosis, prognosis and management, and are provided with relevant and accessible information and advice at initial and subsequent visits in accordance with NICE guidance.

Statement 12 People with suspected COAG or with OHT who are not recommended for treatment are discharged from formal monitoring with a patient-held management plan and their discharge summary is sent to their GP and primary eye care professional.

In addition, quality standards that should also be considered when commissioning and providing a high-quality glaucoma service are listed in related NICE quality standards.

Quality statement 1: Referral

Quality statement

People are referred to a consultant ophthalmologist for further assessment and definitive diagnosis if the optometrist or other healthcare professional suspects COAG. There are local agreements in place for referral refinement.

Quality measure

Structure

Evidence of arrangements for referral refinement that ensure people are referred to a consultant ophthalmologist for further assessment and definitive diagnosis if the optometrist or other healthcare professional suspects chronic open angle glaucoma (COAG).

Data source: Local data collection.

Process

a) Proportion of people in whom an optometrist or other healthcare professional suspects COAG who undergo further assessment with referral refinement.

Numerator – the number of people in the denominator who undergo further assessment with referral refinement.

Denominator – the number of people in whom an optometrist or other healthcare professional suspects COAG.

Data source: Local data collection.

b) Proportion of people who undergo referral refinement who are subsequently referred on to a consultant ophthalmologist for definitive diagnosis because COAG is suspected.

Numerator – the number of people in the denominator who are referred to a consultant ophthalmologist for definitive diagnosis.

Denominator – the number of people undergoing referral refinement because COAG is suspected.

Data source: Local data collection.

What the quality statement means for each audience

Service providers ensure arrangements are in place for referral refinement to ensure that people are referred to a consultant ophthalmologist for further assessment and definitive diagnosis if the optometrist or other healthcare professional suspects COAG.

Healthcare professionals ensure they are aware of agreements for referral refinement and ensure they refer people to a consultant ophthalmologist for further assessment and definitive diagnosis if they suspect COAG.

Commissioners ensure they commission services with agreements for referral refinement to ensure people are referred to a consultant ophthalmologist for further assessment and definitive diagnosis if the optometrist or other healthcare professional suspects COAG.

People with suspected COAG are referred to a specialist (a consultant ophthalmologist) for further assessment and to confirm the diagnosis. Before referral, further or repeat tests may be carried out to check whether the person should be referred.

Source guidance

Glaucoma: diagnosis and management (2009, updated 2017) NICE guideline NG81, recommendations 1.1.1 to 1.1.5

Definitions

'Referral refinement' is a term specific to glaucoma management that describes a 2-tier assessment in which initial evidence of abnormality found during case-finding or screening is validated by an enhanced assessment, which adds value beyond that achieved through a simple 'repeat measures' scheme. A referral refinement service performs tests to diagnose OHT and suspected COAG and interprets the results in the light of clinical findings. Specialist practitioners who deliver this service independently have the qualifications and experience set out in NICE's guideline on glaucoma, in the recommendations on organisation of care. Practitioners providing a referral refinement service should be qualified to make a diagnosis of OHT and suspected glaucoma, and to carry out gonioscopy to exclude angle-closure glaucoma.

[NICE's guideline on glaucoma, terms used section]

Features of COAG may include:

- optic nerve head damage on stereoscopic slit lamp biomicroscopy, or
- visual field defect consistent with glaucoma, or
- IOP of 24 mmHg or more identified using Goldmann-type applanation tonometry.

[NICE's guideline on glaucoma, recommendation 1.1.5]

Quality statement 2: Referral

Quality statement

People with elevated IOP alone are referred to an appropriately qualified healthcare professional for further assessment on the basis of perceived risk of progression to COAG. There are agreements in place for repeat measures.

Quality measure

Structure

Evidence that there are agreements in place for repeat measures to ensure that people with confirmed elevation of intraocular pressures (IOP) alone (normal optic discs and visual fields) are referred to an appropriately qualified healthcare professional for further assessment on the basis of perceived risk of progression to chronic open angle glaucoma (COAG).

Data source: Local data collection.

Process

a) Proportion of people with elevation of IOP alone, who are referred for repeat measures to an appropriately qualified healthcare professional.

Numerator – the number of people in the denominator referred for repeat measures to an appropriately qualified healthcare professional.

Denominator – the number of people with suspected elevation of IOP alone.

Data source: Local data collection.

b) Proportion of people with confirmed elevation of IOP alone, who are referred to an appropriately qualified healthcare professional for further assessment on the basis of perceived risk of progression to COAG.

Numerator – the number of people in the denominator referred to an appropriately qualified healthcare professional on the basis of perceived risk of progression to COAG.

Denominator – the number of people with confirmed elevation of IOP alone.

Data source: Local data collection.

What the quality statement means for each audience

Service providers ensure arrangements are in place for repeat measures to ensure that people with confirmed elevation of IOP alone are referred to an appropriately qualified healthcare professional for further assessment on the basis of perceived risk of progression to COAG.

Healthcare professionals ensure they are aware of agreements for repeat measures and ensure they refer people with confirmed elevation of IOP alone for further assessment on the basis of perceived risk of progression to COAG.

Commissioners ensure they commission services with agreements for repeat measures which ensure people with confirmed elevation of IOP alone are referred to an appropriately qualified healthcare professional for further assessment on the basis of perceived risk of progression to COAG.

People with raised intraocular pressure (which is the pressure within the eye) have their eye tests repeated, and those with confirmed raised intraocular pressure, but without other eye damage, are referred for further assessment by an appropriate healthcare professional if they are considered likely to develop glaucoma.

Source guidance

Glaucoma: diagnosis and management (2009, updated 2017) NICE guideline NG81, recommendations 1.1.4, 1.1.5 and 1.6.3

Definitions

'Repeat measures' involves repeated measurement of parameters related to the diagnosis of glaucoma. A simple repeat measures scheme may involve repeat measurement of IOP only. Other repeat measures schemes may also include repeated measurement of visual fields and other relevant ocular parameters when clinically necessary.

[NICE's guideline on glaucoma, terms used section]

Elevation of IOP is when a reading of 24 mmHg or more is recorded using Goldmann-type applanation tonometry.

[NICE's guideline on glaucoma, recommendations 1.1.4 and 1.1.5]

An appropriately qualified healthcare professional for managing glaucoma and related conditions is defined as having a specialist qualification relevant to the case complexity of glaucoma being managed.

[NICE's guideline on glaucoma, recommendations 1.6.2 and 1.6.3]

Quality statement 3: Diagnosis

Quality statement

People referred for definitive diagnosis in the context of possible COAG or with OHT receive all relevant tests in accordance with NICE guidance.

Quality measure

Structure

Evidence of arrangements to ensure that people referred for definitive diagnosis in the context of possible COAG (chronic open angle glaucoma) or with OHT (ocular hypertension) receive all relevant tests in accordance with NICE guidance.

Data source: Local data collection.

Process

Proportion of people referred for definitive diagnosis in the context of possible COAG or with OHT who attend and receive all relevant tests in accordance with NICE guidance.

Numerator – the number of people in the denominator receiving all relevant tests in accordance with NICE guidance.

Denominator – the number of people attending an appointment following a referral for definitive diagnosis in the context of possible COAG or with OHT.

Data source: Local data collection.

What the quality statement means for each audience

Service providers ensure that people referred for definitive diagnosis in the context of possible COAG or with OHT receive all relevant tests in accordance with NICE guidance.

Healthcare professionals ensure they offer people referred for definitive diagnosis in the context of possible COAG or with OHT all relevant tests in accordance with NICE guidance.

Commissioners ensure they commission services that provide all relevant tests in accordance with

NICE guidance for people referred for definitive diagnosis in the context of possible COAG or with OHT.

People who may have glaucoma or increased eye pressure (ocular hypertension) who have been referred for diagnosis receive appropriate eye tests to confirm the diagnosis.

Source guidance

Glaucoma: diagnosis and management (2009, updated 2017) NICE guideline NG81, recommendations 1.2.1 and 1.2.4

Definitions

In NICE's guideline on glaucoma, recommendations 1.2.1 and 1.2.4 state that all of the following tests should be offered to diagnose COAG and related conditions:

- visual field assessment using standard automated perimetry (central thresholding test), repeated if necessary to establish severity at diagnosis
- optic nerve assessment and fundus examination using stereoscopic slit lamp biomicroscopy, with pupil dilatation
- IOP measurement using Goldmann applanation tonometry (slit lamp mounted)
- peripheral anterior chamber configuration and depth assessments using gonioscopy
- central corneal thickness (CCT) measurement
- optic nerve head image at diagnosis for baseline documentation (for example, a stereoscopic optic nerve head image or OCT).

Equality and diversity considerations

People with physical or learning disabilities may be unable to participate in some of the relevant diagnostic tests and therefore alternative tests should be offered.

Quality statement 4: Diagnosis and management plan

Quality statement

People with COAG, suspected COAG or with OHT are diagnosed and have a management plan formulated by a suitably trained healthcare professional with competencies and experience in accordance with NICE guidance.

Quality measure

Structure

Evidence of arrangements to ensure that people with chronic open angle glaucoma (COAG), suspected COAG or with ocular hypertension (OHT) are diagnosed and have a management plan formulated by a suitably trained healthcare professional with competencies and experience in the relevant condition in accordance with NICE guidance.

Data source: Local data collection.

Process

a) Proportion of people with COAG, suspected COAG or with OHT who are diagnosed by a suitably trained healthcare professional with competencies and experience in the relevant condition in accordance with NICE guidance.

Numerator – the number of people in the denominator diagnosed by a suitably trained healthcare professional with competencies and experience in the relevant condition in accordance with NICE guidance.

Denominator – the number of people with COAG, suspected COAG or with OHT.

Data source: Local data collection.

b) Proportion of people with COAG, suspected COAG or with OHT who have a management plan formulated by a healthcare professional with competencies and experience in the relevant condition in accordance with NICE guidance.

Numerator – the number of people in the denominator with a management plan formulated by a healthcare professional with competencies and experience in the relevant condition in accordance

with NICE guidance.

Denominator – the number of people with COAG, suspected COAG or with OHT.

Data source: Local data collection.

What the quality statement means for each audience

Service providers ensure that people with COAG, suspected COAG or with OHT are diagnosed and managed by a suitably trained healthcare professional with competencies and experience in the relevant condition in accordance with NICE guidance.

Healthcare professionals ensure they have the appropriate qualifications, competencies and experience to diagnose and manage people with COAG, suspected COAG or with OHT in accordance with NICE guidance.

Commissioners ensure they commission services that provide diagnosis and management for people with COAG, suspected COAG or with OHT by suitably trained healthcare professionals with competencies and experience in the relevant condition in accordance with NICE guidance.

People with glaucoma, suspected glaucoma or with ocular hypertension have their condition diagnosed and managed by suitably trained and experienced healthcare professionals.

Source guidance

Glaucoma: diagnosis and management (2009, updated 2017) NICE guideline NG81, recommendations 1.6.1 and 1.6.7

Definitions

The diagnosis of OHT and suspected COAG and formulation of a management plan should be made by a suitably trained healthcare professional with a specialist qualification and relevant experience.

[NICE's guideline on glaucoma, recommendations 1.6.1 to 1.6.3]

Healthcare professionals involved in the diagnosis of OHT and suspected COAG should be trained in case detection and referral refinement and be able to identify abnormalities based on relevant clinical tests and assessments. They should understand the principles of diagnosis of OHT and

COAG and be able to perform and interpret all of the following:

- medical and ocular history
- differential diagnosis
- Goldmann applanation tonometry (slit lamp mounted)
- standard automated perimetry (central thresholding test)
- central supra-threshold perimetry
- stereoscopic slit lamp biomicroscopic examination of anterior segment
- examination of the posterior segment using slit lamp binocular indirect ophthalmoscopy
- gonioscopy
- Van Herick's peripheral anterior chamber depth assessment
- central corneal thickness (CCT) measurement.

[NICE's guideline on glaucoma, recommendation 1.6.4]

Healthcare professionals who provide monitoring and treatment for people with OHT, suspected COAG or COAG should have a specialist qualification, relevant experience and the ability to detect a change in clinical status. They should be trained to make management decisions on:

- risk factors for conversion to COAG
- coexisting pathology
- risk of sight loss
- monitoring and clinical status change detection (for example, visual field changes, stereoscopic slit lamp biomicroscopic examination of anterior segment and posterior segment)
- pharmacology of IOP-lowering medications
- treatment changes for COAG, COAG suspect status and OHT (with consideration given to relevant contraindications and interactions).

[NICE's guideline on glaucoma, recommendation 1.6.5 and 1.6.6]

Healthcare professionals involved in monitoring (but not treating) people with an established diagnosis and management plan for OHT or suspected COAG should have knowledge of OHT and COAG; relevant experience and ability to detect a change in clinical status; and should be able to perform and interpret all of the following:

- Goldmann applanation tonometry (slit lamp mounted)
- standard automated perimetry (central thresholding test)
- central supra-threshold perimetry (this visual field strategy may be used to monitor people with OHT or COAG suspect status when they have normal visual field)
- stereoscopic slit lamp biomicroscopic examination of the anterior segment
- Van Herick's peripheral anterior chamber depth assessment
- examination of the posterior segment using slit lamp binocular indirect ophthalmoscopy.

[NICE's guideline on glaucoma, recommendation 1.6.7]

Healthcare professionals who do not have a specialist qualification and who are working under supervision should have direct access to their supervising consultant ophthalmologist or designated delegate.

Quality statement 5: Monitoring

Quality statement

People diagnosed with COAG, suspected COAG or with OHT are monitored at intervals according to their risk of progressive loss of vision in accordance with NICE guidance.

Quality measure

Structure

Evidence of arrangements to ensure that people diagnosed with chronic open angle glaucoma (COAG), suspected COAG or with ocular hypertension (OHT) are monitored at intervals according to their risk of progressive loss of vision in accordance with NICE guidance.

Data source: Local data collection.

Process

Proportion of people with COAG, suspected COAG or with OHT who are monitored at intervals according to their risk of progressive loss of vision in accordance with NICE guidance.

Numerator – the number of people in the denominator monitored at intervals according to their risk of progressive loss of vision in accordance with NICE guidance.

Denominator – the number of people diagnosed with COAG, suspected COAG or with OHT.

Data source: Local data collection. The National Patient Safety Agency Reporting and Learning System records the number of patient safety incidents reported to the National Patient Safety Agency for visual loss attributable to COAG that occur in association with delays in follow-up appointments.

What the quality statement means for each audience

Service providers ensure that people diagnosed with COAG, suspected COAG or with OHT are monitored at intervals according to their risk of progressive loss of vision in accordance with NICE guidance.

Healthcare professionals ensure they monitor people diagnosed with COAG, suspected COAG or

with OHT at intervals according to their risk of progressive loss of vision in accordance with NICE guidance.

Commissioners ensure they commission services that monitor people diagnosed with COAG, suspected COAG or with OHT in accordance with NICE guidance.

People diagnosed with glaucoma, suspected glaucoma or with ocular hypertension are checked at regular intervals depending on how likely it is that their condition will get worse.

Source guidance

Glaucoma: diagnosis and management (2009, updated 2017) NICE guideline NG81, recommendations 1.4.11 to 1.4.14

Definitions

People with COAG, suspected COAG or with OHT will be monitored in accordance with NICE guidance if they are monitored at intervals according to their risk of progressive loss of vision or risk of conversion to COAG as set out in recommendations 1.4.11 to 1.4.14 in NICE's guideline on glaucoma.

Quality statement 6: Management based on estimated risk of conversion to COAG and progression to visual impairment

Quality statement

People with suspected COAG or with OHT are managed based on estimated risk of conversion to COAG and progression to visual impairment using IOP, in accordance with NICE guidance.

Quality measure

Structure

Evidence of arrangements to ensure that people with suspected chronic open angle glaucoma (COAG) or with ocular hypertension (OHT) are managed based on estimated risk of conversion to COAG and progression to visual impairment using intraocular pressure (IOP), in accordance with NICE guidance.

Data source: Local data collection.

Process

a) Proportion of people diagnosed with suspected COAG or with OHT who are assessed for treatment eligibility based on estimated risk of conversion to COAG and progression to visual impairment using IOP.

Numerator – the number of people in the denominator assessed for treatment eligibility based on estimated risk of conversion to COAG and progression to visual impairment using IOP.

Denominator – the number of people diagnosed with suspected COAG or with OHT.

Data source: Local data collection.

b) Proportion of people diagnosed with suspected COAG or with OHT who are eligible for treatment based on estimated risk of conversion to COAG and progression to visual impairment using IOP, in accordance with NICE guidance.

Numerator – the number of people in the denominator managed in accordance with NICE guidance.

Denominator – the number of people diagnosed with suspected COAG or with OHT who are eligible for treatment based on estimated risk of conversion to COAG and progression to visual impairment using IOP.

Data source: Local data collection.

c) Proportion of people diagnosed with suspected COAG or with OHT at low risk of progressing to visual impairment who receive no treatment in accordance with NICE guidance.

Numerator – the number of people in the denominator who receive no treatment in accordance with NICE guidance.

Denominator – the number of people diagnosed with suspected COAG or with OHT at low risk of progressing to visual impairment for whom treatment is not recommended by NICE guidance.

Data source: Local data collection.

What the quality statement means for each audience

Service providers ensure that people with suspected COAG or with OHT are managed based on estimated risk of conversion to COAG and progression to visual impairment using IOP, in accordance with NICE guidance.

Healthcare professionals ensure that they manage people with suspected COAG or with OHT who are eligible for treatment based on estimated risk of conversion to COAG and progression to visual impairment using IOP, in accordance with NICE guidance.

Commissioners ensure they commission services that manage people with suspected COAG or with OHT based on estimated risk of conversion to COAG and progression to visual impairment using IOP, in accordance with NICE guidance.

People with suspected glaucoma or with ocular hypertension may be offered treatment depending on their estimated risk of developing glaucoma and sight loss.

Source guidance

Glaucoma: diagnosis and management (2009, updated 2017) NICE guideline NG81, recommendations 1.5.3, 1.5.9 and 1.5.10

Definitions

People with suspected COAG or with OHT may have suspicious optic nerve head appearances but should have normal visual fields (exceptions may arise in the presence of co-pathology).

People with IOP of 24 mmHg or more (OHT) should be offered a generic prostaglandin analogue (PGA) if they are at risk of visual impairment within their lifetime.

[NICE's guideline on glaucoma, recommendation 1.5.3]

People with suspected COAG and IOP of 24 mmHg or more, should be offered a generic PGA, in line with the recommendations on treatment for people with OHT.

[NICE's guideline on glaucoma, recommendation 1.5.10]

At the time of publication (November 2017), not all generic PGAs had a UK marketing authorisation for first-line treatment. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information.

People with suspected COAG and IOP less than 24 mmHg should not be offered treatment but should be advised to continue regular visits to their primary eye care professional, at clinically appropriate intervals.

[NICE's guideline on glaucoma, recommendation 1.5.9]

Quality statement 7: Stopping treatment

Quality statement

People with COAG, suspected COAG or with OHT have a regular review of management options with their healthcare professional, taking into account comorbidity and other changed circumstances, including a discussion of the benefits and risks of stopping treatment for those at low risk of progressing to visual impairment.

Quality measure

Structure

Evidence of arrangements to ensure that people with chronic open angle glaucoma (COAG), suspected COAG or with ocular hypertension (OHT) have a regular review of management options with their healthcare professional, taking into account comorbidity and other changed circumstances, including a discussion of the benefits and risks of stopping treatment for those at low risk of progressing to visual impairment.

Data source: Local data collection.

Process

a) Proportion of people with COAG, suspected COAG or with OHT who have a regular review of management options with their healthcare professional taking into account comorbidity and other changed circumstances.

Numerator – the number of people in the denominator having a regular review of management options with their healthcare professional taking into account comorbidity and other changed circumstances.

Denominator – the number of people with COAG, suspected COAG or with OHT.

Data source: Local data collection.

b) Proportion of people with COAG, suspected COAG or with OHT at low risk of progressing to visual impairment who have a discussion of the benefits and risks of stopping treatment.

Numerator – the number of people in the denominator participating in a discussion of the benefits

and risks of stopping treatment.

Denominator – the number of people with COAG suspected COAG or with OHT at low risk of progressing to visual impairment.

Data source: Local data collection.

What the quality statement means for each audience

Service providers ensure systems are in place to ensure that people with COAG, suspected COAG or with OHT have a regular review of management options with their healthcare professional acknowledging comorbidity and other changed circumstances, including a discussion of the benefits and risks of stopping treatment for those at low risk of progressing to visual impairment.

Healthcare professionals ensure that people with COAG, suspected COAG or with OHT have a regular review of management options that acknowledges comorbidity and other changed circumstances, including a discussion of the benefits and risks of stopping treatment for those at low risk of progressing to visual impairment.

Commissioners ensure they commission services that ensure that people with COAG, suspected COAG or with OHT have a regular review of management options with their healthcare professional acknowledging comorbidity and other changed circumstances, including a discussion of the benefits and risks of stopping treatment for those at low risk of progressing to visual impairment.

People with glaucoma, suspected glaucoma or with ocular hypertension have a regular review with their healthcare professional to discuss their treatment, which should take into account any other health problems or changes in the person's circumstances. For people at low risk of developing sight loss, the benefits and risks of stopping treatment should also be discussed.

Source guidance

Glaucoma: diagnosis and management (2009, updated 2017) NICE guideline NG81, recommendations 1.4.11 to 1.4.13 and 1.5.11

Definitions

Comorbidities and changed circumstances that should be taken into account when reviewing

management options for people with COAG, suspected COAG or with OHT include:

- chronic obstructive pulmonary disease
- asthma
- cardiovascular disease
- renal disease
- haematological conditions
- ocular comorbidities
- pregnancy
- drug sensitivities.

People with suspected COAG or with OHT recommended to receive medication are monitored in accordance with NICE guidance if they are monitored at regular intervals and according to their risk of conversion to COAG (see recommendations 1.4.11 and 1.4.12 in NICE's guideline on glaucoma).

A discussion about the benefits and risks of stopping treatment should be had with people with OHT or suspected COAG who have both:

- a low risk of ever developing visual impairment within their lifetime
- an acceptable IOP.

If a person decides to stop treatment after this discussion, offer to assess their IOP in 1 to 4 months with further reassessment if clinically indicated.

[NICE's guideline on glaucoma, recommendation 1.5.11]

Quality statement 8: Service capacity

Quality statement

People diagnosed with COAG, suspected COAG or with OHT have access to timely follow-up appointments and specialist investigations at intervals in accordance with NICE guidance. Sufficient capacity is put in place to provide this service, and systems are developed to identify people needing clinical priority if appointments are cancelled, delayed or missed.

Quality measure

Structure

a) Evidence of arrangements to ensure people diagnosed with chronic open angle glaucoma (COAG), suspected COAG or with ocular hypertension (OHT) have access to timely follow-up appointments and specialist investigations in accordance with NICE guidance.

Data source: Local data collection.

b) Evidence of arrangements to ensure sufficient capacity is put in place to provide this service and systems are developed to identify people needing clinical priority if appointments are cancelled, delayed or missed.

Data source: Local data collection.

Process

a) Proportion of people with COAG, suspected COAG or with OHT who have access to timely follow-up appointments and specialist investigations at appropriate intervals in accordance with NICE guidance.

Numerator – the number of available appointments and specialist investigations for people with COAG, suspected COAG or with OHT.

Denominator – the number of requested appointments and specialist investigations for people with COAG, suspected COAG or with OHT.

Data source: Local data collection. The National Patient Safety Agency Reporting and Learning System records the number of patient safety incidents reported to the National Patient Safety

Agency for visual loss attributable to COAG which occur in association with delays in follow-up appointments.

b) Proportion of people with COAG, suspected COAG or with OHT, whose appointment has been cancelled, delayed or missed who have their clinical priority assessed.

Numerator – the number of people in the denominator with a clinical priority assessment.

Denominator – the number of people with COAG, suspected COAG or with OHT and a cancelled, delayed or missed appointment.

Data source: Local data collection. The National Patient Safety Agency Reporting and Learning System records the number of patient safety incidents reported to the National Patient Safety Agency for visual loss attributable to COAG which occur in association with delays in follow-up appointments.

c) Proportion of people with COAG, suspected COAG or with OHT whose cancelled, delayed or missed appointment is rescheduled within an appropriate time interval.

Numerator – the number of people in the denominator with a rescheduled appointment following a cancelled, delayed or missed appointment within an appropriate time interval.

Denominator – the number of people with COAG, suspected COAG or with OHT with a cancelled, delayed or missed appointment.

Data source: Local data collection. The National Patient Safety Agency Reporting and Learning System records the number of patient safety incidents reported to the National Patient Safety Agency for visual loss attributable to COAG which occur in association with delays in follow-up appointments.

What the quality statement means for each audience

Service providers ensure they provide sufficient capacity to meet clinical demand and identify those needing clinical priority if appointments are cancelled, delayed or missed and that appointments take place within an appropriate interval time.

Healthcare professionals ensure that incidents of cancellation or delay of appointments beyond appropriate time intervals are reported through clinical governance channels.

Commissioners ensure they commission services with sufficient capacity to meet clinical demand and that ensure those needing clinical priority if appointments are cancelled, delayed or missed are identified and that appointments take place within an appropriate time interval.

People with glaucoma, suspected glaucoma or with ocular hypertension are offered appointments within an appropriate time interval to review their condition or for specialist assessment, including those that have been rescheduled due to appointments being cancelled, delayed or missed.

Source guidance

- National Patient Safety Agency (2009) Rapid Response Report. Preventing delay to follow up for patients with glaucoma (RR004) 2, 4 and 5
- Glaucoma: diagnosis and management (2009, updated 2017) NICE guideline NG81, recommendations 1.4.11 to 1.4.14

Definitions

Timely follow-up appointments are defined as appointments and specialist investigations at intervals in accordance with NICE's guideline on glaucoma, recommendations 1.4.11 to 1.4.14.

The Royal College of Ophthalmologists suggests that cancelled, delayed or missed appointments should be rescheduled within 15% of the intended interval time, for example, a rescheduled 6 month request should take place within less than 7 months.

Quality statement 9: Documentation

Quality statement

Healthcare professionals involved in the care of a person with COAG, suspected COAG or with OHT have appropriate documentation and records available at each clinical encounter in accordance with NICE guidance.

Quality measure

Structure

Evidence of arrangements to ensure that healthcare professionals involved in a person's care have appropriate documentation available at each clinical encounter in accordance with NICE guidance.

Data source: Local data collection.

Process

Proportion of people with chronic open angle glaucoma (COAG), suspected COAG or with ocular hypertension (OHT) whose documentation and records are available to healthcare professionals at each clinical encounter.

Numerator – the number of people in the denominator whose documentation and records are available to the healthcare professional(s) present.

Denominator – the number of people with COAG, suspected COAG or with OHT attending a clinic appointment.

Data source: Local data collection.

What the quality statement means for each audience

Service providers ensure that appropriate documentation and records are available to healthcare professionals involved in a person's care in accordance with NICE guidance.

Healthcare professionals ensure they share all appropriate documentation and records with other healthcare professionals involved in the care of people with COAG, suspected COAG or with OHT, and should also ensure that lack of documentation is reported through clinical governance

channels.

Commissioners ensure they commission services that make appropriate documentation and records available at each clinical encounter.

People with glaucoma, suspected glaucoma or with ocular hypertension are seen by healthcare professionals who have access to the person's records, which should include information on test results, past medical problems, current and previous medication details, drug allergies and intolerances.

Source guidance

Glaucoma: diagnosis and management (2009, updated 2017) NICE guideline NG81, recommendation 1.3.1

Definitions

NICE's guideline on glaucoma, recommendation 1.3.1 states that the following appropriate documentation and records should be available at each clinical episode:

- records of all previous tests and images relevant to COAG and OHT assessment
- records of past surgical and medical history which could affect management
- current systemic and topical medication
- glaucoma medication record
- drug allergies and intolerances.

Quality statement 10: Surgery

Quality statement

People with COAG who are progressing to loss of vision despite treatment or who present with advanced visual loss are offered surgery with pharmacological augmentation (MMC) as indicated and information on the risks and benefits associated with surgery.

Quality measure

Structure

Evidence of arrangements to ensure that all people with chronic open angle glaucoma (COAG) who are progressing to loss of vision despite treatment or who present with advanced visual loss are offered surgery with pharmacological augmentation (MMC) as indicated and information on the risks and benefits associated with surgery.

Data source: Local data collection.

Process

a) Proportion of people with COAG who are progressing to loss of vision despite treatment or who present with advanced visual loss who are offered surgery with pharmacological augmentation (MMC) as indicated.

Numerator – the number of people in the denominator offered surgery with pharmacological augmentation (MMC) as indicated.

Denominator – the number of people with COAG progressing to loss of vision despite treatment or who present with advanced visual loss.

Data source: Local data collection. Hospital Episode Statistics (HES) collect data on the number of people who have surgery, but do not collect data on those offered surgery.

b) Proportion of people with COAG offered surgery because they are progressing to loss of vision despite treatment or who present with advanced visual loss, who receive information on the risks and benefits associated with surgery.

Numerator – the number of people in the denominator who receive information on the risks and

benefits associated with surgery.

Denominator – the number of people with COAG who are offered surgery because they are progressing to loss of vision despite treatment or who present with advanced visual loss.

Data source: Local data collection.

What the quality statement means for each audience

Service providers ensure that people with COAG progressing to loss of vision despite treatment or who present with advanced visual loss are offered surgery with pharmacological augmentation (MMC) as indicated and are offered information on the risks and benefits associated with surgery.

Healthcare professionals ensure they offer surgery with pharmacological augmentation (MMC) as indicated to people with COAG progressing to loss of vision despite treatment or who present with advanced visual loss, and offer information on the risks and benefits associated with surgery.

Commissioners ensure they commission services that offer surgery with pharmacological augmentation (MMC) as indicated to people with COAG progressing to loss of vision despite treatment or who present with advanced visual loss, and that information on the risks and benefits associated with surgery is offered to them.

People with glaucoma who are losing their sight despite treatment and those diagnosed with glaucoma at an advanced stage are offered surgery and given information on the risks and benefits of surgery.

Source guidance

Glaucoma: diagnosis and management (2009, updated 2017) NICE guideline NG81, recommendation 1.5.17

Definitions

At the time of publication (November 2017), MMC did not have a UK marketing authorisation for this indication. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information.

[NICE's guideline on glaucoma, recommendation 1.5.17]

Quality statement 11: Information

Quality statement

People with COAG, suspected COAG or with OHT are given the opportunity to discuss their diagnosis, prognosis and management, and are provided with relevant and accessible information and advice at initial and subsequent visits in accordance with NICE guidance.

Quality measure

Structure

Evidence of arrangements to ensure that people with chronic open angle glaucoma (COAG), suspected COAG or with ocular hypertension (OHT) are given the opportunity to discuss their diagnosis, prognosis and management, and are provided with relevant and accessible information and advice at initial and subsequent visits in accordance with NICE guidance.

Data source: Local data collection.

Process

Proportion of people with COAG, suspected COAG or with OHT who are given the opportunity to discuss their diagnosis, prognosis and management and who are provided with relevant and accessible information and advice at initial and subsequent visits in accordance with NICE guidance.

Numerator – the number of people in the denominator given the opportunity to discuss their diagnosis, prognosis and management and provided with relevant and accessible information and advice at initial and subsequent visits in accordance with NICE guidance.

Denominator – the number of people with COAG, suspected COAG or with OHT.

Data source: Local data collection.

What the quality statement means for each audience

Service providers ensure that people with COAG, suspected COAG or with OHT are able to discuss their diagnosis, prognosis and management, and are provided with relevant and accessible information and advice at initial and subsequent visits in accordance with NICE guidance.

Healthcare professionals discuss diagnosis, prognosis and management with people with COAG, suspected COAG or with OHT and provide them with relevant and accessible information and advice at initial and subsequent visits in accordance with NICE guidance.

Commissioners ensure they commission services that offer people with COAG, suspected COAG or with OHT the opportunity to discuss their diagnosis, prognosis and management at initial and subsequent visits, and that provide relevant and accessible information and advice in accordance with NICE guidance.

People with glaucoma, suspected glaucoma or with ocular hypertension have the opportunity to discuss their diagnosis, prognosis (what their sight may be like in the future) and treatment, and are provided with relevant information in a suitable format and advice at each appointment.

Source guidance

Glaucoma: diagnosis and management (2009, updated 2017) NICE guideline NG81, recommendation 1.7.1

Definitions

In NICE's guideline on glaucoma, recommendation 1.7.1 states that relevant information may include the following:

- their specific condition (OHT, suspected COAG and COAG), its life-long implications and their prognosis for retention of sight
- that COAG in the early stages and OHT and suspected COAG are symptomless
- that most people having treatment for COAG will have good quality of life and not go blind
- that once lost, sight cannot be recovered
- that glaucoma can run in families and that family members may wish to be tested for the condition
- the importance of the person's role in their own treatment – for example, the ongoing regular application of eye drops to preserve sight
- the different types of treatment options, including mode of action, frequency and severity of side effects, and risks and benefits of treatment, so that people are able to take an active part

- in decision-making (see NICE's guideline on medicines optimisation).
- how to apply eye drops, including technique (punctal occlusion and devices) and hygiene (storage)
- the need for regular monitoring as specified by the healthcare professional
- methods of investigation during assessment
- how long each appointment is likely to take and whether the person will need any help to attend (for example, driving soon after pupil dilatation would be inadvisable)
- the eye clinic liaison officer (ECLO)
- support organisations and support groups
- compliance aids (such as dispensers) available from their GP or community pharmacist
- Letter of Vision Impairment (LVI), Referral of Vision Impairment (RVI) and Certificate of Vision Impairment (CVI), registration
- Driver and Vehicle Licensing Agency (DVLA) regulations.

Equality and diversity considerations

All information should be provided in an accessible format tailored to the needs of the individual. It should also be accessible to people with additional needs such as physical, sensory or learning disabilities, and to people who do not speak or read English. People with COAG, suspected COAG or with OHT should have access to an interpreter or advocate if needed.

Quality statement 12: Discharge

Quality statement

People with suspected COAG or with OHT who are not recommended for treatment are discharged from formal monitoring with a patient-held management plan and their discharge summary is sent to their GP and primary eye care professional.

Quality measure

Structure

Evidence of arrangements to ensure that all people with suspected chronic open angle glaucoma (COAG) or with ocular hypertension (OHT) who are not recommended for treatment are discharged from formal monitoring with a patient-held management plan and their discharge summary is sent to their GP and primary eye care professional.

Data source: Local data collection.

Process

Proportion of people with suspected COAG or with OHT who are not recommended for treatment who are discharged from formal monitoring with a patient-held management plan and their discharge summary is sent to their GP and primary eye care professional.

Numerator – the number of people in the denominator discharged from formal monitoring with a patient-held management plan and their discharge summary is sent to their GP and primary eye care professional.

Denominator – the number of people with suspected COAG or with OHT who are not recommended for treatment.

Data source: Local data collection.

What the quality statement means for each audience

Service providers ensure that people with suspected COAG or with OHT who are not recommended for treatment are discharged from formal monitoring with a patient-held management plan and their discharge summary is sent to their GP and primary eye care

professional.

Healthcare professionals ensure they discharge people with suspected COAG or with OHT who are not recommended for treatment from formal monitoring with a patient-held management plan and send their discharge summary to their GP and primary eye care professional.

Commissioners ensure they commission services that discharge people with COAG or with OHT who are not recommended for treatment from formal monitoring with a patient-held management plan, and send their discharge summary to their GP and primary eye care professional.

People with suspected glaucoma or with ocular hypertension who do not need treatment are discharged from regular glaucoma monitoring and are given information to take home about their condition, which includes details of tests, how often they should return and when they should next be reviewed. This information is also sent to their GP and their eye care professional.

Source guidance

Glaucoma: diagnosis and management (2009, updated 2017) NICE guideline NG81, recommendations 1.4.14 and 1.4.15

Definitions

In NICE's guideline on glaucoma, recommendation 1.4.14 states that people should be discharged back to primary eye care services if:

- they were referred for OHT but do not need treatment
- they were referred for suspected COAG but this is no longer suspected.

People should be advised to continue with regular visits to their primary eye care professional, at clinically appropriate intervals.

In NICE's guideline on glaucoma, recommendation 1.4.15 states that people who have been assessed and discharged to primary care should be given a discharge summary. A copy should be sent to the person's GP and, with their consent, a copy of the relevant information should be sent to the primary eye care professional nominated by the person. People should be advised to take their discharge summary with them when attending future sight tests.

A patient-held management plan should include details of the following:

- diagnosis
- relevant clinical information such as:
    - copies of disc imaging
    - copies of visual field
    - central corneal thickness
    - threshold intraocular pressure for return referral
    - return referral criteria
    - review interval.

Using the quality standard

It is important that the quality standard is considered alongside current policy and guidance documents listed in the development sources section.

Quality measures

The quality measures accompanying the quality statements aim to improve the structure, process and outcomes of healthcare. They are not a new set of targets or mandatory indicators for performance management.

Expected levels of achievement for quality measures are not specified. Quality standards are intended to drive up the quality of care, and so aspirational achievement levels are likely to be 100% (or 0% if the quality statement states that something should not be done). However, it is recognised that this may not always be appropriate in practice taking account of patient safety, patient choice and clinical judgement and therefore desired levels of achievement should be defined locally.

For further information, including guidance on using quality measures, please see how to use quality standards.

Diversity, equality and language

During the development of this quality standard, equality issues were considered.

Good communication between health and social care professionals and people with glaucoma is essential. Treatment and care, and the information given about it, should be culturally appropriate. It should also be accessible to people with additional needs such as physical, sensory or learning disabilities, and to people who do not speak or read English. People with COAG, suspected COAG or OHT should have access to an interpreter or advocate if needed.

People at risk of developing chronic open angle glaucoma

It is essential that services are commissioned for people at increased risk of COAG, including those at risk of social exclusion, so that they have access to effective eye care services. People at increased risk of developing COAG include those:

- over 40 years

- with OHT
- with a family history of glaucoma
- of West African or African-Caribbean family origin
- with diabetes
- with moderate and high myopia.

Development sources

Evidence sources

The documents below contain clinical guideline recommendations or other recommendations that were used to develop the quality standard statements and measures.

- Glaucoma: diagnosis and management (2009, updated 2017) NICE guideline NG81.
- National Patient Safety Agency (2009) Rapid Response Report. Preventing delay to follow up for patients with glaucoma.

Policy context

It is important that the quality standard is considered alongside current policy documents, including:

Department of Health (2010) The NHS Outcomes Framework 2011/12.

Department of Health (2009) Primary Care and Community Services: Improving Eye Health Services.

Department of Health (2007) Commissioning Toolkit for community based eye care services.

Royal National Institute of Blind People (2008) UK Vision Strategy: Setting the direction for eye health and sight loss services.

Department of Health (2004) National Eye Care Services Steering Group - First report.

Department of Health (2001) National service framework for older people.

Definitions and data sources

References included in the definitions and data sources sections can be found below:

Hospital Episode Statistics.

National Patient Safety Agency National reporting and Learning System. People with OHT, suspected COAG or COAG will be monitored in accordance with NICE guidance if they are

monitored at intervals according to their risk of conversion to COAG or progressive loss of vision as set out in NICE guideline NG81 recommendations 1.4.11 to 1.4.14 and 1.5.11.

1.4.11 For people with treated OHT (baseline IOP of 24 mmHg or more) and a normal optic head and visual field at the most recent assessment:

- use clinical judgement to assess control of IOP and risk of conversion to COAG, and
- reassess according to table 1.

Table 1 Time to next assessment for people being treated for OHT

Conversion from OHT to COAG	Control of IOP	Time to next assessment[1]
Not detected or uncertain conversion[2]	No	Review management plan and reassess between 1 and 4 months
Uncertain conversion[2]	Yes	Reassess between 6 and 12 months
No conversion detected	Yes	Reassess between 18 and 24 months
Conversion	No or yes	See recommendations on the diagnosis and reassessment of COAG
[1]Use clinical judgement to decide when the next appointment should take place within the recommended interval. [2]Uncertain conversion includes having insufficient accurate information (perhaps because the person was unable to participate in the assessment).		

1.4.12 For people with suspected COAG:

- use clinical judgement to assess control of IOP and risk of conversion to COAG (optic nerve head damage and visual field defect), and
- reassess according to table 2.

Table 2 Time to next assessment for people with suspected COAG

Conversion to COAG	Control of IOP	Time to next assessment[1]

Not detected or uncertain conversion[2]	No	Review management plan and reassess between 1 and 4 months
Uncertain conversion[2]	Yes	Reassess between 6 and 12 months
No conversion detected	Yes	Reassess between 12 and 18 months
Conversion	No or yes	See recommendations on the diagnosis and reassessment of COAG
[1]Use clinical judgement to decide when the next appointment should take place within the recommended interval. [2]Uncertain conversion includes having insufficient accurate information (perhaps because the person was unable to participate in the assessment).		

1.4.13 For people with COAG:

- use clinical judgement to assess risk of COAG progression to sight loss, and
- reassess according to table 3.

Table 3 Time to next assessment for people with COAG

Progression of COAG	Control of IOP	Time to next assessment[1]
Not detected	No	Review treatment plan and reassess between 1 and 4 months
Uncertain progression[2] or progression	No	Review treatment plan and reassess between 1 and 2 months
No progression detected and low clinical risk	Yes	Reassess between 12 and 18 months
No progression detected and high clinical risk	Yes	Reassess between 6 and 12 months
Uncertain progression[2] or progression	Yes	Review treatment plan and reassess between 2 and 6 months

[1]Use clinical judgement to decide when the next appointment should take place within the recommended interval.

[2]Uncertain progression includes having insufficient accurate information (perhaps because the person was unable to participate in the assessment).

Related NICE quality standards

Patient experience in adult NHS services (2012) NICE quality standard 15.

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Update information

November 2017: Changes were made to statements 6, 10 and 12, and to definitions and source guidance sections throughout to ensure alignment with the updated NICE guideline on glaucoma: diagnosis and management.

About this quality standard

NICE quality standards are a set of specific, concise statements and associated measures. They set out aspirational, but achievable, markers of high-quality, cost-effective patient care, covering the treatment and prevention of different diseases and conditions. Derived from the best available evidence such as NICE guidance and other evidence sources accredited by NHS Evidence, they are developed independently by NICE, in collaboration with NHS and social care professionals, their partners and service users, and address three dimensions of quality: clinical effectiveness, patient safety and patient experience.

Information about how NICE quality standards are developed is available from the NICE website.

This quality standard has been incorporated into the NICE Pathway on glaucoma.

ISBN: 978-1-4731-1708-2

Supporting organisations

Many organisations share NICE's commitment to quality improvement using evidence-based guidance. The following supporting organisations have recognised the benefit of the quality standard in improving care for patients, carers, service users and members of the public. They have agreed to work with NICE to ensure that those commissioning or providing services are made aware of and encouraged to use the quality standard.

- Association of Optometrists
- College of Optometrists
- International Glaucoma Association
- Royal College of Nursing - ophthalmic forum
- Royal National Institute of Blind People
- Royal Pharmaceutical Society
- Royal College of Ophthalmologists
- UK and Eire Glaucoma Society