1 What is NHS Evidence?

1.1 Introduction

1. NHS Evidence ([www.evidence.nhs.uk](http://www.evidence.nhs.uk)) is a service that provides access to authoritative health and social care evidence and best practice through a web-based portal. It is managed by the National Institute for Health and Clinical Excellence (NICE).

2. NHS Evidence was launched in 2009, to help people from across the health, social care and public health sectors make better decisions by providing them with easy access to high quality evidence-based information (referred to as ‘evidence’ in this manual). The service allows users to access many different types of evidence from a comprehensive range of sources that in the past may have been hard to find.

3. This manual describes what evidence is covered by the service and how it is identified and selected. The manual is aimed at people working for and with NHS Evidence. It is supported by standard operating procedures (SOPs) within individual teams. The manual may also be of interest to other organisations and stakeholders.

1.2 What are the aims of NHS Evidence?

4. The vision of NHS Evidence is:

   ‘To be the trusted health and social care information service providing access to and influencing the greater use of appropriate evidence-based information to deliver high quality care.’

5. To achieve this, the service:

   - provides breadth of information to all users
   - provides easy access to information
   - maintains the quality of information available
   - ensures the usability of the NHS Evidence portal
• provides leadership to promote the use of evidence in health and social care.

1.3 **Who is NHS Evidence for?**

6. NHS Evidence is designed primarily for people working in health and social care who make decisions about care, treatment, interventions or the use of resources. This includes:

• health practitioners in primary and secondary care (doctors, nurses and allied health professionals)
• social care practitioners
• pharmacists
• public health practitioners
• commissioners
• managers and policy makers
• librarians
• researchers
• health and social care students.

7. Some content on NHS Evidence is only available to NHS employees and other authorised users due to licensing agreements (see chapter 3 ‘Online journals and databases’).

8. Although designed for health and social care workers, most NHS Evidence content can be searched by service users, patients and the wider public.

1.4 **What content does NHS Evidence cover?**

9. NHS Evidence provides access to content across three domains: healthcare, public health, and social care. A wide range of types of evidence is included within these domains (see figure 1 and section 2.2.2 ‘Types of evidence available in NHS Evidence search and browse’ for detail). The scope of NHS Evidence is detailed further in section 2.2 ‘Content covered in search and browse’.
1.5 **NHS Evidence services**

NHS Evidence is used by a broad range of health and social care workers whose search needs and preferences differ. To cater for these varying needs the service provides access to two distinct evidence searching services:

- **NHS Evidence search and browse**, which provides access to high quality, selected evidence (approximately 300,000 different items of evidence at the time of publication) from selected evidence providers. Content accessible via this service is determined through a ‘type of evidence’ inclusion criterion (see section 2.2.2 ‘Types of evidence available in NHS Evidence’).
search and browse’) and the selection of evidence providers (see section 2.3.4 ‘Selecting evidence providers’).

- **Online journals and databases**, which provide comprehensive access to bibliographic resources covering the full range of types of evidence available in published literature (see chapter 3 ‘Online journals and databases’).

11. In addition to these two search services, the service enables users to:

- **be alerted** to new evidence and **personalise** evidence
- **find important gaps in evidence**.

12. The following sections briefly describe these features of NHS Evidence.

### 1.5.1 NHS Evidence search and browse

13. Search and browse allows users to find the evidence most relevant to their search query from within selected types of evidence and selected evidence providers. The function is open to all users with no need to register. The majority of content is available in full text.

14. Search results provide links to the most relevant resources, accompanied by brief extracts from the text of the resource, and some basic, descriptive information such as the source of the document and its date, in order to help determine the most useful result in the list. Results are initially offered in order of relevance, but can be sorted by date to show the most up-to-date material first. Searching is often an iterative process, and searches can be further refined using filters.

15. **Topic pages** are available for a wide range of subjects. They provide access to selected types of evidence from key evidence providers without the need to apply search filters. The evidence is highlighted in ‘topic panels’ that cover content such as guidance,
research, commissioning and patient information (see figure 2 for an example of a clinical topic page with associated panels).

Figure 2 Panels displayed on the topic page for skin cancer

16. The exact panels displayed on any given topic page will depend on the type of topic and the content available. Topic panel content is automatically generated by applying search rules specific to each topic panel.

17. The number and types of topic pages are continually reviewed and expanded.

18. See chapter 2 'Search and browse' for more information about how the evidence for search is identified, and section 2.4 ‘What is included in NHS evidence topic pages?’ specifically for more information about topics pages.

1.5.2 Online journals and databases

19. NHS Evidence provides access to a broad range of commissioned resources including bibliographic and full text databases and e-journals. Eligibility for access to these resources is governed by supplier licences. Resources are accessed via an authentication system that enables eligible users to access licensed resources (content that has been purchased by the NHS in England at
national, regional, or local levels for its employees and other eligible users).

20. Databases can be searched via their native interface. Searches against multiple databases can also be performed using the advanced search function of NHS Evidence healthcare databases advanced search (HDAS) which provides an integrated interface to all databases. See chapter 3 ‘Online journals and databases’ for more information.

1.5.3 Evidence awareness and personalisation

21. A significant part of the work of NHS Evidence is to ensure that selected new evidence is highlighted to users. Services provided include the Eyes on Evidence bulletin, the Medicines newsletter and tailored evidence alerting services, including My Evidence.

22. Eyes on Evidence is a monthly bulletin which contextualises selected pieces of research evidence to encourage interest in evidence-based medicine, linking research and practice in a way that is easily accessible to busy professionals.

23. The NHS Evidence Medicines Information awareness service aggregates medicines information relevant to UK practice for users, and those involved in managing, prescribing, dispensing and administering drugs.

24. All users can register for the personalisation service which allows them to create their own space on NHS Evidence – ‘My Evidence’. Users can:

- receive regular updates about new evidence in areas they specify
- save search results
- save specific evidence found in a search result.
25. See chapter 4 ‘Evidence awareness and personalisation’ for more information.

1.5.4 Gaps in the evidence

26. Accessing evidence is important, however it is also important to ensure that users can find information on gaps in the evidence, referred to as ‘evidence uncertainties’. Evidence uncertainties appear in search results and can also be found in the evidence uncertainty panel of relevant topic pages.

27. Further information about how evidence uncertainties are identified and made available in NHS Evidence is provided in chapter 5 ‘Identification of gaps in the evidence base’.

1.6 Who is involved in NHS Evidence?

28. This section outlines the people and groups that contribute to the selection, development and presentation of evidence.

1.6.1 Information specialists

29. Teams of information specialists and other content experts identify, select and appraise evidence. Some are employed directly by NICE and some work within contracted organisations.

1.6.2 Technical, publishing and research support

30. In-house teams provide a range of functions to support NHS Evidence, including:

- processes and methods development
- technical support and development including search
- taxonomy and controlled vocabularies
- user engagement and research
- commissioning and procurement
- technical writing and editing.
1.6.3 Evidence providers

31. Evidence accessible through NHS Evidence comes from a broad range of sources, known as ‘evidence providers’. Evidence providers include for example the Cochrane Database of Systematic Reviews, the Centre for Reviews and Dissemination (CRD) including the Database of Abstracts of Reviews of Effects (DARE), specific journals or websites and aggregators of content such as bibliographic databases or providers of primary care evidence resources.

32. Some of this content is provided free of charge and some is procured (see chapter 3 ‘Online journals and databases’).

1.6.4 The Editorial Board

33. The Editorial Board is an advisory group with internal and external membership (see www.evidence.nhs.uk/nhs-evidence-content/editorial-board for membership and terms of reference) that supports the NHS Evidence management team to ensure a high quality service with the most appropriate content.

1.6.5 Specialist advice

34. NHS Evidence gains specialist advice from a range of individuals as well as regularly convened domain-specific and subject-specific groups. They provide advice and support for:

- sources of evidence
- presentation of evidence
- stakeholder and user engagement
- quality assurance.

35. The groups and individuals currently formally engaged with NHS Evidence can be found at www.evidence.nhs.uk/nhs-evidence-content/specialist-reference-groups
2 Search and browse

2.1 Introduction

36. NHS Evidence search and browse allows users to find the evidence most relevant to their search query from within selected types of evidence and selected evidence providers. The function is open to all users with no need to register. The majority of content is available in full text.

37. This chapter outlines the content covered by the NHS Evidence search and browse in terms of subjects covered by the three domains (see figure 1 in section 1.4) and the types of evidence included.

38. The chapter then outlines the technical systems underpinning NHS Evidence search and browse and the routine processes used to find, select and add evidence. It includes a description of when and how metadata is added so that evidence is easier to find, and also describes how new evidence providers are identified.

39. Finally, there is a section providing information on how topic pages are developed and a section on how continuous improvement of content is managed.

2.2 Content covered in search and browse

2.2.1 Subjects covered in search and browse

40. NHS Evidence provides access to content across three domains: healthcare, public health, and social care. These domains are not mutually exclusive. This is reflected in the overlap between the subjects listed for each domain. For example, clinical conditions appear in both the public health and healthcare lists, but the emphasis is different, with one domain taking a population perspective and the other a patient one. The appropriate retrieval of search results that allow for subtleties in distinction between
domains will depend on the appropriate tagging of pieces of evidence (see section 2.3 ‘Identifying evidence for search and browse’ for details of how evidence is tagged). A subset of subjects in each domain is selected for development into topic pages (see section 2.4 ‘What is included in NHS Evidence topic pages?’).

41. The search and browse service aims to provide comprehensive coverage of areas covered by NICE guidance and quality standards; it also aims to cover topics commonly searched for by users of the service.

42. This focus means that NHS Evidence search and browse may not cover all health or social care conditions and presentations; this level of comprehensive coverage can be found through searching journals and databases (see chapter 3 ‘Online journals and databases’).

**Healthcare domain**

43. For the purpose of this manual, the term healthcare covers the provision of clinical care (prevention, screening, assessment, care and treatment of individuals with potential or actual physical or mental ill health) in whatever setting and in addition an understanding of the way in which such care is organised and delivered. The healthcare domain therefore includes clinical care subjects and healthcare management subjects.

44. NHS Evidence covers the major branches of clinical medicine (shown in table 1 below), ensuring that those conditions commonly seen and those conditions that are important not to miss are covered. There are other conditions, particularly rare ones, that will be more comprehensively covered by searching the online journals and databases service of NHS Evidence (see chapter 3 ‘Online journals and databases’). If conditions with little coverage are identified as important through user feedback then they are considered for further development.
Table 1 Clinical care subject list

<table>
<thead>
<tr>
<th>Anaesthetics</th>
<th>Oral and dental health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancers</td>
<td>Perioperative care</td>
</tr>
<tr>
<td>Cardiovascular system disorders</td>
<td>Renal and urogenital disorders</td>
</tr>
<tr>
<td>Child health</td>
<td>Sexual health</td>
</tr>
<tr>
<td>Complementary and alternative therapies</td>
<td>Surgery</td>
</tr>
<tr>
<td>Critical care</td>
<td>Allergies</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Endocrine disorders</td>
</tr>
<tr>
<td>Diagnostics</td>
<td>Emergency and urgent care</td>
</tr>
<tr>
<td>Ear, nose and throat</td>
<td>Equality and diversity</td>
</tr>
<tr>
<td>Fertility and childbirth</td>
<td>Palliative and end of life care</td>
</tr>
<tr>
<td>Eyes and vision</td>
<td>Haematological and immunological disorders</td>
</tr>
<tr>
<td>Gastrointestinal disorders</td>
<td>Infections</td>
</tr>
<tr>
<td>Genetics</td>
<td>Medically unexplained symptoms</td>
</tr>
<tr>
<td>Gynaecological disorders</td>
<td>Metabolic disorders</td>
</tr>
<tr>
<td>Health management</td>
<td>Musculoskeletal disorders</td>
</tr>
<tr>
<td>Hepatic disorders</td>
<td>Orthopaedics</td>
</tr>
<tr>
<td>Later life</td>
<td>Respiratory disorders</td>
</tr>
<tr>
<td>Learning disabilities</td>
<td>Skin conditions</td>
</tr>
<tr>
<td>Mental health and illness</td>
<td>Supportive care</td>
</tr>
<tr>
<td>Neonates and neonatal care</td>
<td>Trauma</td>
</tr>
<tr>
<td>Nervous system disorders</td>
<td></td>
</tr>
</tbody>
</table>

45. Medicines information (see the A to Z of Medicines) is covered as part of the healthcare domain, including access to the BNF online from NHS Evidence.

46. Information about health and care management subject coverage is provided in appendix A. The subject list for health and care management relates to all three domains.
Public health domain

47. The definition adopted is from the UK Faculty of Public Health:

‘Public health is the science and art of promoting and protecting health and well-being, preventing ill-health and prolonging life through the organised efforts of society.’ ¹

48. Given that the definition from the Faculty is broad, NHS Evidence draws on two key documents to further define the subjects covered in search and browse (see table 2 for subject coverage) and to ensure coverage of the public health functions of both Public Health England and Local Authorities:

- Healthy lives, healthy people: update and way forward²
- Public Health Outcomes Framework³ which encompasses the following domains:
  - improving the wider determinants of health
  - health improvement
  - health protection
  - healthcare public health and preventing premature mortality.

¹ UK Faculty of Public Health: What is public health (accessed 22 March 2012)
Table 2 Public health subject list

| Accident and injury prevention  | Maternal health including preconception, pregnancy and the postnatal period: fetal anomaly – prevention, low birth weight – prevention, breastfeeding |
| Accident and injury prevention  | Mental health and wellbeing |
| Alcohol misuse – prevention     | Obesity |
| Behaviour change                | Offender health |
| Cancer – prevention             | Older people’s health |
| Child health including children in poverty, vulnerable children and families with multiple needs | Physical activity |
| Community safety                | Screening services |
| Dental and oral health          | Seasonal mortality – prevention of excess deaths |
| Domestic abuse                  | Sexual health |
| Environment – air quality       | Social cohesion |
| Environment – noise             | Substance misuse – prevention |
| Genomics                       | Sustainable development including sustainable transport and green spaces |
| Health of black and ethnic minority groups | Tobacco control |
| Health protection incidents and emergencies including infectious diseases, healthcare-associated infection, chemicals and poisons, and radiation emergency response | Worklessness |
| Healthy eating                  | Workplace health |
| Homelessness                    | |
| Immunisation programmes         | |
| Long term conditions – prevention | |

**Social care domain**

49. Social care is defined by the [Social Care Institute for Excellence](https://www.scie.org.uk) (SCIE) as:

'The provision of social work, personal care, protection or social support services to children or adults in need or at risk, or adults with needs arising from illness, disability, old age or poverty and their families and carers. That provision may have one or more of
the following aims: to preserve or advance physical or mental health and wellbeing, to promote independence and social inclusion, to improve opportunities and life chances, to strengthen families, to protect people who use care services and to protect human rights in relation to people's social needs'.

50. The majority of social care content on NHS Evidence is provided through a feed from the Social Care Online service of SCIE. This content is complemented through direct access to evidence providers of social care content, particularly where the overlap to other domains is significant. The processes used by SCIE are not covered in this manual.

51. Subject coverage (see table 3) reflects the coverage of social care topics referenced in the Social Care Online topic tree and the SCIE priorities.
### Table 3 Social care subject list

<table>
<thead>
<tr>
<th>Benefits and personal finance</th>
<th>Living and life events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criminal justice, law and rights</td>
<td>Mental capacity</td>
</tr>
<tr>
<td>Dignity in care</td>
<td>Mental health</td>
</tr>
<tr>
<td>Education, training and employment</td>
<td>Participation</td>
</tr>
<tr>
<td>Equality and discrimination</td>
<td>Partnerships</td>
</tr>
<tr>
<td>Families, children and young people</td>
<td>Paying for services</td>
</tr>
<tr>
<td>Housing and environment</td>
<td>People, groups and communities</td>
</tr>
<tr>
<td>Integration</td>
<td>Personalisation</td>
</tr>
<tr>
<td>Isolation</td>
<td>Physical and learning disabilities</td>
</tr>
<tr>
<td></td>
<td>Safeguarding – adults and children</td>
</tr>
<tr>
<td></td>
<td>Social care services</td>
</tr>
</tbody>
</table>

### 2.2.2 Types of evidence available in NHS Evidence search and browse

52. This section describes the types of evidence included in NHS Evidence search and browse. It also describes how exclusion criteria may then be applied.

53. NHS Evidence search and browse allows access to selected high quality evidence from selected providers. It focuses on the highest quality evidence (with reference to the commonly recognised evidence hierarchy): guidance, systematic reviews and randomised controlled trials (RCTs).

**Types of evidence included**

54. Evidence accessible through search and browse is only selected for inclusion if it fits at least one of the evidence types (which are not mutually exclusive) listed in table 4 below (see appendix B for evidence type definitions).
### Table 4 Types of evidence included in NHS Evidence search and browse

<table>
<thead>
<tr>
<th>Types of Evidence</th>
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</thead>
<tbody>
<tr>
<td>• Audit reports</td>
</tr>
<tr>
<td>• Care pathways</td>
</tr>
<tr>
<td>• Clinical trials</td>
</tr>
<tr>
<td>• Commissioning guides</td>
</tr>
<tr>
<td>• Drug best practice guidance</td>
</tr>
<tr>
<td>• Drug costs</td>
</tr>
<tr>
<td>• Drug horizon scanning</td>
</tr>
<tr>
<td>• Drug news</td>
</tr>
<tr>
<td>• Drug prescribing and safety</td>
</tr>
<tr>
<td>• Drug rapid appraisal</td>
</tr>
<tr>
<td>• Drug regulatory and marketing</td>
</tr>
<tr>
<td>• Drug/medicines management</td>
</tr>
<tr>
<td>• Economic evaluations</td>
</tr>
<tr>
<td>• Effective practice examples</td>
</tr>
<tr>
<td>• Evidence-based management reports</td>
</tr>
<tr>
<td>• Evidence summaries</td>
</tr>
<tr>
<td>• Evidence uncertainties</td>
</tr>
<tr>
<td>• Evidence Updates</td>
</tr>
<tr>
<td>• Eyes on Evidence commentaries</td>
</tr>
<tr>
<td>• Guidance</td>
</tr>
<tr>
<td>• Health technology assessments</td>
</tr>
<tr>
<td>• Implementation support tools</td>
</tr>
<tr>
<td>• Learning materials</td>
</tr>
<tr>
<td>• Patient, user and carer experience</td>
</tr>
<tr>
<td>• Patient, user and carer information</td>
</tr>
<tr>
<td>• Policy</td>
</tr>
<tr>
<td>• Population intelligence</td>
</tr>
<tr>
<td>• Population needs assessments</td>
</tr>
<tr>
<td>• Primary research</td>
</tr>
<tr>
<td>• Quality and Productivity Collection examples</td>
</tr>
<tr>
<td>• Quality measures</td>
</tr>
<tr>
<td>• Randomised controlled trials (RCT)</td>
</tr>
<tr>
<td>• Patient decision aids</td>
</tr>
<tr>
<td>• Systematic reviews</td>
</tr>
</tbody>
</table>

55. Some of the categories in table 4 refer to generally accepted evidence types, for example systematic reviews and RCTs, while others refer to specific collections of evidence developed by NICE, such as **Evidence Updates** and the Quality and Productivity Collection. More about these types of evidence is available below in ‘Types of evidence developed by NICE’.

56. Although NHS Evidence search and browse includes systematic reviews, RCTs and other primary research, it only provides access to a selection of evidence from these evidence types. Access to a complete range of evidence types is possible via bibliographic databases from the online journals and databases pages on NHS Evidence.
57. Search and browse includes ‘reliable systematic reviews’ (including systematic reviews of qualitative evidence) which are defined as systematic reviews published by a journal that conforms to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) standards (see www.prisma-statement.org/endorsers.htm for a list of journals). If not published by one of these journals, a systematic review is deemed reliable if the abstract reports the inclusion/exclusion criteria, confirms two or more sources have been searched, and incorporates a synthesis of included studies.

58. RCTs selected are those published in journals which conform to the Consolidated Standards of Reporting Trials (CONSORT; see www.consort-statement.org/about-consort/consort-endorsement/consort-endorser---journals/).

59. Finally, systematic reviews, RCTs and other primary study types that are published in non-CONSORT, non-PRISMA journals can be found in NHS Evidence if the article has been identified as important new evidence as part of an Eyes on Evidence bulletin (see section 4.2 ‘The Eyes on Evidence bulletin’), as part of an Evidence Update (see ‘Types of evidence developed by NICE’ below) or ingested through the automated ingestion of content from selected evidence providers (see section 2.3.2 ‘Adding new evidence from automated ingestion’).

**Types of evidence developed by NICE**

60. Three of the types of evidence listed in table 4 refer to specific collections of evidence developed by NICE: Evidence Updates, the Quality and Productivity Collection, and the Eyes on Evidence commentaries. These are explained below.

61. Evidence Updates present commentaries on a selection of the most important new evidence, relating to guidance accredited by NICE, that has been published since the original guidance or its
update was produced. They are developed by NICE and displayed in NHS Evidence. All the research papers highlighted in the Evidence Update can be found through NHS Evidence search; this broadens the type of primary research available through the search function. The process for developing Evidence Updates is not included in this manual and will be described in a separate manual due for publication in 2013.

62. The Quality and Productivity Collection covers research from the Cochrane Collaboration (‘quality and productivity Cochrane topics’) and local or national initiatives that demonstrate ways to improve quality, productivity or service delivery (‘quality, innovation, productivity and prevention [QIPP] case studies’), which are evaluated and quality assured by NICE. For more information see the Quality and Productivity programme process manual.

63. Each Eyes on Evidence bulletin from NHS Evidence provides a series of short articles which contextualise selected pieces of research evidence to encourage interest in evidence-based medicine, linking research and practice. These will be made available in the NHS Evidence search and browse as Eyes on Evidence commentaries. For more information on Eyes on Evidence, see section 4.2 ‘The Eyes on Evidence bulletin’.

**Types of evidence excluded**

64. There are certain types of evidence that are routinely excluded from search and browse. Evidence is excluded if it is:

- Predominantly written in a language other than English (although relevant English language systematic reviews which considered non-English studies would be included).
- Focused on raw statistics or data sets that are not integral to another type of publication, such as a toolkit or where it is not possible or desirable to disaggregate the statistical documents from the other documents within the collection.
• A professional code of ethics.
• Statute.
• Personal opinion or experience exclusively (for example, blogs).
• Patient information that has not been awarded the Department of Health Information Standard.
• Temporary and therefore of short-term interest only, such as news stories or event information.
• Content that has been archived by an evidence provider, apart from exceptional circumstances with the approval of the Editorial Board.

65. Exclusion criteria are also applied at evidence provider level (see section 2.3.4 ‘Selecting evidence providers’ for detail).

2.3 Identifying evidence for search and browse

2.3.1 Technical systems underpinning search and browse

66. New evidence is regularly added to the existing content of NHS Evidence through two main routes – an automated process or manual searching.

Automated ingestion

67. There are two processes for automated ingestion: a web feed or a web crawl. Wherever possible a web feed is used, however this is only available from some evidence providers.

68. A web feed is provided by the website owner and provides content in a structured format which includes metadata (see ‘Metadata and controlled vocabularies’ below). Establishing web feeds with major evidence providers is preferred where possible as this allows the content provider greater control over the content and improves the indexing of the content within NHS Evidence.

69. Web crawls create a copy of all the web pages and documents that link from a starting URL (web address) or series of URLs. The
copied pages are then processed by the search engine according to a set of rules to create an index of the content so it can be searched for and redisplayed within NHS Evidence. Web crawls can be instigated without permission from the website owner unless content is blocked or limited by robots.txt files; however NHS Evidence always seeks permission.

**Manual ingestion**

70. Evidence can also be added to NHS Evidence through a manual process. Information specialists identify evidence through regular searching of websites and bibliographic databases. The new evidence is then **added to NHS Evidence by creating records in the resource management system**. A customised, advanced resource management system known as ARMS is used within NHS Evidence. It has been developed to improve the application of metadata and taxonomies to selected evidence.

**Metadata and controlled vocabularies**

71. The standard list of metadata fields that are applied to the evidence available in NHS Evidence is known as the Metadata Application Profile (MAP; see appendix C for details). These metadata fields are mandatory where applicable or optional. Some fields use free text, such as author, and others use a list of fixed terms known as a controlled vocabulary. Controlled vocabularies are a consistent set of terms to describe items, preventing the same thing from being described in different ways.

72. NHS Evidence has developed a controlled vocabulary known as the NHS Evidence ontology. The ontology has been developed to classify evidence within NHS Evidence and is used to describe the subject content, such as the population, disease or intervention. It is built largely on MeSH (the National Library of Medicine’s controlled vocabulary thesaurus), but is augmented by other vocabularies such as the SCIE taxonomy, Public Health Language
and the Dictionary of medicines + devices, for social care, public health and medicines content respectively.

73. The ontology is used to manage the controlled vocabularies within the MAP, including subject keywords. The ontology allows evidence to be described in a language familiar to users of NHS Evidence. The following are links to the taxonomies that the NHS Evidence ontology draws on:

- MeSH (www.nlm.nih.gov/mesh)
- SCIE (www.scie.org.uk/publications/misc/taxonomy.asp)
- Public Health Language (www.nphl.nhs.uk)
- Dictionary of medicines + devices (www.dmd.nhs.uk)

74. The ontology is continuously updated and new terms added from outside of these vocabularies to reflect the content of NHS Evidence. Other taxonomies may be incorporated where appropriate.

**Ranking of evidence**

75. NHS Evidence search and browse is driven by a powerful search engine known as **FAST**. Ranking of search results can be adjusted within the search engine. The order in which search results are presented can be manipulated through the use of numerical ‘boosts’ for specific types of evidence and for evidence that is accredited by the **NICE accreditation** process (see the accreditation process manual for further details). In practice, this means that certain types of evidence will be displayed higher up the search result, and generally accredited evidence will appear higher than non-accredited evidence (when it is available and/or is relevant to the specific search). See table 5 below for the evidence rank order.
Table 5 Ranking of evidence

<table>
<thead>
<tr>
<th>Evidence Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accredited guidance</td>
</tr>
<tr>
<td>Accredited commissioning guides</td>
</tr>
<tr>
<td>Guidance</td>
</tr>
<tr>
<td>Commissioning guides; systematic reviews</td>
</tr>
<tr>
<td>Care pathways; health technology assessments</td>
</tr>
<tr>
<td>Evidence summaries</td>
</tr>
<tr>
<td>Primary research; ongoing trials; policy and service development</td>
</tr>
<tr>
<td>Patient information; quality measures; known uncertainties; drug management</td>
</tr>
<tr>
<td>costs; drug critically appraised hot topics; drug horizon scanning; drug</td>
</tr>
<tr>
<td>news; drug prescribing and safety; drug regulatory and marketing</td>
</tr>
</tbody>
</table>

76. More details about how search results are ordered by relevancy can be found at www.evidence.nhs.uk/search-and-browse/relevancy.

2.3.2 Adding new evidence from automated ingestion

77. This section describes how new evidence is added through the automated ingestion process while section 2.3.4 ‘Selecting evidence providers’ describes how evidence providers may be added or removed from the lists of providers. The list of evidence providers whose evidence is ingested through the automated process has developed over time and is available at www.evidence.nhs.uk/nhs-evidence-content/sources-list.

78. An outline of how the automated ingestion process is undertaken and adds value to new evidence is provided in figure 3 below, and is described in more detail in the subsequent text.
Figure 3 Automated ingestion of evidence

Evidence provider

- Run web crawls or receive web feed
  - Automated ingestion of new evidence

- Ingest available metadata
  - Automated addition of specific metadata

New evidence available in NHS Evidence via search or browse

Add further metadata manually?

- Yes (to all evidence from the evidence provider)
  - Import all new evidence from evidence provider into ARMS and add metadata manually, re-publish into NHS Evidence.

- Yes (to some evidence from the evidence provider)
  - Search new evidence from evidence provider, import selected evidence into ARMS and add metadata manually, re-publish into NHS Evidence.

- No
  - No evidence imported into ARMS from Evidence provider. No metadata added manually.

New evidence available in NHS Evidence via search or browse

Key:

- Automated activity
- Manual activity
**Running web crawls and receiving web feeds**

79. When an evidence provider is first introduced, a web feed or web crawl strategy is agreed and configured by NHS Evidence content specialists in line with the inclusion and exclusion criteria identified in sections 2.2.2 ‘Types of evidence available in NHS Evidence search and browse’, and 2.3.4 ‘Selecting evidence providers’. The web crawl or web feed is then repeated regularly to ensure automated addition of all new or updated evidence to NHS Evidence and to ensure that deleted evidence is removed. Web crawls are updated on a rolling basis and web feed frequency is agreed with each evidence provider taking into account their schedule for updating content.

**Ingesting available metadata and automated addition of new metadata**

80. All evidence providers that are suitable for automated ingestion provide some metadata with their evidence. The minimum dataset is the title, the evidence URL, and the date. In exceptional circumstances it may be possible to accept evidence providers who provide less than this. The [NHS Evidence central team](#) works with evidence providers to improve the provision of this minimum dataset. The metadata supplied with most web feeds and many web crawls is considerably richer and more detailed than this. For example, additional metadata available through a typical web feed includes keywords, abstracts, description and publisher. The NHS Evidence central team also works with evidence providers to move from a web crawl to web feed-based ingestion as this improves the quality and positioning of their evidence in the search results.

81. In addition to metadata provided by the evidence providers, metadata is added as part of the automated ingestion process. This happens as part of the web feed or web crawl configuration. This routinely added metadata relates to the following areas: the area of
interest\textsuperscript{4}, accreditation information, the origin of the evidence (UK or not), the evidence provider name, metadata feeding the clinical queries filter and any reference to named medicines and devices. Metadata about the evidence type (see section 2.2.2 ‘Types of evidence available in NHS Evidence search and browse’) is also added where it is possible to configure the web crawl or web feeds with this information. This is an important addition as it can influence where the evidence will appear in the search results list. For example, guidance receives a bigger ‘type of evidence’ boost than RCTs and should therefore generally appear higher in a search result.

82. Once automated ingestion is complete, the new evidence is available for search and browse on NHS Evidence.

\textit{Adding metadata manually by importing evidence into ARMS}

83. Evidence ingested through the automated process is assessed by the NHS Evidence central team to determine whether additional metadata should be manually added to the evidence. This assessment is based on the quality of metadata provided by the evidence provider and considers the need to prioritise the addition of metadata to evidence by area of interest, subject area, publication type or any combination of these.

84. If additional metadata is required, an information specialist imports the evidence into the ARMS resource management system and reviews the metadata, amending where appropriate. To assist with this process the ARMS system automatically suggests suitable keywords from the NHS Evidence ontology (see section 2.3.1 ‘Technical systems underpinning search and browse’).

85. Where manual addition of metadata is required, assistance may be given to the evidence provider to improve the quality of the original metadata.

\textsuperscript{4} A broad set of categories of resources, intended to reflect very general fields of activity within health and social care.
2.3.3 Adding evidence from manually searched evidence providers

86. This section describes how new evidence from evidence providers that are manually searched is added. The list of evidence providers whose evidence is manually added has developed over time and is available at [www.evidence.nhs.uk/nhs-evidence-content/sources-list](http://www.evidence.nhs.uk/nhs-evidence-content/sources-list).

87. A large number of evidence providers are not suitable for automated ingestion (see section 2.3.4 ‘Selecting evidence providers’ which outlines requirements for automated ingestion). This includes bibliographic databases from which only selected evidence is required for inclusion in NHS Evidence.

88. The key steps followed to add evidence from these evidence providers are outlined in figure 4 below, and details are given in the subsequent text.
Searching for evidence

89. Information specialists regularly search bibliographic databases and monitor websites. The frequency of website monitoring takes into account the evidence provider’s schedule for updating content and the type of evidence available. Search alerts are set up wherever possible so that the information specialist can be notified directly if new evidence is added by an evidence provider.

Selecting new evidence

90. Information specialists use the search functionality available on each website to identify evidence which meets NHS Evidence inclusion and exclusion criteria (listed in sections 2.2.2 ‘Types of evidence available in NHS Evidence search and browse’ and 2.3.4
‘Selecting evidence providers’). Only evidence which meets these criteria is manually added to NHS Evidence.

91. The manual search for new evidence from bibliographic databases (primarily, Medline, Embase, CINAHL and Psychinfo) is limited to reliable systematic reviews (see section 2.2.2 for definition and inclusion rules). When performing the manual search, information specialists sift and select systematic reviews on title and abstract. The search excludes evidence which is added to NHS Evidence via the automated ingestion process; for example, systematic reviews from the CRD’s DARE or the Cochrane Database of Systematic Reviews. Work is underway between NICE and the CRD to support the identification of systematic reviews published which are out of scope of the DARE but suitable for inclusion in NHS Evidence as reliable systematic reviews.

Creating records in ARMS

92. To add the new evidence to NHS Evidence, information specialists create a record in ARMS. To create an ARMS record, metadata available from the evidence provider must be recorded, such as the title, date and a unique identifier. Additional metadata, such as keywords, abstracts and publisher is included where appropriate. Information specialists also add new metadata not available in the original piece of evidence, helped by automatic suggestion by ARMS of keywords from the NHS Evidence ontology.

93. When the ARMS record is complete, the evidence is published and becomes available for search and browse in NHS Evidence.

94. For content added via the manual process, there is a standard 2-year review process for currency and validity of content, but content can be withdrawn at any time if it is deemed out of date or ineligible. External links are checked on a monthly basis to resolve and minimise broken links.
2.3.4 Selecting evidence providers

95. New evidence providers are regularly added to NHS Evidence. They are allocated to either automated or manual ingestion. The current list of providers can be found at www.evidence.nhs.uk/nhs-evidence-content/sources-list.

96. This section describes how potential new evidence providers are identified and assessed, and how the existing list is reviewed.

*Introducing new evidence providers*

97. New evidence providers are added to NHS Evidence on an ongoing basis. The process for adding a new evidence provider is outlined in figure 5.

**Figure 5 Identifying and assessing new evidence providers, and allocating evidence providers to either the automated or manual ingestion process**
Identifying new evidence providers

98. Potential new evidence providers are identified through a number of channels, for example:

- Internally from information and content specialists.
- Through feedback to NHS Evidence that users need more evidence about a particular topic, such as teenage pregnancy, and the Editorial Board may then consider adding a new provider specialising in this area if available.
- Suggestions via individuals providing specialist advice to NHS Evidence, such as the regularly convened domain-specific and subject-specific groups.
- Suggestions from the evidence providers themselves.

99. Evidence providers do not need to be formally accredited before they are added as a provider, however their evidence will appear higher in search results if they are accredited (see the accreditation process manual for further details).

Selecting new evidence providers

100. A potential new evidence provider is assessed by NHS Evidence to determine whether their evidence fits NHS Evidence inclusion and exclusion criteria (see section 2.2.2 ‘Types of evidence available in NHS Evidence search and browse’). Evidence from evidence providers is not included if:

- There is no evidence available through the host website without a cost being incurred by the user or the user needing to register and submit personal information.
- The evidence provider is sponsored by an entity with a financial interest, where it is deemed likely to have impacted on the objectivity of the evidence.

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5 NHS Evidence reserves the right to exclude content sources and providers that are sponsored by an entity with a financial interest, and do not state this in a clear and transparent way, or where there are concerns regarding editorial independence. Please see ‘Financial interest’ in the glossary for further detail on how the financial interest criteria is applied.
101. All suggestions received are checked to see if the evidence provider is already included, or has been previously assessed for inclusion. Evidence providers that have been previously assessed and rejected may be reconsidered if the situation that led to the original exclusion has changed.

102. A list of suggested new evidence providers is checked on a monthly basis by the Editorial Board.

*Assessing new evidence providers for automated ingestion*

103. A technical and quality assessment of the potential new evidence provider is also carried out to establish their suitability for automated ingestion. This will include an analysis of the provider’s website structure, the volume of evidence it carries and the metadata associated with each item of evidence.

104. The preferred approach is automated ingestion as it is less resource intensive than manual searching. However, if this is not possible, or not cost effective, then the evidence can be added manually.

105. Evidence providers will be rejected for automated ingestion if any of the following apply:

- They carry fewer than ten items of evidence relevant to NHS Evidence.
- They are known to infrequently update their evidence – fewer than ten new items of evidence a year.
- The website structure is technically difficult to crawl such that multiple crawls need to be set up and less than ten items of evidence are ingested per crawl.
- The website uses a specific web technology that makes it extremely difficult or impossible to crawl and index.
- The website does not function properly (for example, there are a substantial number of broken links) or is incomplete (for example, it is still under construction).
**Reviewing existing evidence providers**

106. Evidence providers can move from being manually ingested to automated ingestion and vice versa. For example, manually searched providers become candidates for automated ingestion if they meet automated ingestion criteria, such as offering an increased quantity of evidence, or if their site has been restructured so that it can now be crawled. Such changes will be flagged by the information specialist responsible for searching each evidence provider through their monitoring of each provider.

107. Conversely, an evidence provider on the automated ingestion list may no longer be suitable for automated ingestion following, for example, a change in its web interface. Such changes are identified by the NHS Evidence central team, who can be alerted to a change by the evidence provider themselves, or they may observe a web crawl failing.

108. Proposals for changing the treatment of an evidence provider are considered by the NHS Evidence central team and assessed against the selection criteria for automated ingestion.

109. The Editorial Board reviews proposed changes on a monthly basis.

110. The lists of evidence providers whose evidence is ingested through the automated or manual process are available at [www.evidence.nhs.uk/nhs-evidence-content/sources-list](http://www.evidence.nhs.uk/nhs-evidence-content/sources-list).

### 2.4 What is included in NHS Evidence topic pages?

111. NHS Evidence search and browse provides access to topic pages (see [www.evidence.nhs.uk/topics](http://www.evidence.nhs.uk/topics) for a list of topics). The list is regularly reviewed and expanded as part of the continuous review mechanism and ongoing user research (see section 2.5 ‘Continuous improvement’).

112. Topic pages are developed to present key relevant information about a particular topic without the need to use filters. The panels
which make the topic page have been chosen, based on user research, to allow key content to be highlighted for key audiences, for example commissioners, clinicians and researchers. Panels do not cover all types of evidence. Other types of evidence can be found, and filtered for, in the search result which is available below the panels.

113. Each topic page has a set of panels that appear above the search result (figure 2 in section 1.5.1 ‘NHS Evidence search and browse’ shows an example of how the panels are displayed on topic pages). While the sources for these panels are allocated for each panel, the process of populating the panels is automated using background search functionality and rules. These rules can be altered by NHS Evidence to improve the relevancy of content. If evidence is only available to populate one panel then a topic page will not be created.

2.4.1 Clinical topic pages

114. Examples of the types of evidence included in the clinical topic pages, tailored to the specific topic, are given below:

- **Introduction**: Brief background available from a range of sources such as NHS Choices.
- **Guidance**: NICE clinical and public health guidelines, other accredited guidelines, Evidence Updates and NICE pathways.
- **Commissioning**: NICE quality standards, QIPP case studies, NICE guides for commissioners, Department of Health care pathways and commissioning packs.
- **Information for the public**: Information that has received the Department of Health Information Standard.
- **Ongoing research**: Clinical trials information from the UK Clinical Trials Gateway for trials that are still recruiting participants.
• **Evidence uncertainties:** [Research recommendations](#) from NICE and the UK Database of Uncertainties about the Effects of Treatments ([UK DUETS](#); see chapter 5 ‘Identification of gaps in the evidence base’).

• **Medicines:** A list of medicines relevant to the topic. The link on this panel goes to relevant medicines topic pages with NHS Evidence.

### 2.4.2 Medicines topic pages

115. Examples of the types of evidence included in the medicines topic pages, tailored to the specific topic, are given below:

- **Prescribing:** Drug monographs from the British National Formulary.

- **Product characteristics:** Summaries of Product Characteristics from the electronic Medicines Compendium.

- **Safety:** Drug and medical device alerts and drug safety updates from the Medicines and Healthcare products Regulatory Agency and drug safety information from the US Food and Drug Administration.

- **Guidance:** Drug appraisals and recommendations from NICE, the British HIV Association, the Scottish Medicines Compendium and All Wales Medicines Strategy Group.

- **Information for the public:** Patient Information Leaflets from the electronic Medicines Compendium and information that has received the Department of Health Information Standard.

- **News:** Latest news on medicines information aggregated by the National electronic Library for Medicines.

### 2.4.3 Public health topic pages

116. Public health topic pages are being developed using the same principles as the clinical topic pages and are likely to include the following topic panels:
• **Guidance**: NICE public health guidelines, other relevant accredited guidelines, Department of Health public health guidance, Evidence Updates and NICE pathways.

• **Implementation tools**: NICE quality standards, NICE implementation support tools.

• **Case studies**: QIPP case studies

• **Information for the public**: Information that has received the Department of Health Information Standard.

### 2.5 Continuous improvement

117. NHS Evidence search and browse aims to provide sufficient breadth and depth of content to enable users to find relevant records. To make this possible, resources and processes are in place to ensure the continuous improvement of the body of evidence available in NHS Evidence.

118. User research is regularly conducted that asks specific questions about content. Content issues may also be raised by participants as part of more generic research.

119. Regular testing and analysis of search results, and the analysis of search term usage, also help inform content development.

120. Both user research and search analysis may identify areas in which content could be developed. This may lead to new evidence providers being introduced, new types of evidence being considered, or new topic pages being added.

121. In addition to reviewing requests for the addition of new evidence providers, the Editorial Board reviews any requests for changes to the evidence inclusion and exclusion criteria, including changes to the definition of the evidence types for NHS Evidence. The Editorial Board also reviews the proposed addition of new topic pages to NHS Evidence.
2.6 *How to access evidence through search and browse*

Once added, all evidence ingested either via the automated or manual process becomes part of NHS Evidence and can be found through NHS Evidence search and browse, although access to full-text evidence may not always be available.
3 Online journals and databases

3.1 Types of commissioned content available

122. NHS Evidence provide access to a broad range of commissioned resources. These resources include bibliographic and full text databases, full text e-journal titles and archives. They offer multidisciplinary coverage of the published literature, evidence-based healthcare decision-making resources and resources to support prescribing of medicines.

123. These resources complement the selected evidence freely available via NHS Evidence search and browse.

124. Commissioned resources fall into two categories:

- Content that is openly available to all users of the service in the UK. These resources do not require a password to access them. They include the British National Formulary and The Cochrane Library. This content can be accessed directly through NHS Evidence search and browse.

- Content that is licensed and is only accessible to people who meet certain eligibility criteria (please see www.evidence.nhs.uk/nhs-evidence-content/journals-and-databases/nhs-athens-eligibility-criteria for details of these criteria). Access to this licensed content requires an access and identity management service (AIMS) username and password (see section 3.3.2 ‘Managing access to content’). This content is referred to as ‘gated content’ and is only available via the AIMS log-in.

125. A full list of currently commissioned content can be found on the NHS Evidence content webpage.
3.2 **How is commissioned content procured?**

126. The resources that are nationally purchased are either commissioned and funded directly by NICE, or NICE acts as the contracting authority by commissioning on behalf of other groups for their users. For example, content is purchased by NICE on behalf of the collective NHS Special Health Authorities (SHAs).

127. At the time of publication, resources funded directly by NICE and made available through the NHS Evidence portal include The Lancet, Health Business Elite, Cochrane databases, and the British National Formulary, while resources funded via the collective NHS SHAs include:

- BMJ
- BMJ e-collection and archives (21 titles)
- American Medical Association (AMA) e-collection and four archives
- British Nursing Index (BNI)
- Cinahl FT
- MEDLINE
- Embase
- Allied and Complementary Medicine (AMED)
- Health Management Information Consortium (HMIC)
- PsycINFO

128. The benefits of this approach include a coordinated procurement approach, nationally negotiated contracts where possible and the ability for users to seamlessly access all content through one registration and one portal.

129. Resources are typically subscribed to for a 36-month period. Content procured is reviewed regularly depending on funding level.
3.3 How is commissioned content accessed?

3.3.1 Healthcare database advanced search

130. NHS Evidence healthcare databases advanced search (HDAS) is a search service developed and managed by NICE. It provides a single access point and search interface, allowing eligible users to undertake a simultaneous search of all the bibliographic databases (abstract and indexed databases) purchased nationally.

131. The content searched by HDAS is gated content and therefore users require an AIMS username and password to access and search it.

3.3.2 Managing access to content

132. AIMS enables access to gated content and is only available to users who meet the eligibility criteria (see www.evidence.nhs.uk/nhs-evidence-content/journals-and-databases/nhs-athens-eligibility-criteria). It is a secure login system, which verifies the identity of users and authorises them to access the resources they are entitled to use. This may include nationally or locally purchased or licensed content.

133. AIMS provides access to gated content via HDAS or the native interface of each online database or journal.

3.4 How to access commissioned content

Commissioned content is accessed from www.evidence.nhs.uk/nhs-evidence-content/journals-and-databases

All gated content requires an AIMS username and password.
4 Evidence awareness and personalisation

4.1 Introduction

134. A significant feature of the NHS Evidence service is to highlight selected new evidence to users. This chapter describes the evidence awareness services available through NHS Evidence and covers how content is identified and highlighted to users.

135. The following services are described here:

- the Eyes on Evidence bulletin
- the Medicines newsletter
- tailored evidence alerting services, including My Evidence.

136. Other evidence awareness services are available from NHS Evidence, such as Evidence Updates.

4.2 The Eyes on Evidence bulletin

4.2.1 What is Eyes on Evidence?

137. Eyes on Evidence is a monthly bulletin designed to highlight interesting new evidence. Each bulletin provides a series of short articles which contextualise selected pieces of research evidence to encourage interest in evidence-based medicine, linking research and practice in a way that is easily accessible to busy professionals.

138. The bulletin promotes evidence-based medicine and highlights content available via NHS Evidence.

4.2.2 Selection of content for Eyes on Evidence

139. Evidence included in the Eyes on Evidence bulletin is selected from recently published evidence, including systematic reviews and primary research. Eyes on Evidence articles also reference relevant accredited guidance where available.
140. The Editorial Board selects evidence for inclusion in Eyes on Evidence against set criteria. Suggestions of evidence for review by the Board are systematically generated by information specialists. Potential evidence for inclusion in the Eyes on Evidence bulletin may be identified from:

- Evidence Updates produced by NICE.
- The medicines evidence awareness service (see section 4.3 ‘Medicines information awareness services’).
- Existing news services.

141. This will be complemented over time by suggestions from NICE Fellows and Scholars, and from collaboration with professional colleges and other organisations. The Editorial Board will also consider suggestions from other sources, provided they meet the inclusion criteria.

142. Inclusion criteria for Eyes on Evidence articles include evidence which has been published in the last 12 months and has at least one of the following characteristics:

- **Clinical practice or care**: Potential for impact on clinical, public health or social care practice and guidance. This includes increased understanding of the patient or user experience.
- **Services**: Potential for impact on service organisation, delivery or commissioning.
- **Resources**: Potential for significant impact on resource utilisation or the need for investment or disinvestment.
- **Understanding**: Brings about a step-change in the understanding of aetiology, disease progression or management.
4.2.3 Development and approval processes for content for Eyes on Evidence

143. Once the new evidence has been selected, the editorial team completes a template document summarising which selection criteria apply. The full text of the article is obtained and critically appraised. A draft article is written and sent, along with the critical appraisal and full text, to an expert commentator to provide a brief commentary. Each Eyes on Evidence bulletin includes on average four new evidence articles. For each item of evidence under consideration the bulletin provides:

- An introduction to the topic.
- A summary of current practice recommendations as outlined in the relevant accredited guidance.
- Details of the new evidence covered by the study.
- A brief commentary from an expert in the field which contextualises the evidence in terms of potential impact on UK practice.

144. Once complete the final draft of the Eyes on Evidence bulletin is sent to the NICE Publication Executive for sign off. Changes may be made at the request of the Publication Executive.

4.2.4 Where to find Eyes on Evidence

The Eyes on Evidence bulletin is published on the second Wednesday of each month. It is distributed directly to a list of subscribers by email. Users can sign up to receive the bulletin at www.evidence.nhs.uk/newsletter-signup.

It is intended that the bulletin will also be uploaded into NHS Evidence and its articles will become searchable within the NHS Evidence search.
4.3 Medicines information awareness services

145. The NHS Evidence medicines information awareness service aggregates medicines information relevant to UK practice for those involved in managing, prescribing, dispensing and administering drugs.

146. Medicines information specialists review a specified list of sources of information on a daily basis and aggregate content covering medicines information news and evidence, according to agreed selection criteria.

4.3.1 News content

147. This covers news stories, press releases, organisational commentary on previously published evidence, and evidence-based responses to stories in the media. This also details product launches, licence changes, and drug safety, alert and recall content covering patient safety, medical device alerts, drug alerts and drug withdrawals.

4.3.2 Evidence content

148. An evidence awareness service highlights newly published or updated evidence from selected resources. This includes drug appraisals and recommendations, guidelines, and patient safety information, as well as newly published research (from a list of core journals) including review articles and major clinical trials covering medicines or lifestyle interventions involving medicines or pharmacy.
4.3.3 Where to find the medicines information awareness service

At the time of publication, users can receive the NHS Evidence medicines information awareness service by signing up to either of these services:

- The National electronic Library for Medicines (NeLM) Newsletter – a weekday bulletin sent to subscribers by email listing hyperlinks to the NeLM record and brief description of the content.
- The Medicines and Prescribing Centre’s current awareness bulletin – a bulletin sent to subscribers by email listing hyperlinks to the identified source articles. Users can subscribe to a weekday or weekly version.

149. Work is planned to bring these products together into a single awareness service.

4.4 Personalised evidence alerting services

150. Individual users can customise access to evidence to meet their own needs through ‘My Evidence’. My Evidence allows users to register and create their own space on NHS Evidence. Users can then:

- Save their search.
- Receive regular updates about new information they have indicated an interest in by setting up an alert from a saved search.
- Save individual results of a search they have made and organise these into categories they have defined.
- Share their search results with colleagues.
4.4.1 Where to find My Evidence

My Evidence can be accessed via the My Evidence link on the top left of [www.evidence.nhs.uk](http://www.evidence.nhs.uk) For first time users, registration to NHS Evidence will be required, from the link on the top right labeled ‘Register’.
5 Identification of gaps in the evidence base

5.1 Introduction

151. NHS Evidence aims to highlight important, identified gaps in the evidence base (referred to as ‘evidence uncertainties’) to inform the generation and prioritisation of questions for research. The main users of this information are likely to be research funders and researchers.

152. This chapter outlines the process by which evidence uncertainties are identified, recorded and made available through NHS Evidence.

5.2 Definition of ‘evidence uncertainty’

153. An evidence uncertainty is defined as a question that cannot be resolved by reference to reliable and up-to-date systematic reviews of existing research evidence, regardless of the source of the review (which may be, for example, the Cochrane Database of Systematic Reviews, the CRD’s DARE, or accredited clinical or public health guidance). An uncertainty may relate to any aspect of care, including interventions and public health. In some cases, it may be formulated into a formal research question.

154. To be classified as an evidence uncertainty, at least one of the following criteria must be met:

- No relevant and reliable systematic reviews can be identified addressing the evidence uncertainty.
- Relevant reliable up-to-date systematic reviews do not address the evidence uncertainty. An up-to-date systematic review is a systematic review which has been published for the first time, or updated, within the previous two and a half years.
- Existing relevant and reliable systematic reviews need updating or extending.
• Up-to-date relevant and reliable systematic reviews reveal important continuing uncertainties or research recommendations.

155. The definition of an evidence uncertainty given above is used by NHS Evidence as well as by the organisations that contribute to the identification of evidence uncertainties available via the service.

5.3 Overview of the process of identifying evidence uncertainties

156. There are a number of steps involved in identifying the evidence uncertainties that are displayed on NHS Evidence:

• identifying evidence uncertainties
• recording evidence uncertainties on a standard template
• conducting quality checks
• adding information on priorities for research, where available
• publishing evidence uncertainties in NHS Evidence.

157. The processes underpinning these steps are carried out by different organisations, depending on the source and type of evidence uncertainty.

158. The role of NHS Evidence is twofold: to make evidence uncertainties collected by these organisations available to end users, and to implement its own process for capturing evidence uncertainties from accredited guidance, other than NICE guidance, and from systematic reviews. The relationships between the processes, and the organisations involved, are outlined in the flowchart in figure 6 which is described in more detail in the subsequent text. The detail in this manual refers only to the unshaded areas of the flowchart, which are the direct responsibility of NHS Evidence.
Figure 6 Process overview by type of evidence uncertainty and source

Source: Systematic reviews and accredited guidance
Identify evidence uncertainties
- Routine electronic spreadsheets
- Manual sifting

Record on standard template (in integrated or separate databases)
- Record on template (manual/automated)

Conduct quality checks
- Template completeness check
- Duplication check
- Clarity check

Add information on priorities for research
- e.g. James Lind Alliance priority setting partnership process
- e.g. NICE research and development quality assurance process
- e.g. NICE research recommendations from NICE

Priority setting partnerships

NICE guidance

Publish

NHS Evidence website: Available in the ongoing research panel of topic pages and can be selected from a search using the ‘type of information’ filter.
UK Database of Uncertainties about the Effects of Treatments: www.library.nhs.uk/duets
NICE Research Recommendations database: www.nice.org.uk/research/index.jsp?action=rr

Key:
- Process elements not covered by this manual
5.4 Identifying evidence uncertainties

5.4.1 Evidence uncertainties identified by NHS Evidence

159. Evidence uncertainties are identified on a regular basis, from electronic spreadsheets sent to NHS Evidence, or by manual sifting of systematic reviews and guidance by the information team within NHS Evidence. In both cases, the new uncertainties will have been originally identified as research recommendations.

Electronic spreadsheets

160. Monthly electronic spreadsheets are received from the Scottish Intercollegiate Guidelines Network (SIGN) and from the Cochrane Collaboration containing details of evidence uncertainties identified within their new guidelines and systematic reviews, respectively. The information received is converted into the appropriate fields and into a format enabling the evidence uncertainties to be imported directly into the uncertainty database of NHS Evidence: UK DUETs; available at www.library.nhs.uk/duets. Work is ongoing with these organisations to ensure the digital information received is fit for purpose and supports a comprehensive and compatible means of importing the uncertainties into NHS Evidence.

Manual sifting

161. On a monthly basis, information specialists also routinely search all newly published accredited guidance (other than from SIGN or NICE), to identify research recommendations that meet the criteria described in section 5.2 ‘Definition of evidence uncertainty’. An up-to-date list of accredited guidance producers can be found at www.evidence.nhs.uk/accreditation/accreditation-decisions.

162. On an ad hoc basis, research recommendations may be manually identified from other, non-Cochrane, high quality systematic
reviews that have been critically appraised in the process of producing Evidence Updates.

5.4.2 Evidence uncertainties gathered from other sources

163. Organisations such as the James Lind Alliance (JLA) capture potential uncertainties identified by service users, patients, carers, practitioners and clinicians and confirm these as uncertainties in accordance with the agreed definition. The process set up by the JLA to capture uncertainties is known as a priority setting partnership which relates to selected healthcare conditions, for example asthma or schizophrenia. Details of the process followed by the JLA can be found at www.lindalliance.org and the JLA guide book at www.jlaguidebook.org.

164. Uncertainties can also be identified during the development of guidance. For example, the NICE guidance development centres identify uncertainties as they review available evidence and develop recommendations. A number of these uncertainties are articulated as research recommendations (details of the processes used by NICE are available from the NICE website).

5.5 Recording evidence uncertainties on a standard template

165. All evidence uncertainties published on NHS Evidence are initially recorded using a standard template, currently available within UK DUETs. The only exceptions to this are the research recommendations from NICE guidance, which are recorded through a separate database, the NICE Research Recommendations database. It is expected that the templates and platforms used to record uncertainties will be harmonised after the publication of this manual.

166. The UK DUETs template includes mandatory and optional fields. More information is likely to be available for formulated research recommendations identified by NHS Evidence than for less
developed forms of evidence uncertainties such as the uncertainties identified from service users, patients, carers, practitioners and clinicians, although all contributors have to complete the minimum dataset, defined by the mandatory fields.

167. Records in UK DUETs may be created one at a time or through a group import. Group imports are used when evidence uncertainty information is received via the electronic spreadsheets described earlier. For the evidence uncertainties added via a group import, whilst the majority of the information is added through this import, some information may be manually added as part of the quality checking process.

168. While detailed fields may evolve over time, an evidence uncertainty template should comprise, in principle, the following sections.

- **Identification and classification**: This section provides a unique reference for each evidence uncertainty. Keywords and a classification are added to support future searching and retrieval by users, including research funders and researchers.

- **Evidence uncertainty description**: The key field in this section is the description of the evidence uncertainty. A short population-intervention-comparison-outcome (PICO) breakdown should help to formulate a research question, and this should be done where possible.

- **PICO**: This section provides more comprehensive PICO information where available:
  - What is the population of interest? (Diagnosis, disease stage, co-morbidity, risk factor, gender, age, ethnic group, specific inclusion/exclusion criteria, clinical setting, stage of illness.)
  - What is the intervention of interest? (Type, frequency, dose, duration, diagnostic, or prognostic factor.)
  - What is the comparison of interest? (Placebo, routine care, alternative treatment/management.)
- What are the proposed outcome(s) of interest to be addressed in this research? (Result, impact, effect.)

**Other research recommendation details:** This section, where applicable, provides further insight into the evidence uncertainties and recommendation including:
- Why this is an evidence uncertainty (no systematic review, systematic review to be updated or extended, systematic review confirms the uncertainty).
- What the next stage of research should be (do a systematic review, update or extend a systematic review, conduct further research).

If the information is already available, an option exists to add:
- study design recommendations; and
- suggested areas of focus for the research (for example, effectiveness and/or adverse effects, cost effectiveness, implementation, quality of life, acceptability, methods of research).

**Source:** This section identifies the source of the evidence uncertainty and, if applicable, the document title, references and URL.

**Prioritisation:** This section is used to capture whether the uncertainty has been prioritised. This section may be completed at the time the record is created or, at a later stage, once a prioritisation process has taken place. The functionality to enter priorities and filter by priority level is in development within NHS Evidence.

**Ongoing research information (completed for all records when created):** This section is used to document ongoing research relevant to the evidence uncertainty (such as protocols for systematic reviews or clinical trials) which was available at the time the uncertainty was first recorded.
• **Ongoing research updates**: This section is used to document ongoing research relevant to an evidence uncertainty when additional information has been sought. This section is optional.

• **Published dates**: This section includes the date the identified uncertainty was first published and the date when it was reviewed, where applicable.

### 5.6 Conducting quality checks

169. For all evidence uncertainties, whether added manually or through routine group imports, the following template checks are performed prior to uploading to NHS Evidence:

- **Duplication check**: to ensure the uncertainty is not already entered in UK DUETs, existing uncertainty records on the topic (which may have similar or differing terminology) should be checked.

- **Template completeness check**: to ensure no mandatory fields are missing.

- **Clarity check**: to ensure the evidence uncertainty is not ambiguous or vague. If so, clinical input should be obtained, particularly where subject specialist knowledge is required. The original submission text should be maintained in the ‘original uncertainty’ field of the template.

170. These quality checks apply to evidence uncertainties identified directly by NHS Evidence. As indicated earlier, NHS Evidence rely on the organisations contributing evidence uncertainties to ensure the quality of their processes and that the questions asked reflect true uncertainties.

### 5.7 Adding information on priorities for research

171. Both the JLA and NICE processes support the prioritisation of some uncertainties as particularly important research recommendations. Where this prioritisation has occurred, the
uncertainty will be highlighted. The functionality to allow NHS Evidence users to identify prioritised uncertainties is in development.

172. The NHS Evidence team does not prioritise uncertainties.

5.8 Publishing evidence uncertainties on NHS Evidence

173. Once all stages have been completed, evidence uncertainties can be accessed through UK DUETs or the NICE Research Recommendations database.

174. Evidence uncertainties from these two platforms are also added to NHS Evidence using a feed from both databases (see section 2.3.2 ‘Adding new evidence from automated ingestion’) and made available in one place to all users.

5.9 How to access evidence uncertainties

Users of NHS Evidence can find evidence uncertainties through three main routes:

- Through the NHS Evidence search results by applying the ‘known uncertainty’ type of information filter.
- Within the Evidence Uncertainty panel on the topic pages.
- In UK DUETs and the NICE Research Recommendations database.
6  Updating the Process and Methods Manual

175. This document will be reviewed and updated 3 years after its publication. User feedback will be used to review the processes and methods. Feedback can be sent to NHS Evidence by completing the form at [www.evidence.nhs.uk/contact-us](http://www.evidence.nhs.uk/contact-us).

176. As the manual describes a continuously evolving service, it may be necessary to make minor changes to the methods and processes before 3 years. Minor changes that may be made without consultation are those that:

- do not add or remove any fundamental step in methods or techniques
- will improve the efficiency or clarity of the process or method.

177. Examples of this include improved accessibility of resources, or changes to the availability of content based on new agreements with evidence providers.

178. Any major or significant changes that need to be considered before the review date will be consulted on.
7 Equality statement

7.1 Introduction

179. NICE is committed to eliminating unlawful discrimination and advancing equality of opportunity in relation to age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex, and sexual orientation, and to fostering good relations between people who share these protected characteristics and those who do not. We also aim to comply fully with our human rights obligations. This overview describes how we will maintain these commitments as they relate to the NHS Evidence service and its associated employment and workplace policies and practices. More information about the NICE equality scheme can be found within the ‘How we Work’ section of the NICE website (www.nice.org.uk).

180. NHS Evidence, a service of NICE, is one of a number of interlocking components in the NHS infrastructure for supporting health professionals in improving the quality of services and meeting goals such as tackling health inequalities related to socioeconomic status and inequities in access to healthcare and opportunities to improve health for protected and other disadvantaged groups. The likely scale and nature of its impacts on equality should be seen in this context. It is at the very least a rapid and effective means of connecting health professionals with the evidence and information they need.

181. NHS Evidence cannot remedy existing deficiencies in the research and evidence base about inequalities in health, access to healthcare, and in the availability of appropriate treatments in relation to the protected groups, but, as outlined below, the NHS Evidence service can and should be used to influence future research priorities, research design, criteria for systematic review, and concepts of good practice so that information about the impact
of interventions on aspects of equality can progressively fill current
gaps in evidence.

182. In conclusion, within NHS systems for quality improvement, NHS
Evidence aims only to contribute to positive impacts on equality
and does not intend or expect to present any problems or barriers
to any community or group.

7.2 **Equality programme**

183. The service provided by NHS Evidence would be incomplete if it
did not, as far as possible, meet professional needs for evidence
and information to help improve services and reduce health
inequalities in relation to the protected groups and to
socioeconomic status.

184. NHS Evidence has established an equality programme, the
purpose of which is to ensure that the processes, products, and
systems of accountability of NHS Evidence enable it to maximise
its positive impact on equality. The programme is led and overseen
by senior managers and covers the main areas of activity below.

7.2.1 **External advisers and expert input**

185. The same commitment to the values of equality and diversity will be
applied to the recruitment of our experts and references groups as
it does to any other NICE advisory body. This work will ensure that
the committee includes experts in research and evidence in the
field of equality, whether professionals or ‘experts by experience’.
NICE’s Patient and Public Involvement Programme (PPIP), which
specialises in developing links with third sector bodies, is asked to
assist in publicising these roles among organisations concerned
with equality.

7.2.2 **Prioritising content**

186. Decisions have to be made about how additions to NHS Evidence
are sequenced. NHS Evidence will ensure that consideration of
impact on equality is a factor in deciding on priorities for adding new types of evidence and new sources of information to the website.

7.2.3 Enabling retrieval of information related to protected and other disadvantaged groups

187. The former National Library for Health which was transferred to NICE provided an information and evidence service on equality issues, particularly through the specialist libraries on ethnicity and health, learning disabilities, women’s health, later life, and child health. All the information contained within specialist libraries has now been fully integrated and is searchable within NHS Evidence.

188. In general, it will be the aim to ensure that searches of NHS evidence about equality issues produce the most useful results.

189. NICE will develop a ‘local experience’ collection for NHS Evidence (which will provide examples of how formal evidence has been interpreted or applied in a practical, local setting) as a way of disseminating information on good practice in promoting equality in the implementation of evidence-based practice.

7.2.4 Making NHS Evidence accessible

190. NHS Evidence has tried to ensure that the NHS Evidence website is usable and accessible to all. The site has been built and tested in line with recognised accessibility standards, guidelines and established best practice to uphold this aim. It conforms to the World Wide Web Consortium (W3C) Web Accessibility Initiative Web Content Accessibility Guidelines (WCAG) 1.0, level AA, as required by the NHS Brand Guidelines and the Central Office of Information. Where possible, we have followed, and will continue to follow, other best practice to further enhance accessibility.
191. It is essential that the impact of this programme is continuously evaluated, developed and managed and that regular reports on progress will be provided to the NICE Board.

7.2.5 Meeting the information needs of patient and community users

192. The first phase of NHS Evidence has been concerned with designing systems that will meet the needs of professional users. Consideration will now be given to how the information needs and information-seeking behaviour of professionals, patients and members of the public differ, and whether there are any technical or design features that would enhance the usefulness of NHS Evidence for non-professional users.

193. In this work-stream we will also consider:

- testing IT solutions on non-professional users
- engagement with third sector users, assisted by NICE’s PPIP
- examining how we can encourage non-professional users to provide feedback about the NHS Evidence service.

7.2.6 Evaluating the equality impact of NHS Evidence

194. It is essential that the impact of this programme is continuously evaluated, developed and managed and that regular reports on progress are provided to the NICE Board.
8 Glossary

Access and identity management service (AIMS)

AIMS enables access to gated content, and is only available to users who meet the eligibility criteria. AIMS is a secure login system, which verifies the identity of the user and authorises them to access the resources they are entitled to access. The authentication process applies to all purchased and licenced content (gated content); meaning that nationally and locally purchased content use AIMS.

ARMS

A resource management system developed and maintained in house for managing manually added evidence.

Browse

The ability to search for content on a website by using clickable links, rather than entering words into a search box.

Centre for Reviews and Dissemination (CRD)

The CRD is part of the National Institute for Health Research and is a department of the University of York. It provides research-based information about the effects of health and social care interventions via databases and undertakes systematic reviews evaluating the research evidence on health and public health questions of national and international importance. NHS Evidence works closely with CRD, which provides regular feeds from its databases.

Cochrane

The Cochrane Collaboration is an international, independent, not-for-profit organisation dedicated to making up-to-date, accurate information about the effects of healthcare readily available worldwide. The Collaboration produces systematic reviews of healthcare interventions, known as Cochrane Reviews, which are published online in The Cochrane Library. Content from the Cochrane Library databases is used in different ways in NHS Evidence.

CONSORT

CONSORT stands for Consolidated Standards of Reporting Trials. It comprises an evidence-based, minimum set of recommendations for reporting RCTs.
Critical appraisal

The use of explicit, clear methods to assess the data in published research, to establish reliability and relevance in a particular context.

Editorial Board

The Editorial Board is an advisory group with internal and external membership that supports the NHS Evidence management team to help ensure a high quality service with the most appropriate content.

Evidence provider

The owner or originator of evidence that is accessible through NHS Evidence.

Evidence uncertainty

An evidence uncertainty is defined as a question that cannot be resolved by reference to reliable and up-to-date systematic reviews of existing research evidence, regardless of the source of the review.

Evidence Updates

Published by NHS Evidence, they provide a summary of the most important new evidence relating to an accredited guideline published since the original guideline or its update was produced. The process for developing Evidence Updates is not included in this manual and will be described in a separate manual due for publication in 2013.

Eyes on Evidence

A monthly bulletin from NHS Evidence which highlights significant new evidence and how it may impact on clinical practice.

FAST

The search engine which is used to power NHS Evidence and its search function.

Financial interest

NHS Evidence reserves the right to exclude content sources and providers that are sponsored by an entity with a financial interest, and do not state this in a clear and transparent way, or where there are concerns regarding editorial independence.
It is recognised that information sources may be developed with external funding and that this support may be in the form of financial contributions for the complete development of the content, or for parts of it. With this in mind, the involvement from commercial organisations is examined, for example statements relating to how editorial independence is maintained, information about the sponsorship or grant arrangements that are in place and how corporate membership is managed.

Sources of funding should be clearly stated. This can be shown in published annual accounts or through an explanation of how any sponsorship is handled. Ideally this information should be provided on the source’s website, or within specific items of content, otherwise it may be necessary to contact the organisation itself.

NHS Evidence also recognises that there are circumstances when stakeholders involved with content development may have competing interests, and therefore how declarations of financial interests are managed by the source is examined. Ideally, there should be an explicit declaration of interests policy, which describes the policy and procedures that are followed and how these are handled by the source. For example, individuals involved in developing content may be required to declare any competing interests through a regular process, for example an annual declaration as part of their employment, or prior to undertaking work on specific areas of content.

**Information Standard**

The Information Standard is a certification scheme for health and social care information producers, supported by the Department of Health. It has been set up to help the public identify trusted sources of health and social care information.

**Ingestion**

The process by which evidence records are added to NHS Evidence. See also: [Web crawl](#) and [Web feed](#).

**James Lind Alliance (JLA)**

The JLA is an affiliate programme supporting prioritisation of treatment uncertainties by clinicians and patients.

**Licensed content**

Content which has been purchased by the NHS in England at national, regional, or local levels for its employees and other eligible users. It is owned by the provider and made available to eligible users under licence, using AIMS authentication.
MeSH

MeSH is the National Library of Medicine’s controlled vocabulary thesaurus. It consists of sets of terms naming descriptors in a hierarchical structure. It is used to index documents to aid search and retrieval at various levels of specificity.

Metadata

Metadata refers to information that can be applied to evidence to help to describe it, for example document title, publication date and keywords describing the document. The more extensive or detailed the metadata applied, the easier it is to appropriately index, sort and find the evidence within NHS Evidence. This results in a better search experience for the user as the most relevant evidence is found and irrelevant evidence is excluded. See also: Metadata Application Profile and Ontology.

Metadata Application Profile (MAP)

NHS Evidence has a standard format of metadata which is applied to evidence; this is called the Metadata Application Profile. It indicates the fields of information that are added about records, and any controlled vocabularies used.

My Evidence

A form of personalisation used in NHS Evidence. Users who register for My Evidence will automatically be updated on the latest news in their area of specialism or interest.

NHS Evidence central team

This refers to the organisational arrangement of people involved in managing and delivering NHS Evidence, as distinct from providers of evidence or contractors to NHS Evidence.

NICE Accreditation

The process by which credibility, authority and competence is certified, and recognition by NHS Evidence that processes used by an information provider or guidance producer meet the NHS Evidence accreditation criteria.

Ontology

The NHS Evidence language used to classify evidence. It is a type of rich classification system, largely built upon MeSH but also including other vocabularies such as the Public Health Language. It is used to describe evidence more accurately and consequently helps improve the quality and relevance of search results for end users.
It contains concepts which are useful descriptions of the content within NHS Evidence and helps describe resources in a language with which the target audience will be familiar. It also contains synonyms for these concepts and lists complex relationships between them.

**Personalisation**

A function allowing users to customise access to evidence to meet their own interests. In NHS Evidence this is called ‘My Evidence’. See also: **My Evidence**

**Population-Intervention-Comparison-Outcome (PICO)**

A framework used to structure and answer a clinical question.

**PRISMA**

PRISMA stands for Preferred Reporting Items for Systematic Reviews and Meta-Analyses. It is an evidence-based minimum set of items for reporting in systematic reviews and meta-analyses.

**Publication Executive**

The Publication Executive is an executive committee that acts under delegated authority of the NICE Board to review and approve NHS Evidence defined documents for publication and ensure that the appropriate editorial and quality assurance processes have been followed.

**Randomised controlled trial (RCT)**

A comparative study in which participants are randomly allocated to intervention and control groups and followed up to examine differences in outcomes between the groups.

**Reliable systematic review**

For the purpose of these methods, NHS Evidence defines reliable systematic reviews as systematic reviews in the Cochrane Database of Systematic Reviews and those published by a journal which conforms to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) standard. If not published by one of these journals, a systematic review is deemed reliable if the abstract reports the inclusion/exclusion criteria, confirms two or more sources have been searched, and incorporates a synthesis of included studies.
Research recommendation

Recommendations for future research covering questions relating to an uncertainty or evidence gap that has been identified during the guideline development or systematic reviewing process.

Resource management system (RMS)

A resource management system is a system for managing metadata records and their taxonomies that relate to a particular piece of evidence. It differs from a content management system, in that it is not used to create and/or store those resources. The resources are merely links pointing to documents held elsewhere on the web. The system is in effect a giant database allowing the creation of metadata records for each piece of evidence, by adding details such as title, author, publisher, publication date and subject keywords, as well as the URL of the resource. These records are stored in the database, and can be sorted or filtered to produce different views of the records held (for example showing all the records held from one particular publisher). The records can be viewed, edited and deleted, as appropriate. See also: ARMS

Systematic review

Research that summarises the evidence on a clearly formulated question according to a predefined protocol using systematic and explicit methods to identify, select and appraise relevant studies, and to extract, collate and report their findings.

Topic page

Topic pages display a set of panels presenting a consistent set of evidence types across topics. They provide quick access to key resources on a given topic, including access to NICE Pathways. The range of topics will increase over time as the topics are reviewed.

UK Database of Uncertainties about the Effects of Treatments (UK DUETs)

UK DUETS publishes uncertainties about the effects of treatment which cannot currently be answered by referring to reliable up-to-date systematic reviews of existing research evidence. See also: Evidence uncertainty

URL

Uniform Resource Locator – the address of a website on the world wide web.
Web crawl

An ingestion process by which content is pulled into NHS Evidence. The NHS Evidence search engine goes to a website and follows links to pages identified and selected by NHS Evidence. The search engine then copies these pages; it takes the copied pages and processes them according to a set of rules so as to create an index of the website that can be easily and quickly searched. NHS Evidence always seeks permission from the evidence provider before crawling a site.

Web feed

An ingestion process by which content is pushed into NHS Evidence. A file is prepared by the evidence provider which contains content of their website in a structured format which has been selected and identified by NHS Evidence. The file is sent to NHS Evidence to ingest. The search engine processes the file according to a set of rules in order to build an index of the website that can be easily and quickly searched.
Appendix A: Health and care management

Definition of management

195. There are many potential definitions of management activity, the one adopted is from the Health Services Management Centre (HSMC) at Birmingham University and can be applied to both health and social care.

196. “[Health and Social Care] is a large complex system, with a multitude of services that have to be delivered alongside a range of competing priorities that have to be managed such as engaging the public and patients in shaping local services, delivering national policy requirements, improving organisational performance and productivity, working across boundaries with partners, innovating and developing high quality care for service users and patients and actively engaging staff in generating the ways in which all of this can be achieved.”

197. From this definition five broad categories of management activity are described by HSMC:

- leadership and organisational development
- partnerships, collaboration and integration
- commissioning
- quality and innovation in service provision
- patient/user experience and public involvement.

Subject coverage

198. The definition of management and the five top level categories have been broken down into more detailed topics to illustrate the content that is within scope for the service (see table 6 below).
<table>
<thead>
<tr>
<th>Table 6 Health and care management subject list</th>
</tr>
</thead>
</table>
| **Leadership and organisational development** | • Change management  
• Leadership  
• Organisations |
| **Partnerships, collaboration and integration** | • Health and social care integration  
• Inequalities  
• Inter-agency working  
• NHS reorganisation  
• Regeneration and renewal  
• Systems thinking |
| **Commissioning** | • Assessment and planning  
• Contracting and procurement  
• Legal and technical  
• Settlement and review  
• Types of commissioning |
| **Quality and innovation in service provision** | • Evaluation  
• Quality and monitoring  
• Tools and techniques |
| **Patient/user experience and public involvement** | • Co-production  
• Experienced-based design  
• Expert patient  
• Patient/user choice  
• Patient/user narratives  
• Patient/user satisfaction  
• Personalisation  
• Public consultation  
• User journeys |
## Appendix B: Definitions of the evidence types used in NHS Evidence

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit reports</td>
<td>The outcomes of national audits and equivalent initiatives.</td>
<td>National audits reported by the Information Centre of the Royal Colleges</td>
</tr>
<tr>
<td>Care pathways</td>
<td>Care pathways both describe an ideal model of care for a given condition and provide a way of recording relevant details of what actually happened during the care of a specific individual.</td>
<td>NICE pathways, Department of Health Elective Care Commissioning Pathways</td>
</tr>
<tr>
<td>Clinical trials</td>
<td>Current clinical research studies. This term encompasses controlled clinical trials and randomised controlled trials that are recruiting, not recruiting, completed or stopped. The records given for this evidence type describe the research study itself not the results of the study and can be written for a professional or lay audience.</td>
<td>UK Clinical Trial Gateway, Cancer Help UK</td>
</tr>
<tr>
<td>Commissioning guides</td>
<td>Commissioning resources to help health and social care professionals with decisions when they are commissioning services.</td>
<td>NICE guides for commissioners</td>
</tr>
<tr>
<td>Drug best practice guidance</td>
<td>Guidance and recommendations to support the optimal use of medicines.</td>
<td>NICE - Technology Appraisals; All Wales Medicines Strategy Group – Appraisal recommendations; Scottish Medicines Consortium – Advice</td>
</tr>
<tr>
<td>Drug costs</td>
<td>Information on the economic implications of medicines use.</td>
<td>NICE – costing resources; NHS Economic Evaluation Database – economic evaluations and cost-analyses</td>
</tr>
<tr>
<td>Drug horizon scanning</td>
<td>Information to support the managed entry of new medicines to the NHS.* *Prior to marketing authorisation and restricted to individuals working within the NHS with a role in budget planning for medicines.</td>
<td>National Horizon Scanning Centre – New and emerging Technology briefings; Medicines and Prescribing Centre – New Medicines publications; New Drugs Online – monographs on drugs in clinical development</td>
</tr>
<tr>
<td>Drug news</td>
<td>Current awareness information and alerts on issues relating to medicines.</td>
<td>National electronic Library for Medicines – news collection</td>
</tr>
<tr>
<td>Type</td>
<td>Description</td>
<td>Example</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Drug rapid appraisal</td>
<td>Timely, concise critical reviews of new, relevant information set within the context of existing evidence.</td>
<td>Regional Drug and Therapeutics Centre – rapid appraisals</td>
</tr>
<tr>
<td>Drug regulatory and marketing</td>
<td>Information on changes to market authorisations and licensed uses of medicines.</td>
<td>Medicines and Healthcare products Regulatory Agency – Regulatory Guidance</td>
</tr>
<tr>
<td>Drug/medicines management</td>
<td>Systems and processes to support best practice in the use of medicines.</td>
<td>National electronic Library for Medicines – medicines management collection; Department of Health – Medicines and Pharmacy content; Medicines and Prescribing Centre – MeReC Rapid Reviews</td>
</tr>
<tr>
<td>Economic evaluations</td>
<td>Comparative analysis of alternative courses of action in terms of both their costs and their benefits.</td>
<td>NHS Economic Evaluation Database</td>
</tr>
<tr>
<td>Effective practice examples</td>
<td>Local, regional or national examples of practice that have been quality assured and found to be effective to deliver evidence-based health or social care or in implementing health and social care policy.</td>
<td>Social Care Institute for Excellence Good Practice Framework content, NICE shared learning</td>
</tr>
<tr>
<td>Evidence-based management reports</td>
<td>Evidence-based reports or briefings which address key issues in the management of healthcare, public health or social care.</td>
<td>The King’s Fund, NHS Improvement</td>
</tr>
<tr>
<td>Evidence uncertainties</td>
<td>Identifies patient, clinician or research questions that cannot currently be answered by reliable up-to-date systematic reviews.</td>
<td>UK Database of Uncertainties about the Effects of Treatments, NICE Research Recommendations</td>
</tr>
<tr>
<td>Type</td>
<td>Description</td>
<td>Example</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Evidence Updates</td>
<td>Summaries of the most important new evidence relating to an accredited guideline published since the original guideline or its update was produced.</td>
<td>Evidence Updates from NHS Evidence</td>
</tr>
<tr>
<td>Eyes on Evidence commentaries</td>
<td>Summaries of new evidence placed in the context of current practice, with a commentary from an expert in the field.</td>
<td>Eyes on Evidence only</td>
</tr>
<tr>
<td>Guidance</td>
<td>Systematically developed statements to guide decisions about appropriate health and social care to improve individual and population health and wellbeing.</td>
<td>Scottish Intercollegiate Guidelines Network guidelines, NICE guidance, Royal College guidance, Clinical Knowledge Summaries, Clinical Immediate References</td>
</tr>
<tr>
<td>Health technology assessments</td>
<td>A health technology assessment is the process of determining the clinical and cost effectiveness of a health technology.</td>
<td>Centre for Reviews and Dissemination Health Technology Assessment, National Institute for Health Research Health Technology Assessment</td>
</tr>
<tr>
<td>Implementation support tools</td>
<td>Materials developed specifically to support the uptake and use of evidence in health and social care.</td>
<td>NICE implementation support tools</td>
</tr>
<tr>
<td>Learning materials</td>
<td>Selected evidence-based, high quality learning materials.</td>
<td>NICE British Medical Journal learning modules, Medicines and Prescribing Centre learning materials</td>
</tr>
<tr>
<td>Patient decision aids</td>
<td>Products designed to aid communication and decision making between patients and other service users, and health and social care professionals.</td>
<td>Medicines and Prescribing Centre patient decision aids, NHS Direct patient decision aids, Ottawa patient decision aids</td>
</tr>
<tr>
<td>Patient, user and carer experience</td>
<td>Descriptions of experiences of health and illness collected by organisations that have achieved the Department of Health Information Standard.</td>
<td>Healthtalkonline</td>
</tr>
<tr>
<td>Patient, user and carer information</td>
<td>Publications, aimed at a lay audience, produced by organisations that have achieved the Department of Health Information Standard.</td>
<td>Patient UK, Understanding NICE Guidance</td>
</tr>
<tr>
<td>Policy</td>
<td>Selected extant government policy relevant to the NHS Evidence audience.</td>
<td>Department of Health, National Service Frameworks</td>
</tr>
<tr>
<td>Population intelligence</td>
<td>This will be applied to statistics, numerical information and data presented in ways to support population health. This type covers both tools and reports. It is suggested that this type may need to be excluded once Public Health England is in place as population intelligence should fall within its remit. No new sources/records should be added</td>
<td>Health Profiles, Cancer Atlas</td>
</tr>
<tr>
<td>Type</td>
<td>Description</td>
<td>Example</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Population needs assessments</td>
<td>This will be applied to publications which aim to measure the extent and nature of the need of a particular target population in order to make a response to that need.</td>
<td>Public Health Observatories, The National Treatment Agency for Substance Misuse, Local Government Improvement and Development</td>
</tr>
<tr>
<td>Primary research</td>
<td>Published descriptions of research studies.</td>
<td>Cohort studies</td>
</tr>
<tr>
<td>Quality and Productivity Collection examples</td>
<td>Research from the Cochrane Collaboration and local or national initiatives that demonstrate ways to improve quality, productivity or service delivery.</td>
<td>QIPP case studies, Quality and productivity Cochrane topics</td>
</tr>
<tr>
<td>Quality measures</td>
<td>A measurable element of performance which address process and/or outcomes of health and social care.</td>
<td>NICE quality standards and Quality and Outcomes Framework menu items, Information Centre</td>
</tr>
<tr>
<td>Randomised controlled trials</td>
<td>The results of selected randomised controlled trials from a range of evidence providers.</td>
<td></td>
</tr>
<tr>
<td>Systematic reviews</td>
<td>Selected systematic reviews from a range of evidence providers.</td>
<td>Cochrane Database of Systematic Reviews, Centre for Reviews and Dissemination Database of Abstracts of Reviews of Effects</td>
</tr>
</tbody>
</table>
# Appendix C: NHS Evidence Metadata Application Profile (MAP)

<table>
<thead>
<tr>
<th>Ref</th>
<th>Name</th>
<th>DublinCore Name</th>
<th>Origin</th>
<th>Source</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>General Properties</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>URI of Document</td>
<td>dc.identifier</td>
<td>NHS Evidence</td>
<td>URL</td>
<td>An unambiguous reference to the resource within a given context.</td>
</tr>
<tr>
<td>1.2</td>
<td>Title</td>
<td>dc.title</td>
<td>NHS Evidence</td>
<td>Text</td>
<td>A word or phrase which describes the subject matter of the resource.</td>
</tr>
<tr>
<td>1.3</td>
<td>Title, Alternative</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4</td>
<td>Description</td>
<td>dc.description</td>
<td>NHS Evidence</td>
<td>Text</td>
<td>A summary of the content of the resource.</td>
</tr>
<tr>
<td>1.5</td>
<td>Publication Type</td>
<td>dc.type</td>
<td>NHS Evidence</td>
<td>Controlled Vocabulary</td>
<td>The nature or genre of the content of the resource. In this context, the type of publication to which the resource belongs.</td>
</tr>
<tr>
<td>1.6</td>
<td>Guidance Type</td>
<td>dc.type</td>
<td>NHS Evidence</td>
<td>Controlled Vocabulary</td>
<td>The nature or genre of the content of the resource. In this context, the type of guidance to which the resource belongs.</td>
</tr>
<tr>
<td>1.7</td>
<td>Language</td>
<td>dc.language</td>
<td>NHS Evidence</td>
<td>Controlled Vocabulary</td>
<td>The language of the intellectual content of the resource.</td>
</tr>
<tr>
<td>1.8</td>
<td>Geographic Area</td>
<td>dcterm.spatial</td>
<td>NHS Evidence</td>
<td>Controlled Vocabulary</td>
<td>The geographic coverage of the resource.</td>
</tr>
<tr>
<td>1.9</td>
<td>Area of Interest</td>
<td>dc.subject</td>
<td>NHS Evidence</td>
<td>Controlled Vocabulary</td>
<td>The nature or genre of the content of the resource.</td>
</tr>
<tr>
<td>1.10</td>
<td>URL of related resources</td>
<td>dc.relation</td>
<td>NHS Evidence</td>
<td>URL</td>
<td>Indicates a relationship between the current resource and a referenced resource.</td>
</tr>
<tr>
<td>1.11</td>
<td>Audience</td>
<td>dcterms.audience</td>
<td>NHS Evidence</td>
<td>Controlled Vocabulary</td>
<td>A category of user for whom the resource is intended, indicating the level of the resource, or supporting the filtering and / or channelling of resources.</td>
</tr>
<tr>
<td>1.12</td>
<td>Accessibility Statement</td>
<td>~</td>
<td>NICE Website &amp; Evidence Outputs</td>
<td>eGMS. Accessibility</td>
<td>eGMS. Accessibility</td>
</tr>
<tr>
<td>1.13</td>
<td>Rights</td>
<td>Rights</td>
<td>NICE Website &amp; Evidence Outputs</td>
<td>eGMS.copyright</td>
<td>eGMS.copyright</td>
</tr>
<tr>
<td>2</td>
<td>Date Section</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>Publication Date</td>
<td>dcterms.issued</td>
<td>NHS Evidence</td>
<td>Date</td>
<td>The date on which the resource was made available (published).</td>
</tr>
<tr>
<td>2.2</td>
<td>Date Valid</td>
<td>dcterms.valid</td>
<td>NHS Evidence</td>
<td>Date Range</td>
<td>Date (often a range) of validity of the resource.</td>
</tr>
<tr>
<td>2.3</td>
<td>Date Changed</td>
<td>dcterms.modified</td>
<td>NHS Evidence</td>
<td>Date</td>
<td>The date that the resource was changed.</td>
</tr>
<tr>
<td>2.4</td>
<td>Review Date</td>
<td>~</td>
<td>NICE Website</td>
<td>Date</td>
<td>The date that the resource is to be reviewed.</td>
</tr>
<tr>
<td>2.5</td>
<td>Date acquired</td>
<td>~</td>
<td>NICE Website</td>
<td>Date</td>
<td>The date upon which the resource was acquired, or to which access was permitted.</td>
</tr>
<tr>
<td>2.6</td>
<td>Date closed</td>
<td>~</td>
<td>NICE Website</td>
<td>Date</td>
<td>The date upon which access to the resource ceased.</td>
</tr>
<tr>
<td>2.7</td>
<td>Date created</td>
<td>~</td>
<td>NICE Website</td>
<td>Date</td>
<td>The date upon which the resource was created. Note: This can differ from publication date.</td>
</tr>
<tr>
<td>2.8</td>
<td>Date next version due</td>
<td>~</td>
<td>NICE Website</td>
<td>Date</td>
<td>The date upon which the next version is due.</td>
</tr>
<tr>
<td>2.9</td>
<td>Disposal review</td>
<td>~</td>
<td>NICE Website</td>
<td>Date</td>
<td>The date upon which the resource will be reviewed for the purpose of assessing whether disposal of the resource should occur.</td>
</tr>
<tr>
<td>2.10</td>
<td>Date Submitted</td>
<td>dateSubmitted</td>
<td>NICE Website</td>
<td>Date</td>
<td>The Date the Concept was submitted for approved</td>
</tr>
<tr>
<td>2.11</td>
<td>Date Accepted</td>
<td>dateAccepted</td>
<td>NICE Website</td>
<td>Date</td>
<td>The Date the resource was approved</td>
</tr>
<tr>
<td>2.12</td>
<td>Date next version due</td>
<td>DateNextVersionDue</td>
<td>NICE Website</td>
<td>Date</td>
<td>The date on which the next version of the resource being described is due.</td>
</tr>
</tbody>
</table>

3 Classification Section

| 3.1 | Subject Keywords | dc.subject | NHS Evidence | Controlled Vocabulary | A word or phrase which describes the subject matter of the resource. This will use the NHS Evidence Ontology. |
| 3.2 | Subject - setting | ~ | NICE Website & Evidence Outputs | Controlled Vocabulary | The setting which the resource is relevant to. |
| 3.3 | Subject – IPSV | ~ | NICE Website & Evidence Outputs | Controlled Vocabulary | IPSV classification of the resource. |
| 3.4 | Subject - Target Population | ~ | NICE Website & Evidence Outputs | Controlled Vocabulary | The population to which the resource pertains. |

4 Technical Properties Section

| 4.1 | Format | dc.format | NHS Evidence | Controlled Vocabulary | The physical or digital manifestation of the resource. |
| 4.2 | Duration | dcterms.extent | time | The physical or digital size of the resource. |

5 Contributor Section

| 5.1 | Creator | dc.creator | NHS Evidence | Name | Creator is used to indicate the primary person, team or organisation responsible for the intellectual content of the resource. |
| 5.2 | Creator Email | ~ | NHS Evidence | email | The email address of the creator. |
| 5.3 | Contributor | dc.contributor | NHS Evidence | Text | An entity responsible for making contributions to the content of the resource. |
| 5.4 | Publisher | dc.publisher | NHS Evidence | Text | The entity responsible for making the resource available. |
| 5.5 | Source | dc.source | NHS Evidence | Text | The source from which the resource was hosted. |
| 5.6 | Source Type | dc.source | NHS Evidence | Controlled Vocabulary | The type of the source of provision. |

### 6 Physical Properties Metadata

| 6.1 | Location | ~ | ~ | Location of physical entity |
| 6.2 | Start Date | ~ | ~ | Start date of validity of entity. |
| 6.3 | End Date | ~ | ~ | End date of validity of entity. |
| 6.4 | Contact Organisation | ~ | ~ | Organisation responsible for the entity. |
| 6.5 | Organiser’s Email Address | ~ | ~ | Contact details of organisation responsible for the entity. |
| 6.6 | Organisers’ Phone Number | ~ | ~ | Contact details of organisation responsible for the entity. |
| 6.7 | Fax | ~ | ~ | Single Contact details of organisation responsible for the entity. |

### 7 User Generated Metadata (Not currently used)

| 7.1 | User Rating | ~ | ~ | Potential to capture secondary metadata. |
| 7.2 | User comment | ~ | ~ | Potential to capture secondary metadata. |

### 8 Relationships to other resources

<p>| 8.1 | Part Of | isPartOf | Draft Pathways | ~ | The larger part to which the described component belongs. |
| 8.2 | Contains | hasPart | Draft Pathways | ~ | A related concept that is included either physically or logically in the described resource. |
| 8.3 | Change of Ownership | provenance | Draft Pathways | ~ | A statement of any changes in ownership and custody of the resource since its creation that are significant for its authenticity, integrity, and interpretation. |
| 8.4 | Relation | IsFormatOf | Draft Pathways | ~ | A secondary resource to which the resource being described is related. |
| 8.5 | Replaced By | isReplacedBy | Draft Pathways | ~ | A related resource that supplants, displaces, or supersedes the described resource. |
| 8.6 | Replaces | replaces | Draft Pathways | ~ | A related resource that is supplanted, displaced, or superseded by the described resource. |
| 8.7 | Requires | requires | Draft Pathways | ~ | A related resource that is required by the described resource to support its function, delivery, or coherence. |</p>
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Draft Pathways</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8.8</td>
<td>Required By</td>
<td>isRequiredBy</td>
<td>A related resource that is required by the described resource to support its function, delivery, or coherence.</td>
</tr>
<tr>
<td>8.9</td>
<td>Version Of</td>
<td>isVersionOf</td>
<td>A related resource of which the described resource is a version, edition, or adaptation.</td>
</tr>
<tr>
<td>8.10</td>
<td>Other DITA Metadata</td>
<td>–</td>
<td>A name-value pair specifying other metadata about the topic. We use this property only for reference</td>
</tr>
</tbody>
</table>