Service for the accurate diagnosis of the epilepsies in adults

Commissioning guide
Implementing NICE guidance

August 2008
Service for the accurate diagnosis of the epilepsies in adults

This commissioning guide provides support for the local implementation of NICE clinical guidelines through commissioning, and is a resource to help health professionals in England to commission an effective service for the accurate diagnosis of the epilepsies in adults.

This commissioning guide should be read in conjunction with the following NICE guidance:


The clinical guideline covers clinical and cost effectiveness in detail and underpins the content of this guide. Implementation of the guidance noted above is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement this guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in the guidance should be interpreted in a way which would be inconsistent with compliance with those duties.

The guide:

- makes the case for commissioning a service for the accurate diagnosis of the epilepsies in adults
- specifies service requirements
- helps you determine local service levels
- helps you ensure corporate and quality assurance.

The full text of this commissioning guide is accessed from the navigation menu on the right hand side of the screen. The associated commissioning tool is available until 25 June 2010 to primary care organisations in England who are already registered to use the tool. New registrations for the existing commissioning tool will not be possible after 31 March 2010.

From 1 April 2010 the new freely available commissioning and benchmarking tool can be downloaded here. There is no need to register.

We are keen to improve the commissioning guides in order to better meet the needs of commissioners. Please send us your ideas for future topic-specific guides or other comments.
Read the NICE disclaimer for information on the use and accuracy of content on the NICE website.

- **Topic-specific Advisory Group: service for the accurate diagnosis of the epilepsies**
Commissioning a service for the accurate diagnosis of the epilepsies in adults

Epilepsy is a common and chronic neurological condition that is defined as a tendency to have recurrent unprovoked seizures. A seizure is caused by a sudden burst of excess electrical activity in the brain, which temporarily disrupts the normal passage of messages between brain cells.

The age-standardised prevalence of epilepsy in the UK is estimated to be 7.5 per 1000 population, but is likely to be 25% higher in the most socially deprived areas compared with the areas that are least socially deprived[1].

There are major health, educational, employment and psychosocial implications attached to a diagnosis of epilepsy. However, making the diagnosis can be difficult and misdiagnosis is frequent, particularly when the diagnosis is made by a non-specialist[2]. A lack of training among medical practitioners and limited access to epilepsy specialists has been cited as a major cause of misdiagnosis[3]. Misdiagnosis rates in the UK, where a diagnosis of epilepsy is incorrectly made, are between 20–31%[4]. The annual total cost (NHS and community based services) of this type of epilepsy misdiagnosis in England and Wales has been estimated to be up to £138 million[4]. An unknown number of people also have a missed diagnosis, where they actually have epilepsy but it has been diagnosed as something else. Misdiagnosis of epilepsy has economic implications for the NHS and society as a whole.

Epilepsy is associated with a risk of premature death that is two to three times higher than in the general population. There are around 1000 epilepsy-related deaths each year in the UK, most of which are associated with seizures. Sudden unexpected death in epilepsy (SUDEP) is the principal cause of seizure-related death in people with chronic epilepsy and is estimated to account for around half of these deaths each year[5]. Although up to 70% of people with epilepsy have the potential to be seizure-free through accurate diagnosis and optimal treatment, this is achieved in only around 52%[6]. Inadequate access to specialist care and lack of appropriate investigations have been cited as deficiencies in the management of epilepsy in hospitals, and a lack of timely access to skilled specialists identified as a deficiency in general practice[5].

In line with the recommendations in NICE clinical guideline CG20 on the epilepsies there is a need for commissioners to ensure that misdiagnosis is kept to a minimum by making certain that all individuals presenting with a recent onset suspected seizure are seen within 2 weeks by a specialist (a medical practitioner with training and expertise in epilepsy), and that at the initial assessment the specialist has access to appropriate investigations.
Benefits

The potential benefits of robustly commissioning an effective service for the accurate diagnosis of the epilepsies in adults include:

- **improving health outcomes and quality of life** when individuals with long-term neurological conditions have prompt access to specialist expertise in order to obtain a diagnosis and begin treatment
- **avoiding delayed or incorrect diagnoses** – epilepsy is misdiagnosed in around one in four cases
- **reducing the risk of premature death** in a small number of individuals from SUDEP by ensuring a correct diagnosis is made and treatment optimised
- **reducing emergency admissions to secondary care** as a consequence of preventing seizures and seizure-related injuries
- **reducing social and financial deprivation** of individuals wrongly diagnosed with epilepsy and treated with anti-epileptic drugs, and also of those with true epilepsy that is misdiagnosed as a non-epileptic condition
- **reducing the costs to the NHS** of misdiagnosis, including the cost of inappropriate prescribing of anti-epileptic drugs, and medico-legal costs arising from complaints and claims
- **reducing the risk of teratogenicity** and major congenital malformation from the inappropriate prescribing of anti-epileptic drugs in individuals wrongly diagnosed with epilepsy
- **promoting independent living and employability**
- **reducing inequalities** and improving access to diagnostic services
- **enhancing patient choice, empowerment and self-management**
- **better value for money**, through helping commissioners to manage their commissioning budgets more effectively – this may include opportunities for clinicians to undertake local service redesign to meet local requirements in novel ways.

Key clinical issues

Key clinical issues in providing an effective service for the accurate diagnosis of the epilepsies in adults are:

- **ensuring that all individuals with a recent onset suspected seizure are seen within 2 weeks by a specialist (a medical practitioner with training and expertise in epilepsy)**
- **ensuring that access to an electroencephalogram (EEG) or magnetic resonance imaging (MRI) is available** within 4 weeks of it being requested for individuals requiring such tests
- **aiming for a confirmed and precise diagnosis of epilepsy, and accurate classification of seizure type and epilepsy syndrome**
• **providing a quality assured service.**

**National priorities**

National priorities and initiatives relevant to commissioning an effective service for the accurate diagnosis of the epilepsies in adults include:

- **World class commissioning.**
- **The NHS in England: The operating framework for 2009/10.**
- **National service framework for long-term conditions.**
- **Delivering the 18 week patient treatment pathway.**
- **The Care closer to home initiative outlined in chapter 6 of the white paper ‘Our health, our care, our say’.**
- **Commissioning framework for health and well-being.**
- **Considering the impact of patient choice.**
- **The Expert patients programme.**
- **A stronger local voice: a framework for creating a stronger local voice in the development of health and social care services.**
- **Implementation of NICE clinical and public health guidelines. These are core standards, and performance against these standards will be assessed by the Care Quality Commission in line with Standards for better health.**

Although many or all of these priorities may be relevant to the services nationally, your local service redesign may address only one or two of them.

**References**


Specifying a service for the accurate diagnosis of the epilepsies in adults

**Service components**

The key components of a service for the accurate diagnosis of the epilepsies in adults are:

- appropriate and urgent referral of individuals with a recent onset suspected seizure to a specialist
- ensuring prompt access to appropriate diagnostic investigations
- developing a high-quality service.

**Appropriate and urgent referral of individuals with a recent onset suspected seizure to a specialist**

Patients presenting in primary care or accident and emergency departments following a suspected seizure usually undergo an initial screening by a physician. However, diagnosing epilepsy is difficult, and misdiagnosis is a frequent occurrence, particularly when the diagnosis is made by a non-specialist. The NICE clinical guideline CG20 on the epilepsies recommends that:

- all individuals presenting with a recent onset suspected seizure should be seen within 2 weeks by a specialist in the management of the epilepsies to ensure precise and early diagnosis and initiation of therapy as appropriate to the individual’s needs
- protocols should be in place to ensure proper assessment in the emergency setting for individuals presenting with an epileptic seizure (suspected or confirmed)
- individuals presenting to an accident and emergency department following a suspected seizure should be screened initially by a physician, with onward referral to a specialist when an epileptic seizure is suspected or there is diagnostic doubt.

Commissioners may wish to consider whether there are appropriate care and referral pathways in place locally from both primary and emergency care settings to epilepsy specialists. See the Map of medicine care pathway for epilepsy and the 18 weeks commissioning pathway – blackouts 2008. Commissioners may also wish to consider whether there is adequate access to specialist care to meet the needs of their population in terms of both new and existing cases of diagnosed epilepsy, as a proportion of the latter may benefit from specialist review of the diagnosis.

**Ensuring prompt access to appropriate diagnostic investigations**

There are a number of investigations used to facilitate precise diagnosis and classification of epilepsy, including electroencephalogram (EEG) and neuroimaging, which includes magnetic resonance imaging (MRI) and
computed tomography (CT). See a [summary of investigations to support the diagnosis and classification of the epilepsies](#).

The **NICE clinical guideline CG20 on the epilepsies** includes the following recommendations:

- the diagnosis of epilepsy in adults should be established by a specialist medical practitioner with training and expertise in epilepsy
- at the initial assessment for a recent onset seizure, the specialist should have access to appropriate investigations
- individuals requiring an EEG should have the test performed within 4 weeks of it being requested
- MRI should be the imaging investigation of choice in individuals with epilepsy, and individuals requiring MRI should have the test performed within 4 weeks of it being requested
- long-term video or ambulatory EEG may be used in the assessment of individuals who present diagnostic difficulties after clinical assessment and standard EEG
- seizure type(s) and epilepsy syndrome, aetiology, and co-morbidity should be determined, because failure to classify the epilepsy syndrome correctly can lead to inappropriate treatment and persistence of seizures.

Commissioners may need to review whether there is adequate local provision and equitable and timely access to diagnostic investigations such as MRI and video telemetry to meet the needs of their population. They may also wish to be assured that there is appropriate local use of EEG and MRI/CT, in the correct sequence, in order to match demand for diagnostic investigations with capacity. Where there is limited or no local access to such investigations, robust referral pathways to other providers and timely, high quality communication with the requesting team are important for good patient care.

**Service models**

Commissioners may wish to consider delivering a service for the accurate diagnosis of the epilepsies in adults in a number of different ways, and mixed models of provision may be appropriate across a local health economy.

For example, in order to meet the standards outlined in the NICE clinical guideline CG20 on the epilepsies, the [Wessex Neurological Centre Specialist Epilepsy Service](#) developed a rapid access clinic for people who have had a suspected first seizure. Individuals are referred directly from the accident and emergency department or by their GP using a direct booking system. A consultant neurologist reviews the medical information, and where necessary, refers the individual for further tests.

Other service models use the skills of other healthcare professionals to support the initial screening and diagnostic process. The clinical epilepsy team in Bradford PCT runs a service based on a multidisciplinary team that is overseen by consultant neurologists and includes GPs with a specialist interest in epilepsy, epilepsy specialist nurses and a psychotherapist. These
examples are offered to share practice and NICE makes no judgement on the compliance of these services with its guidance.

Local stakeholders, including service users, should be involved in determining what is needed from a service for the accurate diagnosis of the epilepsies in adults in order to meet local needs. The service should be patient-centred and integrated with other elements of management and care of individuals with epilepsy. In order to meet the health needs of the population, commissioners will need to carefully plan local services, which will include determining local need and minimum service standards, and planning the required capacity.

The service specification needs to consider:

- the required competencies of, and training for, staff responsible for providing the service
- the expected number of individuals using the service (this should take into account how quickly any changes in service provision are likely to take place)
- ease of access and service location; commissioners should engage with service users and other relevant individuals and organisations locally
- care and referral pathways
- information and audit requirements, including IT support and infrastructure
- planned service improvement, including redesign, quality, equitable access, and referral-to-treatment times according to the 18 week patient pathway or equitable waiting times locally for those services currently outside 18 weeks
- service monitoring criteria.

Useful sources of information may include:

- Delivering the 18 week patient pathway: 18 week neurology commissioning pathway on blackouts.
- Delivering the 18 week patient pathway: commissioning a world class imaging service is a reference tool that brings together a number of resources on diagnostic imaging.
- Transforming clinical neurophysiology diagnostic services to deliver 18 weeks: a good practice guide provides commissioners with information about where clinical neurophysiology needs to fit into their local 18 weeks strategy.
- Long term neurological conditions: a good practice guide to the development of the multidisciplinary team and the value of the specialist nurse is a resource to help commissioners and providers of services to people with long-term neurological conditions to offer the right service, delivered by an appropriate workforce, to meet the needs of patients.
- Implementing care closer to home: convenient quality care for patients provides practical support to commissioners for the provision of more specialised services closer to home with the emphasis on the role of practitioners with specialist interests.
The **Map of medicine** provides an information resource that visually organises the latest evidence and best practice guidelines.

The **NICE shared learning database** offers examples of how organisations have implemented NICE guidance locally.
Summary of investigations to support the diagnosis and classification of the epilepsies

See the NICE clinical guideline CG20 on the epilepsies for full details.

Investigations

Electroencephalogram (EEG)

Use a standard EEG:
• to support a diagnosis of epilepsy in adults in whom the clinical history suggests that the seizure is likely to be epileptic in origin
• to help determine seizure type and epilepsy syndrome
• to assess the risk of seizure recurrence after a first unprovoked seizure.

Photic stimulation and hyperventilation, with informed consent, should remain part of standard EEG assessment.

Do not use an EEG:
• to exclude a diagnosis of epilepsy
• in the case of probable syncope (risk of false-positive result)
• in isolation to diagnose epilepsy.

If diagnosis or classification remains unclear following a standard EEG, use:
• long-term video or ambulatory EEG
• sleep EEG
• repeated standard EEG (do not use in preference to sleep EEG).

Neuroimaging

Use neuroimaging (magnetic resonance imaging [MRI]/computed tomography [CT]) to identify structural abnormalities that cause certain epilepsies.

Do not routinely request neuroimaging when a diagnosis of idiopathic generalised epilepsy has been made.

MRI

MRI is the imaging investigation of choice for people with epilepsy.

The use of MRI is particularly important for people:
• who have developed epilepsy as adults
• who have any suggestion of a focal onset from a history, examination or EEG
• in whom seizures continue in spite of first-line medication.
CT

CT is an alternative to MRI:
- if MRI is contraindicated or unavailable
- in an acute situation, to determine whether a seizure has been caused by an acute neurological lesion or illness.

Other tests and assessments

- Consider blood tests (for example, plasma electrolytes, glucose, calcium) to identify potential causes and/or significant co-morbidity.
- Perform a 12-lead electrocardiogram in individuals with suspected epilepsy.
- Refer to a cardiologist in cases of diagnostic uncertainty.
- Refer for neuropsychological assessment when:
  - MRI has identified abnormalities in regions of the brain associated with cognitive function
  - the person with epilepsy is having educational or occupational difficulties
  - the person with epilepsy complains of memory or other cognitive deficits and/or cognitive decline.

Classification

- Determine: seizure type(s), epilepsy syndrome, aetiology and co-morbidity.
- Classify epileptic seizures and epilepsy syndromes: use a multi-axial diagnostic scheme (axes – description of seizure; seizure type; syndrome and aetiology).
Determining local service levels

Benchmarks for a standard population

Available data suggest that the standard benchmark rate for new referrals to a service for the accurate diagnosis of the epilepsies in adults is 0.03%, or 30 per 100,000 population, aged 15 years and older per year. Approximately 80% of the population in England is aged 15 years and older.

The NICE clinical guideline CG20 on the epilepsies defines adults as individuals aged 18 years and older and young people as those aged 12–17 years. The guideline also states that there is a variable age range (15–19 years) at which care is transferred between child and adult health services by local healthcare trusts and primary care organisations. For the purpose of this commissioning guide the adult population has been defined as people aged 15 years and older. This definition is also used in the commissioning and benchmarking tool and has been chosen because of the availability of population data at general practice level within certain age bands.

For an average primary care trust population of 300,000 (with 240,000 people aged 15 years and older) the average number of people requiring a new referral to a service for the accurate diagnosis of the epilepsies would be around 70 per year (0.03% of the population aged 15 years and older).

For an average general practice list size of 10,000 (with around 8000 people aged 15 years and older), the average number of people requiring a new referral to a service for the accurate diagnosis of the epilepsies would be 2 per year (0.03% of the population aged 15 years and older).

Of these newly referred individuals, approximately 70% may be expected to have the diagnosis of epilepsy confirmed and hence will require ongoing support and regular structured review.

Examine the assumptions used in estimating these figures.

Epilepsy is likely to fall under the programme budgeting category 207X (neurological).

Use the service for the accurate diagnosis of the epilepsies commissioning and benchmarking tool to determine the level of service that might be needed locally and to calculate the cost of commissioning the service using the indicative benchmark and/or your own local data.

Further information

Sources of further information to help you in assessing local health needs and reducing health inequalities include:
Annex A of the Commissioning framework for health and well-being outlines the process and data needed to undertake a joint strategic needs assessment.

Department of Health Delivering quality and value – focus on benchmarking.

NICE Health equity audit – learning from practice briefing.

Delivering the 18 week patient pathway: 18 week commissioning pathways.

The No delays achiever provides access to service improvement tools aimed at reducing time between referral and treatment.

The Practice-based commissioning comparators reporting service provides access to a range of indicators and activity data at practice level, enabling a better understanding of local commissioning activity, referral patterns and outcomes.

The Disease management information toolkit (DMIT) is a good-practice tool for decision-makers, commissioners and deliverers of care for people with long-term conditions, which presents data on conditions that contribute to high numbers of emergency bed days. It models the effects of possible interventions that may be commissioned at a local level and helps users to consider the likely impact of commissioning options.

PARR (Patients at risk of re-hospitalisation) is a risk prediction system for use by primary care trusts to identify patients at high risk of hospital re-admission.

PRIMIS+ provides support to general practices on information management, recording for, and analysis of, data quality, plus a comparative analysis service focused on key clinical topics.
Assumptions used in estimating a population benchmark

The assumptions used in estimating a population benchmark of 0.03% per year for new referrals into a service for the accurate diagnosis of the epilepsies are based on the following sources of information:

- epidemiological data on the prevalence/incidence of epilepsy
- current practice on detection rates of epilepsy
- expert clinical opinion of the topic-specific advisory group, based on experience in clinical practice and literature review.

For the purpose of this commissioning guide the adult population has been defined as people aged 15 years and older. This definition is also used in the tool and has been chosen because of the availability of population data at general practice level within certain age bands.

Epidemiological data

Epilepsy is the most common chronic disabling neurological condition in the UK. The age-standardised prevalence of epilepsy in the UK is estimated to be 7.5 per 1000 population.

The incidence of epilepsy is estimated to be about 50 per 100,000 population per annum. Incidence is high in the child population, decreases in the adult population and rises again in the population of older people.

Current practice

IMS Disease Analyzer is a database that holds data from a sample of GP practice systems. Data based on the Quality and Outcomes Framework (QOF) epilepsy diagnosis codes were extracted to assess the prevalence and incidence of diagnosed epilepsy.

Analysis of the data suggests that the prevalence of diagnosed epilepsy in people aged 15 years and older is 1.15%. This estimate is higher than the unadjusted QOF prevalence for England for 2006/2007 for epilepsy of 0.6%. Characteristics of the QOF epilepsy disease register may explain this difference. First, the QOF register excludes individuals with a diagnosis of epilepsy who are not receiving drug treatment. Second, although the QOF register excludes individuals aged under 18 years, the prevalence is calculated with a denominator of all registered individuals. This means that the reported QOF prevalence is lower than the actual value. Commissioners should also be aware that the prevalence of diagnosed epilepsy is likely to include some degree of misdiagnosis, which has been estimated to be between 20–31% in the UK\[^1\].
Figure 1 shows the estimated prevalence of diagnosed epilepsy in England by age and sex in 2006/07.

The diagnosed incidence of epilepsy, that is, the average detection rate of new cases in a year, based on data extracted from IMS Disease Analyzer is estimated to be 0.02% of the population aged 15 years and older (95% confidence interval 0.017 to 0.024).

The quality of data used in the analysis of diagnosed epilepsy relies on the information recorded in patient medical records. Some element of misdiagnosis in a proportion of new cases cannot be ruled out.

**Expert clinical opinion**

The consensus opinion of the topic-specific advisory group was that not all individuals who are referred with suspected epilepsy are subsequently diagnosed with epilepsy. The proportion of people who are referred and subsequently diagnosed with epilepsy is likely to be highly variable, and depends on a number of factors. However, based on clinical practice and literature review it is estimated that, on average, around 65–75% of people referred for investigation following a seizure are likely to be subsequently diagnosed with epilepsy.

There is a proportion of people who have a diagnosis of epilepsy (prevalent cases) who may benefit from having a review of the diagnosis (both for confirmation of diagnosis and of the type of epilepsy). However, the proportion of people who may benefit from this review is subject to a high degree of
uncertainty and local variation. Commissioners will need to consider the diagnostic review of these individuals when planning service capacity.

Conclusions

Based on the epidemiological data and other information outlined above, it is concluded that the benchmark for new referrals to a service for the accurate diagnosis of the epilepsies is 0.03%. This is based on the following assumptions:

- the incidence of diagnosed epilepsy is estimated to be 0.02%
- around 70% of people referred for suspected epilepsy are likely to have the diagnosis confirmed
- adjusting the 0.02% to account for individuals who are referred but not subsequently diagnosed with epilepsy produces the figure of 0.03%.

Therefore the population benchmark is estimated to be 0.03%.

Use the service for the accurate diagnosis of the epilepsies commissioning and benchmarking tool to determine the level of service that might be needed locally and to calculate the cost of commissioning the service using the indicative benchmark and/or your own local data.

References

The commissioning and benchmarking tool

Download the services for the diagnosis of epilepsies in adults commissioning and benchmarking tool.

Use the services for the diagnosis of epilepsies in adults commissioning and benchmarking tool to determine the level of service that might be needed locally and to calculate the cost of commissioning the service, as described below.

**Identify indicative local service requirements**

The indicative benchmark based on the national average for referral to a service for the accurate diagnosis of the epilepsies in adults is 0.03%.

The commissioning and benchmarking tool helps you to assess local service requirements using the indicative benchmark as a starting point. With knowledge of your local population and its demographic, you can amend the benchmark to better reflect your local circumstances. For example, if your population is significantly younger or older than the average population, or has an ethnic composition different from the national average, you may need to provide services for relatively fewer or more people.

**Review current commissioned activity**

You may already commission a service for the diagnosis of epilepsies in adults for your population. You can download your own up-to-date secondary care activity data into the tool and data specifications and user notes are provided to help. You can review and amend the downloaded data for your population to calculate the service levels and cost of the service you currently commission. When commissioning outpatient appointments or activity outside of secondary care the tool provides you with tables that you can populate to help you calculate your total current commissioned activity and costs.

**Identify future change in capacity required**

Using the indicative benchmark provided, or your own local benchmark, you can use the commissioning and benchmarking tool to compare the activity that you might need to commission against your current commissioned activity. This will help you to identify the future change in capacity required. Depending on your assessment, your future provision may need to be increased or decreased.

**Model future commissioning intentions and associated costs**

You can use the commissioning and benchmarking tool to calculate the capacity and resources needed to move towards the benchmark level, and to model the required changes over a period of 4 years.
Use the tool to calculate the level and cost of activity you intend to commission and to consider the settings in which the service for the diagnosis of epilepsies in adults may be provided, comparing the costs of commissioning the service across the various settings. The tool is pre-populated with data on the potential recurrent and non-recurrent cost elements that may need to be considered in future service planning, which can be reviewed and amended to better reflect your local circumstances.

Commissioning decisions should consider both the clinical and economic viability of the service, and take into account the views of local people. Commissioning plans should also take into account the costs of monitoring the quality of the services commissioned.
Ensuring corporate and quality assurance

Commissioners should ensure that the services they commission represent value for money and offer the best possible outcomes for patients. Commissioners need to set clear specifications for monitoring and assuring quality in the service contract.

Commissioners should ensure that they consider both the clinical and economic viability of the service, and any related services, and take into account patients’ views and those of other stakeholders when making commissioning decisions.

A service for the accurate diagnosis of the epilepsies in adults needs to:

- be effective and efficient
- be responsive to the diverse needs of patients, including those with learning disabilities
- manage the diagnosis and offer treatment and care based on best practice, as defined in NICE clinical guideline CG20 on the epilepsies
- deliver the required capacity
- be integrated with the general management and care of people with epilepsy
- have local defined criteria for referral, protocols and a care pathway for people with a recent onset unprovoked seizure, which are agreed by local stakeholders and led by a nominated clinician
- be patient-centred and provide equitable access, ensuring that patients are treated with dignity and respect, are fully informed about their care and are able to make decisions about their care in partnership with healthcare professionals
- audit improvement in patient outcomes
- demonstrate how it meets requirements under equalities legislation
- demonstrate value for money.

Local quality assurance

Any mechanisms for quality assurance at a local level are likely to refer to the following.

- Service and performance targets, including estimated activity levels and case mix, complaints procedures.
- Clinical governance arrangements, including incident reporting.
- Clinical quality criteria: for example, appropriateness of referral for diagnostic investigations, consenting procedures, clinical protocols, standards of communication between primary and secondary care healthcare professionals, number of people with a recent onset suspected
seizure seen within 2 weeks by a specialist, and number of individuals requiring electroencephalogram (EEG) or magnetic resonance imaging (MRI) having the test performed within 4 weeks of it being requested. See appendix D of NICE clinical guideline CG20 on the epilepsies for detail on criteria for audit.

- **Audit arrangements**: frequency of reporting, reporting route and format, and dissemination mechanisms.
- **Health, safety and security**: infection control, waste management, confidentiality procedures, legislative requirements.
- **Equipment**: testing and calibration.
- **Accreditation requirements**: for some or all elements of the service, the premises and/or staff.
- **Patient satisfaction**: patient perspective and perception of service provision, number of people with a diagnosis of epilepsy who understand their diagnosis, type of epilepsy and management of their condition, complaints.
- **Patient outcomes**: improved seizure control, quality of life and reduced risk of sudden death from seizures (SUDEP), fewer epilepsy-related injuries. Proportion of people with epilepsy supported to be independent and in control of their condition – see NHS operating framework vital signs; access to personalised and effective care.
- **Staff competencies**: individual and team baseline requirements, monitoring and performance, continuing professional development.
- **Information requirements**, including both patient-specific information (NHS number, referring GP, provision of high-quality information to patients/carers) and service-specific information (referral-to-treatment times, workload trends, number of complaints).
- **The process for reviewing the service with stakeholders**, including decisions on changes necessary to improve or to decommission the service.
- **Achieving targets associated with equalities legislation**.

**Further information**

**General information** on quality and corporate assurance can be obtained from the following sources:

- The National Patient Safety Agency (NPSA) oversees the implementation of a system to report and learn from adverse events and near misses occurring in the NHS. The publication ‘Seven steps to patient safety’ provides an overview of patient safety and gives updates on the tools that the NPSA is developing to support patient safety across the health service.
- **NHS Alliance online resources**: NHS Alliance is the representational organisation of primary care and primary care trusts, and provides them with an opportunity to network and exchange best practice. The alliance
supports its members with an open-access helpline, in-house and joint publications and briefings, internal newsletters and a website.

- The **DH commissioning framework** provides guidance on the commissioning process in the context of the NHS reform agenda.

- **Delivering the 18 week patient pathway** provides a range of resources to support the key NHS objective to deliver an 18 week patient pathway from GP referral to the start of treatment by the end of 2008.

- NHS Institute for Innovation and Improvement support for commissioners, includes **Commissioning for Health Improvement** products to accelerate the achievement of world class commissioning; **The Productive Leader** programme to enable leadership teams to reduce waste and variation in personal work processes, and **Better care, better value indicators** to help inform planning, to inform views on the scale of potential efficiency savings in different aspects of care, and to generate ideas on how to achieve these savings.

- **10 Steps to your SES: a guide to developing a single equality scheme.** This guidance has been developed to assist NHS organisations that have a duty, as public authorities, to comply with the race, disability and gender public sector duties, and in anticipation of new duties in relation to age, religion and belief, and sexual orientation.

Specific information on quality and corporate assurance for a service for the accurate diagnosis of the epilepsies in adults can be obtained from the following sources:

- **Better metrics** is a pragmatic project that provides clinically relevant measures of performance to support the development of measurable local targets and indicators for local quality improvement projects. See [long-term neurological conditions metric 7.05](#) ‘prompt recognition of symptoms, diagnosis and treatment’.

- **Skills for health** works with employers and other stakeholders to ensure that those working in the sector are equipped with the right skills to support the development and delivery of healthcare services. See details of the [competence framework on long-term conditions – neurological care](#).
**Topic-specific Advisory Group: service for the accurate diagnosis of the epilepsies in adults**

A topic-specific advisory group was established to review and advise on the content of the commissioning guide. This group met once, with additional interaction taking place via email.

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