Partners in Paediatrics,
Shropshire, Staffordshire and Black Country and Southern West Midlands Maternity and Newborn Networks
in conjunction with Bedside Clinical Guidelines Partnership

Guidelines Development Process Manual

for Paediatric, Neonatal and Obstetric Guidelines

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1. Background

Clinical guidelines are 'systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances' [1]
They present recommendations for optimal management, informed by published evidence and broad consensus, and encourage flexible application in individual patients. Guidelines that promote effective interventions and discourage ineffective ones have the potential to reduce morbidity and mortality, and improve quality of life. They facilitate consistency of care regardless of where, or by whom, patients are treated.[2]
Guidelines also provide a focus for training, quality assessment and audit.[3]

2. Introduction

Partners in Paediatrics, Shropshire, Staffordshire and Black Country and Southern West Maternity and Newborn Networks recognises that developing bedside clinical guidelines is an efficient use of time and meets one of their primary objectives, "to improve the quality of services for parents, children, neonates and babies".

Partners in Paediatrics (PiP)

PiP is a partnership of organisations concerned to improve the quality and accessibility of services for children across the area served by the participating organisations. It aims to encourage and develop collaborative approaches to the delivery, commissioning and improvement of children's services. To this end, PiP works with children's services organisations and professionals, and with children, young people and their families.

PiP has now produced over 90 guidelines, in conjunction with the Bedside Clinical Guidelines Partnership (BCGP), and the 6th Edition has been published.

Copies of the Guidelines are regularly sent to hospitals outside the West Midlands – and requests for copies have been made from as far afield as Australia and New Zealand.

Paediatric guideline books are available to purchase at £15.00 a copy from the network

Shropshire, Staffordshire and Black Country Newborn Network (SSBCNN)

The Network was set up in 2005 as part of the Staffordshire, Shropshire and Black Country Newborn Network and consists of six maternity units.

The second edition of the Obstetric Guidelines book 2013-2015 has been published by the Staffordshire, Shropshire and Black Country Maternity Network obstetric guideline group in conjunction with BCGP. The book includes 66 guidelines, and 14 practical procedures. Individual guidelines are available to download.

Obstetric Guidelines books are available to purchase at a cost of £15.00 a copy from the network,

The Neonatal guidelines group is responsible for overseeing the production and implementation of neonatal clinical guidelines across the network.

The Neonatal Guidelines 2013 book is the fifth edition of the Neonatal Guidelines book published by the Staffordshire, Shropshire and Black Country Newborn Network neonatal guideline group in conjunction with BCGP. The book includes 126 guidelines and the guidelines are available to purchase at a cost of £15.00 a copy from the network.

Southern West Midlands Maternity and Newborn Network (SWMMNN)

The Southern West Midlands Maternity and Newborn Network aims to promote the best quality care for all babies.

The Network Guidelines Group draws membership from all units within the Network and is chaired by Dr. Siva Sivakumar, a Consultant at City Hospital. The group meet regularly to oversee development of guidelines, created by group members and in conjunction with relevant specialists including the Transfer Team and BCH Neonatal Surgeons. In 2012 the network joined colleagues in the SSBC Newborn Network in work to produce a joint guidelines booklet.

In 2013 the numbers of copies of the guidelines sold were:

- Neonatal = 67
- Obstetric = 42
- Paediatric = Member Trusts receive free copies as part of their PiP membership, there were a further 62 copies sold
- BCGP = the partnership distribute(d) paediatric, obstetric and neonatal guidelines to a number of their trusts

It is difficult to ascertain how many guidelines are downloaded from the intranet/internet.

See appendix 1 for the Trusts associated with PIP, SSBC and SWMNN

The bedside clinical guidelines are produced for use by all staff concerned with the management of Paediatrics, Neonates and Obstetrics, and provide easily accessible *point of care* information that helps reduce the risks associated with inconsistency of practice, both within and between Trusts; giving the user:

- Peace of mind
- Confident clinicians
- An easy reference bedside tool
- Consistency of practice within your Trust and between Trusts
- Access to robust, evidence- based guidance to aid clinical decision- making

The guidelines have continued to be successful - helping consultants, junior doctors and nurses maintain high quality and consistent practice within, and outside of, the West Midlands.

Developing quality guidelines that would be useful at the patient doctor interface, was a very challenging agenda and the networks joined with **The Bedside Clinical Guidelines Partnership Group,** who had already developed a methodology and a team approach to developing guidelines.

Bedside Clinical Guideline Partnership

The Bedside Clinical Guidelines Partnership (BCGP) was launched in 1998 to develop high quality guidelines.

The Partnership is managed by an editorial board, and the Secretariat is comprised of the following:

- A clinical effectiveness librarian, highly trained and experienced in evidence-based healthcare
- Two full-time developer/co-ordinators

BCGP has developed clinical guidelines for use at the bedside in North Staffordshire, and the guidelines have been adopted by other hospitals nationally, all are members of the BCGP contributing by annual subscription to the cost of developing the guidelines together with their supporting information.

This process manual details the development, dissemination and implementation of the Paediatric, Neonatal and Obstetric guidelines, which comprise a rapidly expanding volume of guidance, formatted for easy consultation and implementation at the bedside.

3. Scope and purpose

Bedside clinical guidelines for Paediatric, Neonatal and Obstetric guidelines provide easily accessible point of care information that helps reduce the risks associated with inconsistency of practice, both within and between Trusts.

The Guidelines support care of paediatrics, neonates and obstetrics. Questions fall into defined categories in the following areas:

This needs to be amended to reflect paediatrics, neonates and obstetrics

1. General services/administration

2. Guidelines for management of common conditions
    a) Recognition/assessment
    b) Immediate treatment
    c) Subsequent management
    d) Monitoring treatment
    e) Discharge policy

3. Prescribing regimens/nomograms (details on specific drugs) check this does not need to be included
    a) Variable dosage requirements
    b) Infusion rates
    c) Selecting appropriate regimens

4. Practical procedures (many illustrated) not in a particular section
    a) Indications
    b) Contraindications
    c) Equipment (sterile packs designed to conform)
    d) Procedure (rehearsed before publication)
    e) Specimens to be obtained

f) Patient aftercare

5. Supporting Information (supplied separately) sets out the evidence for the management decisions in the guidelines and indicates the level of its robustness.

The style of each Guideline is similar for quick, easy reference.

The population is paediatrics, neonatal and obstetrics from admission to discharge. The target audience is the multi-disciplinary clinicians who care for them (doctors, nurses, midwives and pharmacists). The guidance is authored by clinicians for clinicians, and is used by doctors, midwifery staff and nursing staff in partner trusts around the country.

They work to the 3 principles of relevance, validity and ease of use:

Relevance
Identify and refine the subject area
For the management of acute medical conditions, making recommendations that allow for:
- Quick diagnosis
- Appropriate management
- Appropriate secondary prevention

Validity
Gather and validate the evidence
Bi-annually, identify a specialist author to draft or review each guideline, which should reflect the recommendations of any relevant national guideline(s). Challenge any statements that are not based on national or international guidance, framing and answering clinical questions.

Ease of use
Edit the guideline's recommendations
Present the guidelines in a standard format and layout. Choose a presentation and style for ease of bedside reference. Aim for conciseness, eliminating any information not of practical value, remove ambiguities and use bulleted, terse statements in the active tense, with bold/italic typeface to alert or warn. Such simplicity of style is known to assist implementation.

Arrange consultation and peer review
Circulate drafts of new guidelines to the network editorial teams, and those who have a view. Update guidelines regularly and seek feedback at each update, taking any recent clinical advances and emerging evidence into account when incorporating any necessary changes.

Format and layout
The format and layout of the guidelines is set out on page 44.

4. Stakeholder Involvement

There are three separate guidelines groups for Paediatrics, Neonates and Obstetrics consisting of Clinical Leads, Nurses, Midwives, and Pharmacists, and guideline authors are drawn from experts within their specialist field (usually Consultant, SpR or Advanced Nurse Practitioner).

See appendix 3 for names and description of the roles within the guidance developmental groups

The Bedside Clinical guidelines are secondary (local) guidelines and rely on national and international guidelines for much of their input.

Primary (National and International) guidelines are produced by groups of experts with involvement of representatives of all stakeholders, such as patient groups, and they include the most up-to-date evidence with extensive references.

Secondary (Local) guidelines are powerful tools for influencing practice locally. They must rely on national guidelines and reviews available, for example through the NICE website, but attempt to adapt these for ease of local use. If well implemented, local guidelines can be more receptive to feedback from users, for example through audit and local adverse incidents reporting, and rapid amendments can be made.

Each member Trust has a guideline lead who works with their colleagues to make certain that the guidelines are adapted to their Trusts special circumstances.

The paediatric, neonatal and obstetric guidelines are quite generic as they are authored by a number of Trusts and increasingly by three networks, there aren't usually many local amendments. The main area for review is the recommended antibiotics and most Trusts have local policies on these.

NICE have developed a Patient and Public Involvement Policy which sets out NICE's commitment and approaches to patient and public involvement, outlines the underlying principles of NICE's approach to involving lay people, and explains the support available to lay people and organisations involved with NICE's work.

NICE have also developed Factsheets for patients and carers contributing to clinical guidelines – a guide for patients and carers. The networks have devised a leaflet based on the NICE factsheet. AR to do – appendix 4

Therefore, stakeholders, such as patient groups are involved in the development of the national guidance, on which the secondary guidelines, the bedside clinical guidelines, rely.

The guidelines encourage full consent from the patients for their treatment, and problems are fed back to the project team through the adverse incident reporting system and from complaints. As part of the clinical governance structure of the Trust, the Secretariat review internal Adverse Incident reports, serious untoward incidents and complaints to see if any are relevant. The networks also receive reports on untoward events and complaints.

The partner trusts are asked to report any issues with the guidelines.
Patients, parents/carers and young children are involved in the development of the guidelines, and their views regarding required content from their perspective are actively sought – see appendix 5 for patient/parent/children and young people engagement strategy.

The feedback obtained is then used to inform the guidance development process and/or formation of the recommendations – see appendix 6 for "Top tips to be taken into consideration when working with young children" that were gained from Engaging Children & Young People in Service Development event held on 28th March 2014. These will be added to the updated version of the paediatric guidelines this year.

The project team circulates drafts of new guidelines to the network guidelines team and acute trusts to be disseminated to the users or anyone who may have a view, and a preview copy of the guidelines is placed on Trust intranet for 2 weeks for feedback from

users. User feedback is vital, and is encouraged by discussions with doctors in their training programmes.

The network websites include a section where users are able to leave feedback, and there are feedback forms included in the guideline books. Neonates but not obs – check pip

To review the effectiveness of the guidelines a survey of users is undertaken following publication across participating Trusts in both hardcopy and electronic format. Completed questionnaires are returned and analysed, the results of which are used to highlight areas for improvement in the next edition.

See appendix 7 for survey of users of neonatal and obstetric guidelines 2013.

Audits of the adoption and implementation of the guidelines are regularly undertaken (**see page 14**).

5. Guideline Development

The guidelines are secondary guidelines synthesised from existing national guidelines, when available blended with systematic review and primary study research. They are developed, based on the best available evidence and practice, and are compiled as an aide memoire for all staff concerned with paediatric, neonatal and obstetric management, towards a more uniformed standard of care.

Evaluating the evidence-base of these guidelines involves continuous review of both new and existing literature, and they are reviewed on a 2-yearly cycle.

A specialist from any of the partner trusts is appointed as the author for a guideline.

The Clinical/guideline Leads for the guidelines are as follows:

- Paediatrics: Dr Paddy McMaster
- Neonatal: Dr Kate Palmer
  Obstetrics: Dr Adam Gornall

Regular editorial meetings are held to discuss development of new guidelines following feedback from users and review of existing guidelines informed by clinical advances and emerging evidence, and the Guidelines Developer/Co-ordinator and Clinical Effectiveness Librarian attend most of these. Clinical questions may be posed at these meetings, and these generally will be answered as quickly as possible.

The literature search is undertaken by the Clinical Effectiveness Librarian, and, once updated by the author; the guideline is edited by the network editorial team and, finally, the BCGP editorial board. Partner Trusts tailor the guidelines to fit local use, although Paediatric, Neonatal and Paediatric Guidelines are largely generic so there shouldn't be any or very little local tailoring.

Key stages for identifying and developing new guidelines are given in appendix 8, and appendix 9 describes the production schedule.

6. Evidence

The saved search strategies used to create and update supporting information for each guideline are applicable to Medline only (available online from 1951 to date). Other databases such as Embase are utilised when evidence addressing a clinical question is not found on Medline. The earliest date for online availability is different for each database.

Challenges are made to any statements that are not based on national or international guidance, framing clinical questions, to which the clinical effectiveness librarian seeks answers, drafting a succinct summary and assigning evidence levels (I to V) to each question, circulating answers to specialists for comment and responding to feedback received. The final statements are published as 'Supporting Information' to the guideline.

See appendix 10 for the evidence search strategy.

Evidence is sought and evaluated using the methodology of 'Clinical Evidence' (published by the British Medical Journal).

The validity of nationally-accepted guidelines is assumed, the validity of guidelines adopted at a local level i.e. at an individual hospital trust, is not. National guidelines (NICE, SIGN, etc.) are not, therefore, subjected to appraisal by the AGREE instrument.

Despite this, some rapid critical appraisal is carried out in order to assess their suitability for inclusion in the Supporting Information.

Once relevant studies have been identified by the evidence searches the papers are obtained, read and critically appraised. If evidence is already available from a trustworthy source such as Cochrane Library or NICE, the Secretariat does not repeat the review. They are then added to the supporting information for the guidance.

Evidence is included on the grounds that it is the best available with which to address a particular clinical question, and whether it reinforces (or challenges) existing information and also passes rapid critical appraisal (utilising CEBM Checklists) http://www.cebm.net/criticalappraisal/Centre for Evidence Based Medicine. 2014. Critical Appraisal Tools. Oxford: CEBM. Available from: http://www.cebm.net/critical-appraisal/ [Last accessed 25th July 2014]

Approximately 60% of the evidence is level 3, 4 or 5; this reflects areas which have not been the subject of randomised controlled trials or systematic reviews, but which have at least expert consensus opinion to support them.

Evidence is rejected that does not satisfy this minimum standard of general acceptance, that has been published in journals not subject to rigorous peer review, or that relates to study populations that do not closely resemble those targeted by the guidelines.

Supporting information is not included in the guidelines book due to size restraints but is widely available on the intranet and network websites, hard copies are also available on the wards.

Where advice given in national guidelines from different providers conflicts, this is generally in areas where no firm evidence exists and this would be noted in supporting information. See appendices 11a, 11b and 11c for samples of Supporting Information

For each Supporting Information document, links to patient information are also provided, where relevant, so that clinicians can signpost patients to information about their condition or the intervention being carried out

Evidence adheres to a high minimum standard and is reviewed by the clinical effectiveness librarian on a rolling program, each guideline having its own individually-tailored Medline search strategy with automatically-generated monthly updates.

All areas of possible contention in the guidelines are addressed; not simply those for which high-level evidence already exists.

The BCGP has adopted a clear and simple method of indicating the level of evidence used in the book 'Evidence Based Healthcare'[4]

The level of evidence attributed for each clinical question refers to the highest level reached by any of the quoted references. (i.e. if a Cochrane Review, then Level 1). The level is assigned by the Clinical Effectiveness Librarian.

The level of evidence ranges from Level 1 (demonstrating support from at least one systematic review of well conducted randomised controlled trials) through to Level V (expert consensus). It was not deemed necessary to add a letter indicating the strength of recommendation (for example IIA), as all the advice given was of equal importance.

See appendix 12 for levels of evidence.

Every other year each year Trusts are asked for specialists to be authors for an individual guideline. In some areas of practice, the evidence base is weak or non-existent.

If there is debate around a guideline, the specialists in the trusts are asked for a consensus decision to minimise the changes required locally at Trust level.

If no final consensus can be reached the editorial board agrees on clear wording in the guidance in the core guidelines. In these circumstances, the aim is to give clear guidance to the user.

The review allows changes if more evidence is found or consensus reached.

The recommendations from the secretariat may be amended, however, to reflect the opinion of local specialists in each partner Trust. Variation among Trusts can also occur where local funding lags behind evidence of clinical effectiveness.

It is recognised that patients are individuals, possibly with co-morbidities or allergies that require alternative management; clinicians must be free to adapt the guidelines, which are explicitly advisory, not mandatory.

Primary guidelines recommendations are followed if available and consistent with Trust policy e.g. from local formularies and drugs permitted by the Safer Medicines Committee, or imaging modalities available. If not, evidence is searched for as above.

The safe medicines group is a committee of University Hospitals North Staffordshire which reviews all drugs on cost benefit criteria, taking into account national guidance. Only drugs on its formulary can be prescribed within the Trust. The Secretariat can ask for the formulary to be changed, but until that change happens, these local guidelines must reflect local policy to be able to support its users at that time. Need to add in what happens at other Trusts

All guidelines checked are updated by pharmacist. Consistency is required with British National Formulary (BNF, Neonatal formulary and BNFc).

If supporting services are involved e.g. imaging, biochemistry or microbiology, guidance is checked by the appropriate speciality.

Do you address the risks and benefits if there is not enough evidence? Is it stated why you have chosen a particular treatment i.e. even though the risks are greater than the benefits it has the best/strongest evidence – does the process demonstrates that this happens – needs to be documented

The paragraphs/chapters describing the guidance development process should contain a description of the body of evidence, its interpretation, and the translation into practice recommendations. Need supporting data and report of benefits/risks/side effects which will be evidenced during review/development.

5. Guideline Review

The Secretariat, editorial board and guidelines project team works to a bi-annual reviewing and updating cycle.

They review the previous version of each guideline, feedback from users, and search for any new evidence.

The primary guidelines are sent for review by the author at the start of each review cycle to ensure the translation is correct. The changes are checked by the editors in the editorial process.

The bi-annual reviewing and updating cycle can be found in appendix 13.

To arrange consultation and peer review, drafts of new guidelines are sent to all those who may use them or have a view. Updated guidelines require feedback at each update. Any recent clinical advances and emerging evidence are taken into account when incorporating any necessary changes.

Each review has incorporated and implemented changes resulting from user feedback, clinical advances and emerging evidence.

Wider members of the organisations provide an external review function by commenting and providing input from their own perspective.

The many 100s of users act as external reviewers, and are encouraged to contact the project/editorial teams.

The networks rely on users, clinicians, nurses, pharmacists, midwives or other healthcare professionals to give feedback whatever their level of seniority or discipline. This may occur in specific, meetings, requests via email for feedback and from a built in request in the guidelines.

All feedback will be acknowledged and reviewed by the Secretariat and specialist author.

Users inform the secretariat of evidence supporting amendments. Where this is compelling, action is taken between editions. To date, the questions have covered 50 paediatric guidelines, 54 neonatal guidelines, and 23 obstetric guidelines.

For the Supporting Information, although relevant information may from time to time be contributed by guidelines authors, editors or partners, or gleaned from general online sources, the primary method for updating is via monthly Medline saved search alerts from NHS Evidence.

Only material that enhances the answers to existing clinical questions or that suggests new ones is of relevance. The search strategy for each guideline seeks to achieve a balance between sensitivity (not missing important references) and specificity (exclusion of as many irrelevant references as possible).

Every librarian experienced in searching online databases will have their own favourite techniques for constructing a search strategy and there is no single correct way of achieving an optimum result.

Guidelines are updated regularly and feedback is sought at each update, taking any recent clinical advances and emerging evidence into account when incorporating any necessary changes.

Regular meetings are held to discuss development of new guidelines following feedback from users and review of existing guidelines informed by clinical advances and emerging evidence.

As the guidelines are reviewed by the network, editorial board and project team they can respond quickly to changes in evidence, practice and adverse incidents.

The process is continuous and the supporting information documents are updated with the dates of the last amended and last reviewed dates when there is any change.

7. Format and layout

The presentation and style are chosen to facilitate bedside reference. The editorial approach aims for conciseness, eliminating any information not of practical value, removing ambiguities and using bulleted, terse statements in the active tense, with bold/italic typeface to alert or warn. Such simplicity of style is known to assist implementation.

The guidelines support management of paediatrics, neonates and obstetrics.

The style of each Guideline is similar for quick, easy reference.

See appendix 14 for Guidelines Style Guide.

In these guidelines where junior doctors, nurses or midwives have to take swift action, a single option is presented. The choice is made at each review. Bi- annual reviews allow changes if more evidence is found or consensus changes.

Each page of the guidelines has:

- Issue number
- Date of issue
- Date of expiry

Supporting information is updated as necessary following review of monthly updates of over 200 saved search strategies. At the foot of each summary appears the month and year that text was last amended and reviewed by the Librarian, e.g.

"Last amended, August 2010"
"Last reviewed, July 2014"

The presentation and style are chosen to facilitate bedside reference.

The editorial approach aims for conciseness, eliminating any information not of practical value, removing ambiguities and using bulleted, terse statements in the active tense, with bold/italic typeface to alert or warn. Algorithms and flowcharts are used where possible. The style of each guideline is similar to allow quick reference.

8. Dissemination and implementation

SSBCNN and SWMMNN

Each Trust is provided with an electronic word version of the guidelines and supporting evidence on CD. An electronic pdf version of the guidelines and supporting evidence is put on to the SSBCNN and SWMNN website.

Each Trust is also provided with an allocation of A5 books for dissemination within their organisation. Partner Trusts edit some of the guidelines to include local protocols, an A4 hardcopy of which is available on each unit. Some Trusts have intranet versions, either instead of, or in addition to, a paper version for staff to access.

Should any inaccuracies be identified following publication and distribution of the guidelines, partner Trusts are informed in order that the A4 hardcopy version and electronic versions are both on the intranet and internet are amended.

Partners in Paediatrics

Members who subscribe to PiP receive guideline books. All guidelines and supporting information is freely available on the PiP website.

Contact details of all purchasing Trusts are kept to enable any amendments to be circulated.

Secondary (local) guidelines are a part of the implementation tools for primary (national and international guidance). However, there are still local barriers to implementation.

These are routinely discussed within the clinical governance/patient safety structure/NICE guidelines group of the local Trust of which guidelines form a part.

The Secretariat is integrated into the Clinical and corporate governance structure of UHNS. The clinical lead meets every 3 months with the Chief executive and Medical Director to discuss any issues especially service delivery, and sits on the Trust Clinical Governance committee. Cases are made for any changes to equipment, drugs, prescription charts and other documentation to the appropriate committees. Does this still happen?

Until each such case is successful, the guidelines have to reflect the practice allowed by the Trust's policies such as on drugs or equipment.

Using the guidelines as a starting point for change within the Trust is a major part of their usefulness.

9. Awareness and use

The guidelines are written with audit in mind, in fact the drive to develop the guidelines was partly due to the need to have standards against which to audit.

Trusts within the networks are asked to complete and return the formal adoption form listing each of the guidelines, and asking if each guideline is either fully adopted (including local protocols), adopted with minor amendments or not followed using local guideline/major amendments. To inform the update of the next edition of the guidelines Trusts are requested to return the form with copies of guidelines with minor amendments and/or local guidelines with major amendments.

See appendix 15 for the formal adoption audit form

A summary of the findings can be found in appendix 16: results to follow

An audit had also been undertaken by the Clinical Guideline Lead for SWMMNN. See appendix 17 for audit form and appendix 17 for a summary of the results.

10. Costs

The running costs of the secretariat are borne equally by all partner Trusts. The annual subscription to the Bedside Clinical Guidelines Partnership is currently £5,250 per Trust; this allows money to be found for printing, and embedding the guidelines in day to day care. No outside body, such as a pharmaceutical company, funds the partnership.

The BCGP funds guidance production via subscription on a non-profit making basis. As more Trusts join the BCGP, the increased resources will be used to add additional specialties to the bedside guidelines range.

Users within the BCGP then peer review the material and offer challenges, comments and their own contributions. The combined expertise and experience of the contributors make the guidelines independent.

Need to add what the networks pay BCGP for their involvement

11. Editorial independence

All authors, editors and members of the Secretariat and guidelines groups sign a declaration of interest form.

The guidelines are checked against local drug formularies and other policies at each partner Trust.

See appendix 19 for declaration of interest policy (in process of being developed by AR)

See appendix 20 for declaration of interest form (in process of being developed by AR)

Consensus is sought in the recommendations where there is little or no evidence, and the strength of the guidelines is the review.

The Secretariat searches for evidence which reduces the risk of bias.

The Guidelines are initially written and reviewed by specialists with support from qualified, trained and experienced pharmacy, library and publication staff. They are checked against national guidance and reviews

Users within the partnership then review the material and offer challenges, comments and their own contributions. These are always welcomed as the combined expertise and experience of the contributors make the guidelines a robust and reliable bedside tool.

Because they are reviewed and updated so regularly, the guidelines are kept up-to-date and can respond quickly to changes in evidence, practice and even adverse incident reports. Where evidence is compelling, action is taken between editions.

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4. JA Muir-Gray from Evidence Based Healthcare, Churchill Livingstone London 1997
5. Charles Pantin, John Mucklow, David Rogers, Marian Cross and Janine Wall on behalf of the BCGP, 'Bedside Clinical Guidelines: The Missing Link' *Clinical Medicine* Vol 6 No 1, Jan/Feb 2006
6. P McMaster, D Rogers, M Kerr and A Spencer, Getting guidelines to work in practice; *Arch. Dis. Child* 2007, 92; 104-106

Appendices

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Appendix 1 – Trusts associated with Partners In Paediatrics, Shropshire, Staffordshire and Black Country Maternity and Newborn Network and Southern West Midlands Maternity and Newborn Network

PIP

- Birmingham Children's Hospital NHS Foundation Trust
- Black Country Partnership NHS Foundation Trust
- Burton Hospitals NHS Foundation Trust
- Dudley CCG
- Dudley Group NHS Foundation Trust
- East Cheshire NHS Trust
- George Eliot Hospital NHS Trust
- Heart of England NHS Foundation Trust
- Mid Staffordshire NHS Foundation Trust
- Robert Jones & Agnes Hunt Orthopaedic Hospital NHS Foundation Trust
- Shropshire Community NHS Trust
- South Staffordshire & Shropshire Healthcare NHS Foundation Trust
- The Royal Wolverhampton Hospitals NHS Trust
- The Shrewsbury & Telford Hospital NHS Trust
- University Hospitals Coventry & Warwickshire NHS Foundation Trust
- University Hospital of North Staffordshire NHS Trust
- Walsall Healthcare NHS Trust
- Worcester Acute Hospitals NHS Trust

SSBC

- Dudley Group of Hospitals
- Mid Staffordshire Hospital NHS Foundation trust
- The Royal Wolverhampton Hospitals NHS Trust
- The Shrewsbury and Telford Hospitals NHS Trust
- University Hospitals of North Staffordshire NHS Trust
- Walsall Healthcare NHS Trust

SSWMNN

- Birmingham Women's
- Heart Of England (Heartlands/Good Hope)
- Sandwell and West Birmingham (City/Sandwell)
- Birmingham Children's
- Hereford
- Worcester (Worcester/Alex Hospitals)

Appendix 2 – Names and roles of guideline groups

Need to add

Appendix 3 – Patient information leaflet

In development

Appendix 4 – Strategy for Patient and User Involvement in Development of the Guidance

In development

Appendix 5 – Top tips to be taken into consideration when working with young children

1. Always introduce yourself and say what your role is: ‘hashtag hello my name is’ (Dr Kate Grainger’s campaign)

2. Explain what you are doing to a young person and why

3. Don’t talk down to a young person/ don’t patronise them

4. DUA! Don’t use acronyms

5. If you need to use specialist language please explain it

6. Don’t treat us as if we are a rag doll – we have feelings and value our personal space

7. Don’t make us feel small – believe what we are saying

8. Don’t make us feel guilty

9. Talk to us as well as out parent or carer and make our parent or carer feel valued. They are frightened too and we worry about them.

10. Make us feel safe

11. Listen. Don’t keep making us repeat ourselves

12. Try not to give us conflicting advice

13. Be aware of our feelings

14. It’s ok to say you don’t know something or to apologise

15. Don’t be the bad apple; be the good example and be proud!

Appendix 6 – User feedback survey

Final survey of users 2013

Staffordshire, Shropshire & Black Country
Newborn and Maternity Network

in association with the
The Bedside Clinical Guidelines Partnership

Dear Colleague

REVIEW OF THE OBSTETRIC GUIDELINES 2013-15

As part of a project to review the effectiveness of the Obstetric Guidelines, we would like to know your views of them. It is noted that the guidelines are advisory not mandatory.

Would you please spare the time to complete this questionnaire? Your response will be combined with those of other users and presented to the Network Guidelines Group. The results will then be used to highlight areas the network can improve on in the future. The information that you provide will be treated confidentially and you will not be personally identified.
The questionnaire is available to complete on-line at:
http://www.surveymonkey.com/s/2CDT3VB

Completed questionnaires can either be e-mailed (if completed electronically) to sarah.carnwell@nhs.net, or

Completed hard copy questionnaires can either be returned to the Guidelines Lead in your unit:

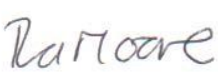
Shrewsbury and Telford Hospitals NHS Trust	Jackie Bolton and Paul Williams
University Hospital of North Staffordshire NHS Trust	Junny Chan
Mid Staffordshire General Hospital NHS Trust	Wendy Carroll
Dudley Group of Hospitals NHS Trust	Justine Edwards
Royal Wolverhampton Hospitals NHS Trust	Helen Sullivan
Walsall Hospitals NHS Trust	Carol Hollington

or returned in the post to:
Staffordshire, Shropshire and Black Country Newborn and Maternity Network, University Hospital of North Staffordshire, 1st Floor Office before Ward 206, Maternity Centre, Newcastle Road, Stoke on Trent, ST4 6QG.

The deadline for the return of completed questionnaires is the 30 November 2013.

Thank you for your assistance. Should you have any queries please do not hesitate to contact me on 01782 672380.

Yours faithfully



Ruth Moore

Network Manager/ Lead Nurse

Enc

Please turn over and complete the second page, thank you.

REVIEW OF THE OBSTETRIC GUIDELINES 2013-15 USER SURVEY

Please complete the questionnaire by placing a cross in the box that most closely represents your answer

1. What is your role?

☐ Consultant ☐ Specialist Registrar ☐ SHO ☐ ANNP

☐ Midwife ☐ Other (please state) _____

2. Where do you work?

☐ University Hospital of North Staffordshire ☐ Mid Staffordshire General Hospital

☐ Shrewsbury and Telford Hospitals ☐ Royal Wolverhampton Hospital

☐ Walsall Manor Hospital ☐ Dudley Group of Hospitals

☐ Unit outside of the Staffs, Shrops and Black Country (SSBC) Network ☐ Other (Please state): _____

3. Are you aware of the Obstetric Guidelines 2013-15?

Yes No If no, and you would like to receive information about the guidelines, please provide an e-mail

address:_____ otherwise please go to the end of the survey.

4. In what form have you seen a copy of the Obstetric Guidelines 2013-15? ***(Please cross all that apply)***

___ A5 pocket book ___ Copy on internet/intranet ___ Other (Please state): _____

5. Do you have your own copy of the guidelines? ☐ No ☐ Yes ***If yes, who provided you with a copy of the guidelines?***_____

6. How often do you refer to the guidelines?

☐ Daily ☐ Once a week ☐ Once a month ☐ Never

7. Have you found any errata, inaccuracies or inconsistencies in the guidelines?

☐ No ☐ Yes

If Yes please give details: _____

_____

8. Which format would you prefer the guidelines to be available in?

☐ A5 pocket book ☐ App for mobile device ☐ Copy on intranet ☐ All formats

Other format (please state) _____

9. What additional topics would you like included in the next edition of the guidelines?

_____

_____

10. Would you be interested in reviewing existing guidelines and/or writing new

guidelines for future editions?

☐ No ☐ Yes If yes, please provide your contact details below:

Name: _____

Email address: _____

Thank you for taking the time to complete this questionnaire.

Appendix 7 - Key stages for identifying and developing new guidelines

1. Feedback from users points to the need for a particular guideline

2. Clinical Effectiveness Librarian searches literature referring to relevant National Service Frameworks (NSF) and guidance from national bodies, such as NICE, SIGN, and specialist societies

3. Together with clinical specialists and potential users (junior doctors, pharmacists, midwives and nurses), the project team drafts the guideline posing clinical questions to challenge any knowledge/evidence gaps not filled by national or international guidance

4. Where appropriate, departments such as pharmacy, medico-legal, radiology and other service providers review the guidelines to ensure accuracy

5. This process can take more than one year

Appendix 8 – Production schedule for Paediatric, Neonatal and Obstetric Guidelines

Production Schedule			
	Paediatric	**Neonatal**	**Obstetrics**
SEP	☺ Prepare files and request evidence search updates to send to authors	☺ Prepare files and request evidence search updates to send to authors	☺ Prepare files and request evidence search updates to send to authors
OCT	Guideline to author for review. Evidence updates required to send to author at review stage	Guideline to author for review. Evidence updates required to send to author at review stage	Guideline to author for review. Evidence updates required to send to author at review stage
NOV	Guideline received from authors and sent to editors, pharmacist and appropriate specialist (e.g. microbiology) for review	Guideline received from authors and sent to editors, pharmacist and appropriate specialist (e.g. microbiology) for review	Guideline received from authors and sent to editors, pharmacist and appropriate specialist (e.g. microbiology) for review
DEC	File sent to Network leads for review (PiP) Chase outstanding guidelines from authors	File sent to Network leads for review (Newborn) Chase outstanding guidelines from authors	File sent to Network leads for review (SSBCNN)
JAN			Chase outstanding guidelines from authors
FEB	To PiP editors for review	File sent to Network leads for review (SSBCNN) To Neonatal editors for review	
MAR	To PiP editors for review	Chase outstanding guidelines from authors	Files sent to BCGP editors for review
APR	Files sent to BCGP editors for review	To PiP editors for review Files sent to BCGP editors for review	Proof read finalised Word files
MAY	Files sent to BCGP editors for review	Files sent to BCGP editors for review	Obtain printer quote and forward to SSBCNN to raise order
JUN	Proof read finalised Word files Obtain printer quote and forward to PiP to raise order	Proof read finalised Word files Obtain printer quote and forward to SSBCNN to raise order	Proof read Printers proof and give authorisation to print
JUL	Proof read Printers proof and give authorisation to print Updated evidence files received ready to send to partners and upload to intranet Add links to Printer's PDF and upload to intranet	Proof read Printers proof and give authorisation to print Updated evidence files received ready to send to partners and upload to intranet Add links to Printer's PDF and upload to intranet	Updated evidence files received ready to send to partners and upload to intranet Add links to Printer's PDF and upload to intranet
AUG	Send out all files and accompanying information to Partner Trusts Books: distribute to Partners as requested (x10)	Send out all files and accompanying information to Partner Trusts Books: distribute to Partners as requested (x10)	Send out all files and accompanying information to Partner Trusts Books: distribute to Partners as requested (x10)

Appendix 9 - Evidence search strategy

The sequence of searching to identify national and international clinical guidance is:

• NHS Evidence to establish whether a relevant guideline already exists
• Cochrane Library to identify any systematic reviews or Randomised Controlled Trials (RCT)
• Medline 1951 through to the current date to identify lesser degrees of evidence, using comprehensive search strategies employing combinations of thesaurus headings and text words
• Each guideline has its own individually tailored Medline search strategy with automatically generated monthly updates
• Searches are repeated on additional databases (for example Embase, Cinahl, PsycINFO) as necessary
• Further items are identified by scanning reference lists from relevant papers
• General internet searches (including discussion groups) may be used if the above databases fail to identify relevant material
• If other sources have failed, recently published textbooks may be consulted to provide level V evidence
General 'catch-all' updating searches are run monthly for each guideline, using stored search strategies.
- General internet searches (including discussion groups) may be used if the above databases fail to identify relevant material

The search strategy used varies slightly between guidelines; for conditions having a large evidence base (e.g. cardiac failure, can we add something specific) only high-level evidence (systematic reviews, RCTs etc.) is targeted, whilst those for conditions having little evidence (e.g. cardiac tamponade, can we add something specific) are more wide-ranging.

Primary evidence is reviewed by the author and editorial committee if addressing management not covered by a national guideline.

The guidelines deal with problems commonly encountered by clinical staff in the acute setting. As such, the literature (although not necessarily the evidence base) for each topic is often extensive. Over 400 saved search alerts arrive by email each month; the challenge lies in the quick and efficient identification of potentially useful references and their inclusion in the SI.

The Medline database is used for all saved searches. Supplementary information is provided by ad-hoc searching of other databases (primarily Embase and Cinahl), as required.
In most cases, the appropriate thesaurus (MeSH) headings are used as the starting point for each search. In the case of very common conditions e.g. Stroke, the heading is "majored", ensuring that only those references in which "Stroke" is a main subject heading are retrieved, i.e.:
*stroke/

The addition of subheadings, e.g. for retrieving references on drug therapy of stroke (*stroke/dt) is not recommended, as Medline indexers are sometimes inconsistent in their application.
Guideline topics having 100s of new references added to Medline each month require a search strategy with the best chance of retrieving relevant material. This string:
random*7 OR systematic OR review*1 OR guideline*1 OR evidence.af
will pick up the vast majority of useful references, when used in combination with the appropriate MeSH heading(s). It may be found helpful, on subsequent lines of the search, to exclude individual case reports and correspondence, e.g:

1. *stroke/
2. random*7 OR systematic OR review*1 OR guideline*1 OR evidence.af
3. 1 AND 2

4. 3 NOT case report/
5. letter.pt
6. 4 NOT 5

A peculiarity of the system requires that “letter” is searched for on a separate line and then excluded on the next one. Attempting to do otherwise produces anomalous results. Additionally, particular age groups may be excluded from the search results.

Because the indexers sometimes omit to use the “child” age limiter when indexing specialist paediatric journals, it is necessary to use a line similar to this for children older than neonates and up to the age of 18:

child*4 OR adolesc* OR pediatric*1 OR paediatric*1.af
To restrict to neonates only:

infan*4 OR neonat*2 OR “neo nat*2” OR newborn*1 or “new born*1” or baby or babies.af
These two lines may also be used to exclude paediatric material from “adult” searches, using the NOT operator. It may sometimes also be necessary to use NOT adult/ for excluding material from paediatric searches when the study population has consisted of all age groups.
Animal studies may be excluded by using NOT animals/. This is more effective than using AND human/, as once again the indexers can be inconsistent in their use of the “human” check tag.

Finally, it is usual to limit the results to English Language papers only.
As a rough guide, any search that, when limited to “current update”, produces more than 100 or so hits, probably needs further refinement. Conversely, if few hits are being retrieved, the search may be widened by omitting some or all of the limiters mentioned above.

Inclusion of suitable references in the SI

Where possible, the guidelines are based on evidence from published literature. It is intended that evidence relating to statements made in the guidelines – and its quality – will be made explicit.

Where supporting evidence has been identified, it is graded I to V according to standard criteria of validity and methodological quality as detailed in the table below. A summary of the evidence supporting each statement is available, with the original sources referenced, on Trust intranet or by requesting an A4 printed version from the Guidelines Co-ordinator/Developer (5391 or bedsideclinicalguidelines@uhns.nhs.uk). The evidence summaries are being developed on a rolling programme, which will be updated as each guideline is reviewed.

The SIs for all sets of guidelines are maintained on a rolling programme, and are therefore always up to date. Periodically the guidelines Secretariat will request a set of SIs to be emailed to them, for distribution to authors and/or addition to a new edition of the appropriate guidelines set.

In addition, annual search updates for each guideline will be requested in advance of the individual guideline authors being invited to review their topics. These should consist of reviews, important research studies and ‘horizon-scanning’ papers published since the last edition of that particular set of guidelines.

The SI documents are to be found in the following places:

- The desktop of the Clinical Effectiveness Librarian
- Network and PiP websites
- The Clinical Area of each Trusts Intranet (along with the guidelines themselves)

- In A4 format on each ward that has a reference copy of the guidelines. Does this happen in all trusts?

Appendix 10a) - Management of pre labour rupture of membranes at term supporting information

This guideline and supporting information has been prepared with reference to the following:

National Institute of Health and Clinical Excellence. Intrapartum care: management and delivery of care to women in labour London: NICE, 2007 [Guideline to be updated Autumn 2014]

Is planned early management preferable to expectant management?

A Cochrane systematic review of 12 trials in a total of 6,814 women (Dare, 2006) found no differences between planned and expectant groups for mode of birth:
Caesarean section RR 0.94, 95% CI: 0.82 - 1.08 (12 trials, 6814 women)
Operative vaginal birth RR 0.98, 95% CI: 0.84 - 1.16 (7 trials, 5511 women)
Significantly fewer women in the planned compared with expectant management groups had chorioamnionitis (RR 0.74, 95% CI: 0.56 - 0.97; 9 trials, 6611 women)
or endometritis (RR 0.30, 95% CI: 0.12 -0.74; 4 trials, 445 women).
No difference was seen for neonatal infection (RR 0.83, 95% CI: 0.61 - 1.12; 9 trials, 6406 infants).
Fewer infants under planned management went to neonatal intensive or special care compared with expectant management (RR 0.72, 95% CI: 0.57 - 0.92, NNT 20; 5 trials, 5679 infants).
In a single trial, significantly more women with planned management viewed their care more positively than those expectantly managed (RR of "nothing liked" 0.45, 95% CI: 0.37 - 0.54; 5031 women.

Dare MR, Middleton P, Crowther CA, et al. Planned early birth versus expectant management (waiting) for prelabour rupture of membranes at term (37 weeks or more). Cochrane Database of Systematic Reviews 2006, Issue 1. Art. No.: CD005302

Evidence Level: I

Does antibiotic prophylaxis help prevent infection?

A Cochrane systematic review of 2 trials in 838 women (Flenady, 2002) found that the use of antibiotics resulted in a statistically significant reduction in maternal infection (chorioamnionitis or endometritis): (RR 0.43; 95% CI 0.23 - 0.82); (RD -4%; 95% CI -7% - -1%); (NNT 25; 95% CI 14 - 100). There were no statistically significant differences in neonatal morbidity. One study of 105 women showed a reduction in neonatal length of stay (mean difference -0.90; 95% CI -1.34 - -0.46).
Another revised Cochrane review, of 22 trials, involving 6872 women and babies (Kenyon, 2013), concluded that: “routine prescription of antibiotics for women with preterm rupture of the membranes is associated with prolongation of pregnancy and improvements in a number of short-term neonatal morbidities, but no significant reduction in perinatal mortality. Despite lack of evidence of longer-term benefit in childhood, the advantages on short-term morbidities are such that we would recommend antibiotics are routinely prescribed. The antibiotic of choice is not clear but co-amoxiclav should be avoided in women due to increased risk of neonatal necrotising enterocolitis.”

Flenady V, King JF. Antibiotics for prelabour rupture of membranes at or near term. Cochrane Database of Systematic Reviews 2002, Issue 3. Art. No.: CD001807

Kenyon S, Boulvain M, Neilson JP. Antibiotics for preterm rupture of membranes. Cochrane Database of Systematic Reviews 2013, Issue 12. Art. No.: CD001058

Evidence Level: I

Speculum examination or pad test is only required if there is doubt about whether membranes have ruptured?
Although the actual clinical guideline for Intrapartum Care (NICE 2007) hasn't yet been changed, it does appear that a change in practice has been recommended in a NICE Medical Technology Guidance issued in July 2013.

This recommends that that the "Vision Amniotic Leak Detector Pad be considered for use in pregnant women with unexplained vaginal wetness"

This still applies to patients where there is some doubt as to whether the wetness is due to their membranes rupturing and appears to be recommending this is checked out via pad in the primary setting rather than checked via speculum exam.

NICE. Vision Amniotic Leak Detector to assess unexplained vaginal wetness in pregnancy. Medical Technology Guidance (MTG15) London: NICE. http://publications.nice.org.uk/vision-amniotic-leak-detector-to-assess-unexplained-vaginal-wetness-in-pregnancy-mtg15/nhs-considerations

Evidence Level: IV

Last amended June 2014
Last reviewed June 2014

Appendix 10b) Supporting Information for HIV

This guideline and supporting information has been prepared with reference to the following:

British HIV Association (BHIVA). Guidelines for the management of HIV infection in pregnant women 2012
http://www.bhiva.org/documents/Guidelines/Treatment/2012/120430PregnancyGuidelines.pdf

Taylor G, Anderson J, Clayden P, et al. British HIV Association and Children's HIV Association position statement on infant feeding in the UK 2011. HIV Medicine 2011;12:389-93

When viral loads in the mother are undetectable (i.e. < 200-500 copies/ml):

Should anti-retroviral therapy be given to the infant?

A nested case-control study in 105 women (Thea, 1997) found that those with an undetectable viral load were 6 times less likely to transmit the infection than were those with a measurable load (AOR 5.8; 95% CI 2.2-15.5).
In a nonrandomised prospective cohort study of 92 HIV-1-seropositive mothers (Dickover, 1996), none of the 63 women with viral loads of <20,000 copies/ml transmitted the infection to their infants.
A larger study in 480 zidovudine-treated women (Mofenson, 1999) found that “there was no perinatal transmission of HIV-1 among the 84 women who had HIV-1 levels below the limit of detection (500 copies per milliliter) at base line or the 107 women who had undetectable levels at delivery.”
In another, similar study of 42 women (Aleixo, 1997), perinatal transmission occurred in 2 ZDV-treated and 3 untreated women with viral loads < 100 copies/ml, raising the possibility that there is no absolute threshold below which transmission will not occur. Equally, there appears to be no upper threshold above which transmission will always occur (Cao, 1997). Anti-retroviral therapy (for both mothers and infants) was shown by the Aleixo study to reduce transmission by 78%, and this was similar to the reduction of 67% noted by the ACTG 076 study (Connor, 1994).
Treating the infants of mothers with a viral load of < 1000 copies may confer some benefit, but it is "not possible to discern from the available data” according to the combined results of 7 European and US prospective studies in a total of 1,202 women (Ioannidis, 2001).

- A Cochrane Review of 25 trials with a total of 18,901 participants (Siegfried, 2011) concluded that: “A regimen combining triple antiretrovirals is most effective for preventing transmission of HIV from mothers to babies. The risk of adverse events to both mother and baby appears low in the short-term but the optimal antiretroviral combination and the optimal time to initiate this to maximise prevention efficacy without compromising the health of either mother or baby remains unclear. Short courses of antiretroviral drugs are also effective for reducing mother-to-child transmission of HIV and are not associated with any safety concerns in the short-term. ZDV given to mothers during the antenatal period, followed by ZDV+3TC intrapartum and postpartum for one week, and sd-NVP given to infants within 72 hours of delivery and ZDV for one week, may be most effective when considering short antiretroviral courses. Where HIV-infected women present late for delivery, post-exposure prophylaxis with a single dose of NVP immediately after birth plus ZDV for the first 6 weeks after birth is beneficial. The long term implications of the emergence of resistant mutations following the use of these regimens, especially those containing Nevirapine, require further study.”

Aleixo LF, Goodenow MM, Sleasman JW. Zidovudine administered to women infected with human immunodeficiency virus type 1 and to their neonates reduces pediatric infection independent of an effect on levels of maternal virus. J Pediatr 1997;130:906-14

Cao Y, Krogstad P, Korber BT, et al. Maternal HIV-1 viral load and vertical transmission of infection: the Ariel Project for the prevention of HIV transmission from mother to infant. Nat Med 1997;3:549-52

Connor EM, Sperling RS, Gelber R, et al. Reduction of maternal-infant transmission of human immunodeficiency virus type 1 with zidovudine treatment. N Engl J Med 1994;331:1173-80

Dickover RE, Garratty EM, Herman SA, et al. Identification of levels of maternal HIV-1 RNA associated with risk of perinatal transmission: effect of maternal zidovudine treatment on viral load. JAMA 1996;275:599-605

Ioannidis JP, Abrams EJ, Ammann A, et al. Perinatal transmission of human immunodeficiency virus type 1 by pregnant women with RNA virus loads <1000 copies/mL. J Infect Dis 2001;183:539-45

Mofenson LM, Lambert JS, Stiehm ER, et al. Risk factors for perinatal transmission of human immunodeficiency virus type 1 in women treated with zidovudine. N Engl J Med 1999;341:385-93

Siegfried N, van der Merwe L, Brocklehurst P, et al. Antiretrovirals for reducing the risk of mother-to-child transmission of HIV infection. Cochrane Database of Systematic Reviews 2011, Issue 7. Art. No.: CD003510

Thea DM, Steketee RW, Pliner V, et al. The effect of maternal viral load on the risk of perinatal transmission of HIV-1. New York City Perinatal HIV Transmission Collaborative Study Group. AIDS 1997;11:437-44

Evidence Level: I

Should delivery be by elective caesarean section?

A recent review (Mitchla, 2000) states that “There is still no information as to whether (caesarean section) provides any added benefit for women on highly active antiviral therapy with an undetectable HIV viral load”.
The American College of Obstetricians and Gynecologists originally recommended, in 1999, that caesarean section should be offered to all HIV-seropositive pregnant women. A survey of 2,000 randomly-selected obstetricians and gynaecologists in the U.S. (Rowland, 2001) found, however, that 47% of respondents disagreed with this recommendation, and 72% did not advise caesarean delivery in women with undetectable viral loads.
Current recommendations (Anon, 2001) are that there is no evidence of benefit in women with viral loads < 1000 copies/ml, but that the individual’s wishes regarding mode of delivery should be respected.
The European Collaborative Study (Boer, 2010), a cohort study on 5238 mother-child pairs (MCPs), found that, amongst MCPs with maternal HIV RNA<400 HIV-1 RNA copies/mL (n=960), elective caesarean section (CS) was associated with 80% decreased transfer risk (AOR 0.20; 95% CI 0.05-0.65). Two infants born to 559 women with viral loads <50 copies/mL were infected, one of whom was delivered by elective CS (transmission rate 0.4%; 95% CI 0.04-1.29).

Anon. Scheduled cesarean delivery and the prevention of vertical transmission of HIV infection. ACOG committee opinion Number 234, May 2000 (Replaces Number 219, August 1999). Committee on Obstetric Practice. Int J Gynecol Obstet 2001;73:279-81

Boer K, England K, Godfried MH, et al. Mode of delivery in HIV-infected pregnant women and prevention of mother-to-child transmission: changing practices in Western Europe. HIV Medicine 2010;11:368-78

Mitchla Z, Sharland M. Current treatment options to prevent perinatal transmission of HIV. Expert Opin Pharmacother 2000;1:239-48

Rowland BL, Vermillion ST, Soper DE. Scheduled cesarean delivery and the prevention of human immunodeficiency virus transmission: a survey of practicing obstetricians. Am J Obstet Gynecol 2001;185:327-31

Evidence Level: V

Should breast-feeding be avoided?

In a small study involving 17 samples of breast milk from 4 HIV-positive mothers (Chantry, 2000) 15 (88%) showed measurable HIV-1 proviral DNA, despite all mothers having had low or undetectable viral loads.
Advice from BHIVA (2012) and the U.S. Public Health Service Task Force (Anon, 2005) is that all HIV-seropositive mothers should avoid breast-feeding.
"To prevent the transmission of HIV infection during the postpartum period, the British HIV Association and Children's HIV Association (BHIVA/CHIVA) continue to recommend the complete avoidance of breast feeding for infants born to HIV-infected mothers, regardless of maternal disease status, viral load or treatment." (see top of page)

Anon. Recommendations for use of antiretroviral drugs in pregnant HIV-1-infected women for maternal health and interventions to reduce perinatal HIV-1 transmission in the United States. Public Health Service Task Force, 2005
http://aidsinfo.nih.gov/guidelines/perinatal/PER_022405.pdf

British HIV Association (BHIVA). Guidelines for the management of HIV infection in pregnant women 2012
http://www.bhiva.org/documents/Guidelines/Treatment/2012/120430PregnancyGuidelines.pdf

Chantry CJ, Morrison P, Panchula J, et al. Effects of lipolysis or heat treatment on HIV-1 provirus in breast milk. J Acquir Immune Defic Syndr 2000;24:325-9

Evidence Level: IV

Should the infant be tested with pro-viral DNA/RNA PCR?

A prospective study compared DNA-PCR and viral RNA amplification and detection in 44 HIV-infected infants and 9 uninfected infants (Brown, 1996). Specimens were tested at 3 stages between birth and around 35 days of age, and in each case, viral RNA was found to be more sensitive than DNA-PCR. After the first month of life, the sensitivity of the DNA-PCR increases from 50% to 96% (Cervia, 2003).
As viral RNA levels increase rapidly from birth and reach a peak at 1-2 months of age (Shearer, 1997), testing during this period should be conclusive on the question of whether or not transmission has occurred. The available evidence, however, is at present inconclusive as to the value of testing or treating infants of mothers with undetectable viral load (see 1st question).

Brown TM, Steketee RW, Abrams EJ, et al. Early diagnosis of perinatal HIV infection comparing DNA-polymerase chain reaction and plasma viral RNA amplification. Int Conf AIDS 1996 Jul 7-12 (abstract no. Tu.B.2374)

Cervia J, Kaplan B, Schuval S, et al. Virologic testing in the management of perinatal HIV exposure. AIDS Read 2003;13:39-46

Shearer WT, Quinn TC, LaRussa P. Viral load and disease progression in infants infected with human immunodeficiency virus type 1. N Engl J Med 1997;336:1337-42

Evidence Level: V

Last amended August 2013
Last reviewed July 2014

Appendix 10c) – Asthma - acute management supporting information

This guideline and supporting information has been prepared with reference to the following:

Scottish Intercollegiate Guidelines Network. British Guideline on the management of asthma: a national clinical guideline. Revised edition January 2012 [draft for consultation sent December 2013-)

http://www.sign.ac.uk/pdf/sign101.pdf

Routine arterial blood gas (ABG) testing does not alter the initial management and thus is inappropriate?

A prospective study in 89 acute severe asthma patients (Carruthers, 1995) found that when oxygen saturation was >/= 92% (72 patients), 3 (4.2%) had respiratory failure. In the 82 patients with a saturation of >/= 90%, 6 (7.3%) had respiratory failure. The authors concluded that an oxygen saturation of > 92% gave sufficient indication that respiratory failure was unlikely and that ABG measurement was therefore unnecessary.

SIGN guidelines also acknowledge that ABG measurement is only necessary in those patients with oxygen saturation < 92% (See above).

Carruthers DM, Harrison BD. Arterial blood gas analysis or oxygen saturation in the assessment of acute asthma? Thorax 1995;50:186-8

Evidence Level: IV

Nebulised treatment should not be given routinely if the child is breathless, without trying inhalers first?

A comparative study (Boyd, 2005) looked at two sequential three-month periods. During the first period, nebulised therapy was given routinely and in the second period, treatment was with pressurised metered dose inhalers with spacers. Admission rates fell significantly from 31% to 20.6% during the second period, although no significant change in total hospital or emergency department times were recorded.

Boyd R, Stuart P. Pressurised metered dose inhalers with spacers versus nebulisers for beta-agonist delivery in acute asthma in children in the emergency department. Emerg Med J 2005;22:641-2

Evidence Level: IV

What are the appropriate doses and mode of administration for intravenous salbutamol, if there is no response to nebulised salbutamol?

The evidence for intravenous salbutamol is uncertain. A Cochrane review of 15 trials involving 584 patients (Travers, 2001) concluded that: “There is no evidence to support the use of IV beta2-agonists in patients with severe acute asthma. These drugs should be given by inhalation. No subgroups were identified in which the IV route should be considered.”
The SIGN asthma guideline (See above), referencing the Cochrane review, states: “The role of intravenous beta2 agonists in addition to nebulised treatment remains unclear. One study has shown that an IV bolus of salbutamol given in addition to near maximal doses of nebulised salbutamol results in clinically significant benefits”. On the strength of this trial (Browne, 2002), SIGN recommends that: “The early addition of a bolus dose of intravenous salbutamol (15 mcg/kg)

can be an effective adjunct to treatment in severe cases" (Category B recommendation), with the stipulation that such treatment should only be given within a PICU environment.
The recommended bolus dose of 15 mcg/kg, given over 10-20 minutes, is also used in the other two identified RCTs on this topic (Roberts, 2003; Browne 1997), one of which was an earlier study by Browne.
A review of evidence on this subject (Tobin, 2005) warns that intravenous salbutamol "has metabolic effects that may worsen respiratory function…and should not be given…outside of clinical trials."
No recent recommendations for continuous infusion, or for mode of administration were identified. The SIGN guideline also states that continuous nebulised salbutamol has no advantage over doses repeated every 20-30 minutes.

Browne GJ, Trieu L, van Asperen P. Randomized, double-blind, placebo-controlled trial of intravenous salbutamol and nebulized ipratropium bromide in early management of severe acute asthma in children presenting to an emergency department. Crit Care Med 2002;30:448-53

Browne GJ, Penna AS, Phung X, et al. Randomised trial of intravenous salbutamol in early management of acute severe asthma in children. Lancet 1997;349:301-5

Roberts G, Newsom D, Gomez K, et al. Intravenous salbutamol bolus compared with an aminophylline infusion in children with severe asthma: a randomised controlled trial. Thorax 2003;58:306-10

Tobin A. Intravenous salbutamol: too much of a good thing? Crit Care Resus 2005;7:119-27

Travers A, Jones AP, Kelly K, et al. Intravenous beta2-agonists for acute asthma in the emergency department. Cochrane Database of Systematic Reviews 2001, Issue 1. Art. No.: CD002988

Evidence Level: I

Corticosteroids can help to prevent recurrent episodes?

A Cochrane review of 6 trials involving 374 children and adults (Rowe, 2007) found that a short course of corticosteroids significantly reduced the number of relapses without any apparent increase in side effects. Results in the first week after discharge were RR 0.38; 95% CI 0.2 – 0.74. This effect was maintained over the first 21 days following discharge (RR 0.47; 95% CI 0.25 – 0.89; NNT = 10).

Rowe BH, Spooner CH, Ducharme FM, et al. Corticosteroids for preventing relapse following acute exacerbations of asthma. Cochrane Database of Systematic Reviews 2007, Issue 3. Art. No.: CD000195

Evidence Level: I

Is magnesium sulphate of use?

A systematic review and meta-analysis of 24 studies in 1,669 adults and children (Mohammed, 2007) found that intravenous (but not nebulised) magnesium had a significant effect on respiratory function in children (but not adults): SMD 0.25, 95% CI 0.80 – 3.08. There was also a significant reduction in hospital admission, again in children but not adults: RR 0.70, 95% CI 0.54 – 0.90. In the recent MAGNETIC trial (Powell 2013) where 508 children were randomly assigned to treatment: (252 to MgSO(4) and 256 to placebo), the clinical difference in mean Yung Asthma Severity Score, was not found to be clinically significant. Clinical effect was larger in children with

more severe asthma exacerbation however (p=003) and those with symptoms present for less than 6 h (p=0049).
Mohammed S, Goodacre S. Intravenous and nebulised magnesium sulphate for acute asthma: systematic review and meta-analysis. Emerg Med J 2007;24:823-30

Powell C,Kolamunnage-Dona R, Lowe J,Boland A et al. Magnesium sulphate in acute severe asthma in children (MAGNETIC): a randomised, placebo-controlled trial. Lancet Respir Med 2013; 1 (4): 301-8.

Evidence Level: I

Patient Information is available from:

Scottish Intercollegiate Guidelines Network. Managing Asthma in Children: A Booklet for parents and carers. December 2011. http://www.sign.ac.uk/pdf/pat101_children.pdf

Last amended June 2014
Last reviewed June 2014

Appendix 11 - Levels of evidence

Where supporting evidence has been identified, it is graded I to V according to standard criteria of validity and methodological quality as detailed in the table below. A summary of the evidence supporting each statement is available, with the original sources referenced, on Trust intranet or by requesting an A4 printed version from the Guidelines Co-ordinator/Developer (5391 or bedsideclinicalguidelines@uhns.nhs.uk). The evidence summaries are being developed on a rolling programme, which will be updated as each guideline is reviewed.

Level of evidence	**Strength of evidence**
I	Strong evidence from at least one systematic review of multiple well-designed randomised controlled trials
II	Strong evidence from at least one properly designed randomised controlled trial of appropriate size
III	Evidence from well-designed trials without randomization, single group pre-post, cohort, time series or matched case-control studies
IV	Evidence from well-designed non-experimental studies from more than one centre or research group
V	Opinions of respected authorities, based on clinical evidence, descriptive studies or reports of expert committees

JA Muir-Gray from Evidence Based Healthcare, Churchill Livingstone London 1997

Evaluating the evidence base of these guidelines involves continuous review of both new and existing literature. The editors encourage you to challenge the evidence provided in this document. If you know of evidence that contradicts, or additional evidence in support of, the advice given in these guidelines, please forward it to the Clinical Guidelines Co-ordinator/Developer, Room 37, Prince Henry Building (Old Nurses' home), University Hospital of North Staffordshire, North Staffordshire Royal Infirmary, Princes Road
Stoke-on-Trent, ST4 7LN (Telephone 01782 555391 or bedsideclinicalguidelines@uhns.nhs.uk)

Appendix 12 – Bi - annual review and updating cycle

1. A specialist is appointed as annual editor for a guideline

2. As in the development of a guideline, the librarian searches the literature on a continual basis to identify changes in practice and new developments.

3. The bi-annual author reviews the previous year's guideline with regard to any new evidence and feedback from users across the network, which may include complaints and adverse incidents

4. The following review the guidelines bi - annually:
   - Senior pharmacist (with full knowledge of Trust prescribing formulary and links to Trust Safe Medication Committee) reviews all guidelines against current BNF, BNFc, Toxbase etc.
   - Senior Antimicrobial Pharmacist reviews all guidelines against current BNF.
   - In addition, all guidelines containing reference to antimicrobials are discussed annually at Trust Antimicrobial committee meeting. Members of this committee include Consultant Microbiologists and Consultants in infectious diseases
   - Senior Radiologist – reviews guidelines containing reference to radiological procedures
   - Biochemistry – any biochemical content within a guideline is reviewed by a Senior Biochemist
   - Haematology – any haematological content within a guideline is reviewed by a Consultant Haematologist
   - The guidelines project team edits the guideline with its accompanying evidence
   - The editorial board reviews the updated guideline, which is scrutinised independently by three editors, one after the other, taking account of answers to queries put to annual author evidence? Document the different processes

Appendix 13 - Guideline style guide

THE GUIDELINE WRITER'S ABC

Active tense – give positive guidance

- Prefer active recommendations to passive statements:

A nasogastric tube should normally be introduced if the patient is unconscious, and the stomach aspirated

Should read:

- If patient unconscious, insert nasogastric tube and aspirate stomach contents

Brevity – be concise – use bullet points

- Ask patient, relatives, GP, ambulance men. Retain any containers found
- Secure and maintain airway
- Stop any regular medication that might enhance the effect of the substance taken in overdose
- Monitor conscious level, temperature, respiration, pulse and BP until they return to normal

Clarity – be precise (avoid ambiguity and chance of misinterpretation)

- Nurse patient at 30-40°

Should read:

- Nurse patient at angle of 30-40° to horizontal, head upmost

Detail – define and be specific

Avoid instructions that require judgement without explaining how this should be exercised, for example:

- Exercise caution
- Give slowly
- Monitor frequently
- Only in extreme circumstances
- Transfuse blood
- Avoid overaggressive fluid replacement

Emphasis – use selectively

- Use emboldened text and boxed comments sparingly
- Use diagrams and tables
- Use bullet points
- Avoid underlining
- Avoid italics

Format – be consistent

Adopt a standard format for:

- Headings
  - Symptoms, Signs, Investigations, Management
- Bullets
- Punctuation
- Abbreviations
  - hr, IV, FBC, kPa
- Commonly used terms
  - Dyspnoea, X-ray
- Cross-references to other guidelines
  - See Myocardial infarction guideline

CLINICAL GUIDELINES

• Each guideline normally has five main headings:

RECOGNITION AND ASSESSMENT (which may have any or all of the following subheadings: Definition, Symptoms and signs, Investigations, Differential diagnosis)
IMMEDIATE TREATMENT
SUBSEQUENT MANAGEMENT
MONITORING TREATMENT
DISCHARGE POLICY

PRESCRIBING REGIMENS AND NOMOGRAMS

• Main headings are:
INDICATIONS
DOSAGE
NOTES
PREPARATIONS
DILUENTS
• Other headings which appear under some subjects may include:

IN-PATIENT PROCEDURE
ADMINISTRATION VIA A SYRINGE PUMP
INCOMPATIBILITIES
PRACTICAL PROCEDURES

• Main headings are:

INDICATIONS
CONTRAINDICATIONS
EQUIPMENT
PROCEDURE
AFTERCARE
COMPLICATIONS

• Some others may include:
SPECIMENS
TROUBLESHOOTING AND PREVENTING PROBLEMS
• Conventions to be observed in the nomograms and procedures sections are as for the guidelines themselves.
• Never use a long word where a short one will do.
• Never use the passive (The consultant on call should be informed) where you can use the active (Inform the
consultant on call).
• If a word can be omitted, omit it.
• Use jargon and foreign words only where essential.

Dates

Dates should be written as: day month year, e.g. 10 July 2001; or month year, e.g. July 2001. No commas are
required. Avoid use of ‘st’, ‘nd’, ‘rd’, etc.

Language

• English spelling and words, exception is in titles of people or places, e.g. Centers for Disease Control. Use
the OED; see exceptions to the -ize rule.
• Avoid shortened forms of words, e.g. can't, couldn't, etc., unless quoting speech.

Spelling - ize and –ise

Decided at main editorial meeting 05-08-09 that ise now the accepted form
-ize is usually correct in English as it is in American, but American follows the sound and nearly always uses -ize.

English spelling tends to follow word derivation, so the following are exceptions to the -ize rule:
analyse
compromise
devise
excise
improvise
incise
revise
supervise

Supporting Information

References and quotations

Leave quotations and abstracts 'untouched' – if additions/deletions are unavoidable use square brackets and
ellipses (…) respectively to indicate the changes.
Also, reproduce reference titles' wording exactly as in the original paper (but do amend the style if necessary,
e.g. changing to sentence case). Use PubMed Single Citation Matcher
http://www.ncbi.nlm.nih.gov/entrez/query/static/citmatch.html to check reference details if you don't have the
original paper.
Use the Vancouver System to set out bibliographies and reference lists. It is commonly used in medical and
scientific journals (http://www.library.uq.edu.au/training/citation/vancouv.html)

Citing papers

Russell FD, Coppell AL, Davenport AP. In vitro enzymatic processing of radiolabelled big ET-1 in human kidney
as a food ingredient. Biochem Pharmacol 1998 Mar 1;55(5):697-701.

Citing conferences

Bengtsson S, Solheim BG. Enforcement of data protection, privacy and security in medical informatics. In: Lun
KC, Degoulet P, Piemme TE, Reinhoff O, editors. MEDINFO 92. Proceedings of the 7th World Congress on
Medical Informatics; 1992 Sep 6-10; Geneva, Switzerland. Amsterdam: North-Holland; 1992. p. 1561-5.

Citing Internet sites

Hoffman DL. St John's Wort. 1995;[4 screens]. Available at:
URL:http://www.healthy.net/library/books/hoffman/materiamedica/stjohns.htm. Accessed July 16, 1998.

Abbreviations

Spell abbreviations out in full first with the abbreviation following in brackets, e.g. World Health Organization
(WHO). After the initial clarification of the abbreviation in full, just the abbreviation should be used. Use minimal full stops for abbreviations (e.g. WHO, plc) but note B.Sc., Ph.D., M.Sc.

Numbers, units and symbols

• Use numerals:
• with units, divisions of time and percentages: 3 hr; 5 min; 2 sec; 9%; 2 kg (NB space between numeral and
unit, except for percentages)
• for grades, levels or numbers allocated to patients: grade 2 toxicity, level 3, patient 8.
• 100; 1,000; 10,000, etc. except dosages, dates and ratios, e.g. 1200 mg, 1997, 1000:20000.
• One to nine numbers spelt out, 10 upwards written as numbers.
• One-fold to nine-fold, then 10-fold etc.
• Numbers at the start of sentences spelt out.
• Three weeks, five days but week 3, day 5
• Two-thirds, three-fifths, etc.
• Use % in text as well as tables (as opposed to per cent), and use a numeral with it (but no space: e.g. 18%)
unless at the beginning of the sentence, then use the long form, e.g. ‘Twelve per cent of studies were
randomized’
• Lower case ‘n’ for number of subjects, e.g. n = 79.
• Upper case, italicized ‘P’ for probability values
• No space either side of < , > , = , = , = , = , ± , etc.
• Single space either side of en rule
• Write decimals in figures. Put a zero (0) in front of the decimal point.
• Hyphenate all compound numbers from twenty-one to ninety-nine, e.g. ‘Twenty-nine per cent of patients’
• Ages to be written as aged <> 5 yr

Underlining

• Underlining is not to be used, except for website addresses.

Italics

• Italics will only be used for the names of organisms, e.g. Coxiella burnetii.

Emboldened text

• Text appears in bold for emphasis only, and this is to be used sparingly. Text appearing in bold within a
black box is reserved for especially important points, to aid in grading a condition or to list important features

or warnings. The only other use of bold is in cross-referencing to other guidelines in the book, e.g. “see **Cardiac Arrhythmias** guideline”, or referring to another section of the same guideline see **immediate treatment**

Algorithms

• Algorithms are used only where their key decision points apply to most patients and/or where a widely accepted algorithm is already in common usage.

Drug therapy

• Where drug treatments are referred to, this will be in the form: Approved name/size of dose/route of
administration/periodicity, e.g. “cefuroxime 1.5 g IV 6 hrly”. Suggested alternative treatments will be
separated by an upper case OR.

Additional

• Dextrose is always called glucose.
• Normal saline is always called sodium chloride 0.9%.

Biological names

• Gene names should be in italic, e.g. the tat gene, CYP2D6 gene.
• Protein names should not be in italic and should start with a capital letter, e.g. the Tat protein, CYP2D6
protein.
• HbA1c should be written with the '1c' as subscript and lower case 'c'

Titles

• Titles should be succinct.
• Abbreviations should not be used in title (except universally familiar ones, e.g. UK, USA).
• No full point at the end of headings.
• Single quote marks should be used in headings.
• Avoid underlining titles and headings.

Subheadings

• Abbreviations are allowed in subheadings provided they are defined within the main text.
• No full point at the end of subheadings.
• Different levels of headings should be defined from each other clearly, e.g. Title – size 18 and bold; A heading – size 14 and bold; B heading – size 10, bold; C heading – size 10 italics and bold.

Bulleted lists

The **short-entry list** is effectively an extended sentence with a colon in the middle.
Entries begin with a **lower-case** letter. Do these need to be specific to paediatrics etc

• Correct reversible causes such as:
hypoxia/hypovolaemia

hyper/hypokalaemia and metabolic disorders
hypothermia.

The **long-entry** list follows a completed sentence, and consists of separate sentences that are less closely linked than short entries are. Each entry has its **capital** letter, though all full stops but the last are usually omitted.

‘Special situations:
• Atropine will counter any excess vagal tone although it brings no proven benefit in clinical practice. During the treatment of asystole IV atropine 3 mg once only is recommended
• Transcutaneous or transvenous pacing should be considered if electrical activity (P waves or occasional QRS complexes) has recently been present.’

Footnotes

Order of symbols is: *, †, ‡, §, º, ¶, **, ††, etc., except for probability values in tables.

Dash (en rule; –)

• En-rules are used to indicate ‘to’, e.g. 16–20 min, pp. 28–39.
• En-rules are also used between two names (if they are of different people, i.e. do not use in double-barrelled
names), e.g. Epstein–Barr virus.
• En-rules are also used between two parameters, e.g. risk–benefit ratio, dose–response curve.
• In the middle of a sentence to break it up – with a space either side

Hyphen

Generally, hyphenate between two or more adjectives when they come before a noun and act as a single idea (e.g. low-density gas, least-squares fit, two-component model). This also applies to simple units (e.g. 1.5-m telescope, 284.5-nm line), but not to complex units or ranges, which could become cumbersome (e.g. 100–200 m
observations).

out-of-hours
out-patient
in-patient
contraindicated (no hyphen)
crossmatch (no hyphen)
facemask (no hyphen)

Figures and Tables

Figure captions

Small type, all run-on, left align above figure:
‘Figure 1: (A) Immunofluorescence and dark-field micrographs. (B--D) Twenty-four hours after surgery’.

Figure citations in text

... shown in Figure 1A and B; also shown in Figures 3--5.
(At beginning of sentence) Figure 1A and B represents...
In parentheses:

(Figure 1A, B)
(Figures 1, 2, 4--6, 7a)

Tables

Small type, all run-on, left align above table: Use shading in tables to differentiate rows
Table 1: Immunofluorescence and dark-field micrographs.

Heading	Heading
Row 1	2.5 *
Row 2	3.6
Row 3	4.6
Row 4	1.3

S.I. UNITS		
Quantity	*SI units*	*Abbreviation*
Length	Metre Kilometre Centimetre	m km cm
Mass	Kilogram Gram	kg g
Volume	Litre Millilitre	L mL
Time	Hour Minute second	hr min sec
Temperature	Kelvin Degree Celsius (or Centigrade)	K °C
Amount of substance	Mole	mol
Pressure, stress	pascal	Pa

Other units/symbols

cpm (counts per minute) days fmol fmole i.d. (inner diameter) inch (out in full) IU (international units) M [molar (concentration = moles/litre)] mcg (micrograms) mM (millimolar – concentration) mmol (millimoles – quantity)	n (number) Osmol(e) (not osMol) Osmolar or Osmol/l or Osm P (use asterisk) probability Rpm SD (standard deviation) SE (standard error) SEM (standard error of the mean) Weeks

msec (milliseconds) months	µm (not microns)

English and American spelling and usage

English	American
Anaesthetic	Anesthetic
Anaesthetics (Department of)	Anesthesiology (Department of)
Anaemia	Anemia
Analogue	Analogue or analog
Analyse	Analyze
Behaviour	Behavior
Centre	Center
Caesarean	Cesarean
Caesium	Cesium
Colour	Color
Diarrhoea	Diarrhea
Distil	Distill, distil
Favour	Favor
Fibre	Fiber
Fetal	Fetal
Fulfilment	Fulfillment
Goitre	Goiter
Gonorrhoea	Gonorrhea
Gram	Gram (gramme)
Grey	Gray
Gynaecology	Gynecology
Haemodynamic	Hemodynamic
Haemoglobin	Hemoglobin
Haemorrhage	Hemorrhage
Humour	Humor
Ischaemia	Ischemia
Leukaemia	Leukemia
Litre	Liter
Metre	Meter
Manoeuvre	Maneuver
Odour	Odor
Oedema	Edema
Oesophagus	Esophagus
Oestrogen	Estrogen
Paediatric	Pediatric
Prise (open)	Pry
Programme (verb)	Program, programme (verb)

Programme (noun) Program (programme) (computer) RNAase Sanatorium Skilful Sulphur Titre Travelling Tumour Vapour **Usage** GP, Doctor (never MD) (Doctor's) surgery (Operating) theatre A&E, Casualty May/might as appropriate	Program (noun) Program (computer) RNAse Sanitarium Skillful Sulfur Titer Traveling Tumor Vapor **Usage** Often MD Office Operating room; OR Emergency Room (ER) Usually may

Some commonly used words, phrases and abbreviations

ageing (U.K.)/ aging (U.S.) analyse (NOT analyze) Blood–brain barrier Brainstem c. (circa) cf. (compare) cis de novo (afresh) DOPA (dihydroxyphenylalanine) dose–response curve Dr , e.g. Eqn (1), Eqn (2), etc. [Eqns (3 and (4)] et al fetus/fetal GABA (γ-aminobutyrate) , i.e. IM (intramuscular) IP (intraperitoneal)	NB nevertheless (one word) none the less (three words) ortho- P (probability) parkinsonian parkinsonism per se post mortem Prof. radioimmunoassay RNAase (U.K.), RNase (U.S.) SC (subcutaneous) time-course time-scale trans ultrathin UV (ultraviolet) versus or vs via

IV (intravenous) in situ in vitro in vivo into (one word)	vice versa wavelength

Hyphenation of some compound words

Hyphenate noun–adjective compounds for clarity; many act as adjectives: ‘clear-cut result’) and the rest nouns (guinea-pig, re-uptake). The following are common:

-accumulating
-coated
-conjugated
-containing
-converting
-coupled
-dependent
-dried
-immunoreactive
-labelled
-lesioned
-limiting
-negative
-operated
-positive
-purified
-reactive
-resistant
-selective
-sensitive
-shaped
-sized
-specific
-stained (-ing)
-tolerant
-treated
-type

Appendix 14 – Formal adoption form

Staffordshire, Shropshire & Black Country
Newborn and Maternity Networks

SOUTHERN WEST MIDLANDS NEWBORN NETWORK

Hereford, Worcester, Birmingham, Sandwell & Solihull

Title:	**Surname:**	**First Name:**
Email:	**Telephone:**	
Guidelines: Neonatal **Obstetric**	**Edition: Please Specify Year**	
The above edition of the guidelines have been reviewed by the unit which confirms the adoption of the network guidelines identified in the table below :		
Signature of Clinical Lead:	**Signature of Trust Medical Director:**	
Date:	**Date:**	
Date Received by Network:		

Examples of Fully Adopted network guideline with local information, Adopted network guideline with Minor amendments and Major amendments to a network guideline making it a local guideline and therefore the network guideline not followed are attached

To inform the update of the next edition of the network guidelines please supply the network with the following with this completed form:
Adopted with Minor Amendments * copies of these versions used by the Trust
Not Followed / Using Local Guideline ** copies of the local guidelines followed by the Trust

Please return to relevant Network Manager, either Sonia Saxon (SWMNN) or Ruth Moore (SSBCNN) by date to be inserted (4 weeks after circulation of the guidelines).

Topic	Fully Adopted (Includes insertion of local tel no.s etc)	Adopted with Minor Amendments *	Not Followed / Using Local Guideline **
ADMISSION & DISCHARGE			
Admission to neonatal unit			
Death and extremely ill babies			
Discharge			
Follow up of infants discharged from NNU			
Labour ward calls			
Transport and referral			
CARDIOVASCULAR			
Cardiac murmurs			
Cyanotic congenital heart disease and HLHS			
ECG abnormalities			
Heart failure			
Hypotension			
Patent ductus arteriosus (PDA)			
Pericardiocentesis			
CRITICAL CARE			
Extreme prematurity			
Hypothermia			
Pain and stress			

Pre-term care (golden hour)			
Resuscitation			
DEVELOPMENT CARE			

Environment and noise inc. quiet time			
Kangaroo care			
Positioning and positioning aids			
ENDOCRINE/METABOLISM			
Hyperglycaemia with insulin infusions			
Hyperkalaemia			
Hypernatraemic dehydration			
Hypoglycaemia			
Hypothyroidism			
IV fluid therapy			
Metabolic disorders (formerly inborn errors)			
GASTROENTEROLOGY			
Breastfeeding preterm infants			
Breast milk handling and storage			
Breast milk expression			
Enteral feeding			
Gastro-oesophageal reflux (GOR)			
Gastroschisis			
Jaundice			
Liver dysfunction			
Necrotising enterocolitis (NEC)			
Nutritional			
Parenteral nutrition			
HAEMATOLOGY			
Blood group incompatibilities			
Coagulopathy			
Polycythaemia			
Thrombocytopenia			
Transfusion of red blood cells			
Vitamin K			
INFECTION			
BCG immunisation			
CMV			
Conjunctivitis			
Group B streptococcus disease			
Hepatitis B and C (combined)			
Herpes simplex			
HIV			
Immunisations			
Infection			
Infection (Early onset)			
MRSA			
Syphilis			
Palivizumab			
Varicella			
NEUROLOGY			
Abstinence syndrome			
Brachial plexus injury			
Cooling			
Hypoxic ischaemic encephalopathy (HIE)			
Seizures			
PRACTICAL PROCEDURES			
Arterial lines insertion			
Arterial line sampling			
Cannulation			
Chest drain insertion			
Consent			
Exchange transfusion			
Extravasation injuries			
Long Lines			
Nasogastric tube insertion			
55			

Skin biopsy

Skin care

UVC and removal			
UAC and removal			
Venepuncture			
RENAL			
Renal abnormalities			
Renal failure (neonatal)			
RESPIRATORY			
Apnoea +/- bradycardia			
Chronic lung disease			
CPAP and Bubble CPAP			
High Flow Nasal cannulae (HFNC)			
High frequency oscillatory ventilation			
Intubation			
Nitric oxide			
Oxygen			
Oxygen on discharge			
PPHN			
Pulmonary haemorrhage			
Surfactant			
SIPPV			
Transcutaneous O_2 monitoring			
Ventilation			
SCREENING			
Antenatal ultrasound abnormalities			
Blood spot test			
Cranial Ultrasound scans			
Disorders of sexual development			
Examination of the newborn			
Hearing screening			
Retinopathy of prematurity (ROP) screening			

NEW GUIDEINES

Guideline	Fully Adopted	Adopted with Minor Amendments *	Not Followed / Using Local Guideline **
History of TB in pregnancy			
Difficult neonatal intubation			
Vascular spasm and thrombosis			
BCG and unknown maternal HIV status			
MCCAD			
Born to mother with thyroid disease			
NG tube feeding			
Sudden collapse in first week of life			
Volume guarantee ventilation			
Chest physiotherapy			
Trans-illumination			

NEW GUIDELINES RECEIVED FROM SWMNN

Guideline	Fully Adopted	Adopted with Minor Amendments *	Not Followed / Using Local Guideline **
Ano-rectal malformation			
Audit tool NICU, SCN, Postnatal ward			
Bottle feeding			
Broviac lines			
CVL – Insertion			
CVL – Removal			
CVL – Dressings management			
Delayed cord cutting			
Developmental care			
Development al – Recognising behaviour			
ECMO referral			
Exomphalus major – initial management			
Gastrointestinal stomata			

Hip screening			
Inguinal hernia			

Intra-abdominal cysts			
Oesophageal atresia			
Rectal washout			
Recycling stoma losses			
Replogle tubes			
Tongue tie			
Prostin infusion			
Non-nutritive sucking			

Appendix 15 – Summary of findings

To follow

Appendix 16 – SWMMNN Network Guideline implementation assessment and support visit

Name of the trust: Name of unit: Date of visit:

Trust members present: Network team:

No	Aspect assessed	Self assessment/plan	Network team assessment	Evidence	Gaps/Targets	Date to be achieved
1	Return of signed adoption forms					
2	Return of guidelines not adopted/major amendments					
3	Implementation of electronic version on trust intranet/database					
4	Backup hard copy of guidelines in all areas (booklet/alternative)					
5	Distribution/Awerwness of all MDT staff (Perinatal/Paed)					
6	Linking with relevant local additions/contacts					
7	Matching/Linking with relevant maternity guidelines					
8	Matching/Linking with relevant trust guidelines					
9	Avoiding duplicating local guidelines					
10	Engagement of local clinical goverance/DTC/Pharmacy etc					
11	User survey engagement					
12	Network audit engagement					
13	Plan for further update					

Appendix 17 – Summary of findings

To follow

Appendix 18 – Declaration of interest policy

In development

Appendix 19 – Declaration of interest form

In development