Appendix C Guideline scope

NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

SCOPE

1 Guideline title

Sickle cell acute painful episode: management of an acute painful sickle cell episode in hospital

1.1 Short title

Sickle cell acute painful episode

2 The remit

The Department of Health has asked NICE: 'To produce a clinical guideline on the management of sickle cell crisis in hospital.'

The scope refers to sickle cell crisis as an acute painful sickle cell episode.

3 Clinical need for the guideline

3.1 Epidemiology

a) Sickle cell disease (SCD) is the name given to a group of lifelong inherited conditions of haemoglobin formation. Most people affected are of African or African-Caribbean origin, although the sickle gene is found in all ethnic groups. Sickle cell disease can have a significant impact on morbidity and mortality.

b) Acute painful sickle cell episodes are caused by the sickling process. The red blood cells in people with sickle cell disease behave differently under a variety of conditions, including dehydration, low oxygen and elevated temperature. Changes in any of these conditions may cause them to block small vessels and

cause tissue infarction. Crises are often unpredictable and pain may vary in intensity but can be excruciating. Repeated crises may result in organ damage.

c) It is estimated that there are between 12,500 and 15,000 people with sickle cell disease in the UK. The National Haemoglobinopathy Registry aims to improve patient care and will provide more accurate information on the number and geographical distribution of patients in the future. The prevalence of the disease is increasing because of immigration into the UK and new births. The National Sickle Cell and Thalassaemia newborn screening programme also means that more cases are being diagnosed.

d) The distribution of disease reflects that of the multi-ethnic population in the UK: about two thirds of people with sickle cell disease live in London, with the majority of others in major urban areas such as the West Midlands and Manchester. The geographical distribution of sickle cell disease is widening through immigration into other parts of the UK and the increasing mobility of the population.

3.2 Current practice

a) The management of painful sickle cell episodes is variable throughout the UK and this is a frequent source of complaints from patients. Common problems are: unacceptable delays in receiving analgesia, insufficient or excessive doses, inappropriate analgesia, and stigmatising the patient as drug seeking.

b) The approach to pain management follows the WHO stepladder of non-opioid and opioid analgesia. Treatment begins with non-opioids such as paracetamol and progresses though to weak opioids such as codeine and then stronger opioids such as morphine until the pain is controlled.

c) There is guidance available from the British Committee for Standards in Haematology (2003) and Sickle Cell Society (2008) relating to the management of acute pain. There is also a guideline for clinical care in children published by the NHS Sickle Cell and Thalassaemia Screening Programme and The Sickle Cell Society (2010). Recommendations from these guidelines cover the type and timing of analgesia, assessment and monitoring of pain and other physiological measures, and the teams involved in caring for patients with an acute painful sickle cell episode.

4 The guideline

The guideline development process is described in detail on the NICE website (see section 6, ‘Further information’).

This scope defines what the guideline will (and will not) examine, and what the guideline developers will consider. The scope is based on the referral from the Department of Health.

The areas that will be addressed by the guideline are described in the following sections. The guideline will cover management from the point at which it is suspected that the patient is having an acute painful sickle cell episode until the pain is under control. This will be separated into defined time periods as appropriate.

4.1 Population

4.1.1 Groups that will be covered

a) Adults, children and young people with any genotype for sickle cell disease who present with an acute painful sickle cell episode.

b) Within this population, consideration will be given to the specific needs of:

- pregnant women, and
- age-specific subgroups.

4.1.2 Groups that will not be covered

a) People who are sickle cell carriers.

b) People who present with a crisis that is not associated with an acute painful sickle cell episode (such as aplastic crisis).

4.2 Healthcare setting

a) In-hospital settings and specialist centres in the NHS.

4.3 Clinical management

4.3.1 Key clinical issues that will be covered

a) Pharmacological interventions that are used to manage acute painful episodes in hospital. This includes all types of analgesia, including NSAIDs, non-opioids, weak opioids and strong opioids. This also includes oxygen, nitrous oxide and prescribed fluids. Note that guideline recommendations will normally fall within licensed indications; exceptionally, and only if clearly supported by evidence, use outside a licensed indication may be recommended. The guideline will assume that prescribers will use a drug's summary of product characteristics to inform their decisions for individual patients.

b) Choice, timing and route of analgesia, including patient-controlled analgesia.

c) When and how often pain and physiological assessments are carried out for monitoring purposes.

d) Non-pharmacological interventions that are used to manage acute painful episodes in hospital.

e) Clinical signs and symptoms to identify patients who are likely to have acute complications associated with a painful sickle cell episode.

f) Optimal clinical setting for managing episodes of acute pain.

g) Skills and knowledge of healthcare professionals and teams providing care.

h) The specific information and support needs of adults and children and young people with an acute painful sickle cell episode, and their parents/carers and families, in relation to pain management.

4.3.2 Clinical issues that will not be covered

a) Managing chronic pain.

b) Preventing an acute painful sickle cell episode.

c) Formal diagnostic investigations to confirm acute complications.

d) Managing acute complications.

e) Managing side effects associated with interventions used to manage acute pain.

f) Sickle cell episodes not associated with acute pain.

g) Co-medications, unless they are used to manage acute pain.

4.4 Main outcomes

a) Survival.

b) Intensity and duration of pain using validated and age-appropriate pain rating scales (this will include parental and healthcare professional assessment for children).

c) Rates of adverse events that are associated with interventions to manage acute painful episodes in hospital.

d) Development of acute complications.

e) Patient and carer satisfaction or experience of pain management.

f) Health-related quality of life.

g) Resource use and cost.

4.5 Economic aspects

Developers will take into account both clinical and cost effectiveness when making recommendations involving a choice between alternative interventions. A review of the economic evidence will be conducted and analyses will be carried out as appropriate. The preferred unit of effectiveness is the quality-adjusted life year (QALY), and the costs considered will usually only be from an NHS and personal social services (PSS) perspective. Further detail on the methods can be found in 'The guidelines manual' (see ‘Further information’).

The key health economic question for this guideline appears to be the cost effectiveness of different pharmacological strategies for managing an acute painful sickle cell episode. The strategies evaluated will depend on the availability of data on which to base estimates of costs and effects.

Further cost effectiveness analysis will be considered if any additional questions are identified during guideline development.

4.6 Status

4.6.1 Scope

This is the final scope.

4.6.2 Timing

The development of the guideline recommendations will begin in August 2011.

5 Related NICE guidance

5.1 Published guidance

- Antenatal care. NICE clinical guideline 62 (2008). Available from www.nice.org.uk/guidance/CG62

- Intrapartum care. NICE clinical guideline 55 (2007). Available from www.nice.org.uk/guidance/CG55
- Acutely ill patients in hospital. NICE clinical guideline 50 (2007). Available from www.nice.org.uk/guidance/CG50
- Depression in adults with a chronic physical health problem. NICE clinical guideline 91 (2009). Available from www.nice.org.uk/guidance/CG91

5.2 Guidance under development

NICE is currently developing the following related guidance (details available from the NICE website).

- Opioids in palliative care. NICE clinical guideline. Publication date to be confirmed.

6 Further information

Information on the guideline development process is provided in:

- ‘How NICE clinical guidelines are developed: an overview for stakeholders' the public and the NHS’
- ‘The guidelines manual’.

These are available from the NICE website (www.nice.org.uk/guidelinesmanual). Information on the progress of the guideline will also be available from the NICE website (www.nice.org.uk).

Appendix D How this guideline was developed

This guideline was developed in accordance with the process for short clinical guidelines set out in 'The guidelines manual' (2009) (see www.nice.org.uk/GuidelinesManual). There is more information about how NICE clinical guidelines are developed on the NICE website (www.nice.org.uk/HowWeWork). A booklet, 'How NICE clinical guidelines are developed: an overview for stakeholders, the public and the NHS' (fourth edition, published 2009), is available from NICE publications (phone 0845 003 7783 or email publications@nice.org.uk and quote reference N1739).

Additional methods used

For the review question addressing clinical signs and symptoms of acute complication, a modified approach was used with GRADE. This is because GRADE has not been developed for use with prognostic studies, therefore methods based on the use of GRADE for diagnostic studies were applied. The same criteria (risk of bias, inconsistency, imprecision and indirectness) were used to downgrade the quality of the evidence. In terms of study design, prospective studies were started with a high-quality rating, whereas retrospective studies were started with a low-quality rating and downgraded as appropriate. This is because there is a higher risk of information bias associated with retrospective study designs. Quality ratings were further downgraded for risk of bias if there was evidence of selection bias. Inconsistency was assessed by examining unexplained differences in estimates of effect. In this case, a range of different estimates of effect were reported including diagnostic accuracy statistics, statistical measures of association or adjusted OR's from multivariate regression analyses. Indirectness was assessed by examining any important differences in population, prognostic factor or outcome of the included evidence compared with those whom the recommendation is intended. Imprecision was assessed by examining the sample size or the 95% confidence intervals around the estimate of effect. Although GRADE provides rules of thumb when assessing imprecision in intervention questions, (i.e. where the total sample size is less than 400, the event rate is less than 300 or the 95% confidence intervals

cross the thresholds for appreciable benefit or harm or the minimal important difference) these may not be directly applicable to prognostic studies. For this review question the evidence was downgraded for imprecision where 95% confidence intervals (if reported or calculated) were wide. This criterion was met if the interval was not narrow enough to support a recommendation or the final recommendation would change if the effect estimate was equal to the lower 95% boundary. Where no confidence intervals were reported, small sample sizes was used as a criterion for downgrading. As sample sizes were small for all included studies (i.e. less than 400) the evidence was generally downgraded for imprecision even if confidence intervals were relatively narrow.

For the review question addressing the information and support needs of patients and their carers, GRADE was not used to present the evidence as GRADE methodology has not yet been adapted for use with qualitative studies. Alternatively a thematic analysis was undertaken. All of the included studies were initially screened to identify common key themes and issues relating to patient experiences during admission for an acute painful sickle cell episode. The evidence was then further explored to identify common subthemes across all included papers. All papers were then re-examined to ensure that all relevant key themes and subthemes were extracted. There is currently no checklist available for the assessment of survey or questionnaire designs. Therefore a checklist originally published in the British Medical Journal was modified to aid the quality assessment of these studies. (See appendix E for a copy of this checklist.)

Search strategies

The evidence reviews used to develop the guideline recommendations were underpinned by systematic literature searches, following the methods described in ‘The guidelines manual' (2009). The aim of the systematic searches was to comprehensively identify the published evidence to answer the review questions developed by the Guideline Development Group and Short Clinical Guidelines Technical Team.

The search strategies for the review questions were developed by the Information Services Team with advice from the Short Clinical Guidelines Technical Team. Structured questions were developed using the PICO (population, intervention, comparison, outcome) model and translated into search strategies using subject heading and free text terms. The strategies were run across a number of databases with no date restrictions imposed on the searches.

The NHS Economic Evaluation Database (NHS EED) and the Health Economic Evaluations Database (HEED) were searched for economic evaluations. Search filters for economic evaluations and quality of life studies were used on bibliographic databases. There were no date restrictions imposed on the searches.

Guideline Development Group members were also asked to alert the Short Clinical Guidelines Technical Team to any additional evidence, published, unpublished or in press, that met the inclusion criteria.

Scoping searches

Scoping searches were undertaken on the following websites and databases (listed in alphabetical order) in April 2011 to provide information for scope development and project planning. Browsing or simple search strategies were employed.

Guidelines/websites	**Systematic reviews/economic evaluations**
African Health Policy Network American Academy of Pain Medicine American Pain Society American Sickle Cell Anemia Association American Society of Hematology American Society of Pediatric Hematology/Oncology British Medical Association (BMA) British Pain Society British Society for Haematology British Committee for Standards in Haematology	BMJ Clinical Evidence Cochrane Database of Systematic Reviews (CDSR) Database of Abstracts of Reviews of Effects (DARE) Health Economic Evaluations Database (HEED) Health Technology Assessment (HTA) Database NHS Economic Evaluation Database (NHS EED) NIHR Service Delivery and Organisation programme (NIHR SDO)

College of Emergency Medicine Department of Health Clinical Knowledge Summaries - CKS Guidelines International Network (GIN) National Confidential Enquiry into Patient Outcome and Death National Institute for Health and Clinical Excellence (NICE) - published & in development National Institute for Health and Clinical Excellence (NICE) - Topic Selection National Institute for Innovation and Improvement NHS Evidence NHS Sickle Cell & Thalassaemia Screening Programme Organisation for Sickle Cell Anaemia Research and Thalassaemia Support (OSCAR) Royal Colleges Scottish Intercollegiate Guidelines Network (SIGN) Sickle Cell Disease Association of America Sickle Cell Society Sickle Cell Information Center Society for Acute Medicine UK Forum on Haemoglobin Disorders World Health Organisation	National Institute for Health Research (NIHR) Health Technology Assessment (HTA) Programme TRIP Database

Main searches

The following sources were searched for the topics presented in the sections below.

- CINAHL (HDAS)
- Cochrane Database of Systematic Reviews – CDSR (Wiley)
- Cochrane Central Register of Controlled Trials – CENTRAL (Wiley)
- Database of Abstracts of Reviews of Effects – DARE (Wiley and CRD website)
- Health Technology Assessment Database – HTA (Wiley and CRD website)
- EMBASE (Ovid)

- MEDLINE (Ovid)
- MEDLINE In-Process (Ovid)
- PSYCINFO (Ovid)

Systematic reviews and mapping searches

The searches were conducted during May 2011. The aim of the searches was to identify evidence for all the review questions of the 'Sickle cell acute painful episode' clinical guideline

The MEDLINE search strategy is presented below. It was translated for use in all of the other databases.

Ovid MEDLINE <1948 to May Week 2 2011>

1 exp Anemia, Sickle Cell/ (15887)
2 exp Pain/ (264029)
3 Acute Disease/ (168610)
4 (pain$ or acute$ or cris$ or episode$).tw.
5 or/2-4
6 1 and 5
7 (sickl$ adj10 (pain$ or acute$ or cris$ or episode$)).tw.
8 6 or 7

Economic search

The following sources were searched to identify economic evaluations and quality of life data featuring patients with acute painful sickle cell episode.

- NHS Economic Evaluation Database – NHS EED (Wiley and CRD website
- Health Economic Evaluations Database – HEED (Wiley)
- Embase (Ovid)
- MEDLINE (Ovid)
- MEDLINE In-Process (Ovid)

Ovid MEDLINE <1950 to March Week 4 2011>

1 exp Anemia, Sickle Cell/
2 Hemoglobin, Sickle/

3 sickl$.tw.

4 or/1-3

Health economics and quality of life methodological search filters

The MEDLINE economic evaluations and quality of life search filters are presented below. They were translated for use in the MEDLINE In-Process and Embase databases.

Economic evaluations

1 Economics/

2 exp "Costs and Cost Analysis"/

3 Economics, Dental/

4 exp Economics, Hospital/

5 exp Economics, Medical/

6 Economics, Nursing/

7 Economics, Pharmaceutical/

8 Budgets/

9 exp Models, Economic/

10 Markov Chains/

11 Monte Carlo Method/

12 Decision Trees/

13 econom$.tw.

14 cba.tw.

15 cea.tw.

16 cua.tw.

17 markov$.tw.

18 (monte adj carlo).tw.

19 (decision adj2 (tree$ or analys$)).tw.

20 (cost or costs or costing$ or costly or costed).tw.

21 (price$ or pricing$).tw.

22 budget$.tw.

23 expenditure$.tw.

24 (value adj2 (money or monetary)).tw.

25 (pharmacoeconomic$ or (pharmaco adj economic$)).tw.

26 or/1-25

Quality of life

1 "Quality of Life"/

2 quality of life.tw.

3 "Value of Life"/

4 Quality-Adjusted Life Years/

5 quality adjusted life.tw.

6 (qaly$ or qald$ or qale$ or qtime$).tw.

7 disability adjusted life.tw.

8 daly$.tw.

9 Health Status Indicators/

10 (sf36 or sf 36 or short form 36 or shortform 36 or sf thirtysix or sf thirty six or shortform thirtysix or shortform thirty six or short form thirtysix or short form thirty six).tw.

11 (sf6 or sf 6 or short form 6 or shortform 6 or sf six or sfsix or shortform six or short form six).tw.

12 (sf12 or sf 12 or short form 12 or shortform 12 or sf twelve or sftwelve or shortform twelve or short form twelve).tw.

13 (sf16 or sf 16 or short form 16 or shortform 16 or sf sixteen or sfsixteen or shortform sixteen or short form sixteen).tw.

14 (sf20 or sf 20 or short form 20 or shortform 20 or sf twenty or sftwenty or shortform twenty or short form twenty).tw.

15 (euroqol or euro qol or eq5d or eq 5d).tw.

16 (qol or hql or hqol or hrqol).tw.

17 (hye or hyes).tw.

18 health$ year$ equivalent$.tw.

19 utilit$.tw.

20 (hui or hui1 or hui2 or hui3).tw.

21 disutili$.tw.

22 rosser.tw.

23 quality of wellbeing.tw.

24 quality of well-being.tw.

25 qwb.tw.

26 willingness to pay.tw.

27 standard gamble$.tw.

28	time trade off.tw.
29	time tradeoff.tw.
30	tto.tw.
31	or/1-30

374 ## *Review questions and review protocols*

375 **Review questions**

376 - Review question 1: How should the acute painful episode be managed using pharmacological interventions?
377 - Review question 2: How should the acute painful episode be managed using non-pharmacological interventions?
378 - Review question 3: What are the clinical signs and symptoms to identify patients who are likely to have an acute complication?
379 - Review question 4: Where should the acute painful episode should be managed?
380 – What skills are required by healthcare professionals and teams providing care?
381 - Review question 5: What information do people need during an acute painful sickle cell episode?

382 **Review protocols**

	Details	Additional comments	Status
Review question 1	How should the acute painful episode be managed using pharmacological interventions?		The protocol was amended post GDG 1 to refer to the management of the 'acute painful episode' rather than 'acute pain'
Objectives	To identify how pharmacological interventions should be used to manage an acute painful episode This will include; Timing and choice of drugs until the patient has been discharged What route should these drugs be given by?		

	Should patient controlled analgesia (PCA) be used? When and how often should patients be monitored for pain and physiological measures?		
Language	English		
Study design	RCTs and systematic reviews		
Status	Published papers (full papers only)		
Population	Adults and children and young people with a diagnosis of sickle cell disease who present with an acute painful sickle cell episode Within this population, pregnant women will be considered as a sub-group as appropriate Consideration will also be given to age-specific sub groups as appropriate		
Intervention	pharmacological interventions to manage an acute painful episode	Search terms: any drugs used for pain relief and to include the following; NSAIDs and non-opioids: paracetamol, aspirin, nefopam, ibuprofen, diflunisal, ketorolac, diclofenac, amytripyline, entonox, ketamine Strong opiates/opioids: morphine, buprenorphine, dipipanone, diamorphine, fentanyl, alfentanil, remifentanil, methadone, oxycodone, papaveretum, pethidine, pentazocine, tramadol	

		Weak opiates/opioids: codeine, dihydrocodeine, meptazinol Corticosteroids: dexamethasone, methylprednisolone Other: patient controlled analgesia (PCA), gabapentin, pregabalin, oxygen and fluids (general supportive care)	
Comparator	placebo or other treatment (including combinations)		
Outcomes	Intensity and duration of pain (using validated and age appropriate scales) Adverse events associated with pain management Survival Health related quality of life Resource use and cost		
Other criteria for inclusion/exclusion of studies	Include: RCTs comparing pharmacological intervention for acute painful episodes with placebo or other treatment Any pharmacological intervention used to manage the acute painful episode all secondary and tertiary settings (inpatient and outpatient) any follow-up period open label studies patients who experience an acute painful episode as an inpatient (e.g. post surgery)	Any additional criteria applied – duration of follow up etc	

	Exclude: drugs used to reduce the incidence of painful sickle cell episodes management of the acute painful episode in other settings (e.g. community, pre hospital setting) co-medications (unless used to manage the acute painful episode) chronic pain (unless accompanied by acute pain)		
Search strategies	RCTs and systematic reviews		
Review strategies	The NICE methodology checklist for RCTs will be used as a guide to appraise the quality of individual studies Data on all included studies will be extracted into evidence tables Where statistically possible, a meta-analytical approach will be used to give an overall summary effect All key outcomes from evidence will be presented in GRADE profiles or modified profiles and further summarized in evidence statements Sub-group analysis will be undertaken for children and pregnant woman where appropriate		
Identified key studies	Dunlop & Bennett (2009). Pain management for sickle cell disease in children and adults. Cochrane review. This included 10 primary studies.		

	Details	**Additional comments**	**Status**
Review question 2	How should the acute painful episode be managed using non-pharmacological interventions?		
Objectives	What non-pharmacological interventions should be used to manage the acute painful episode (if any)?		

	At what point should these interventions be used?		
Language	English		
Study design	RCTs and systematic reviews		
Status	Published papers (full papers only)		
Population	Adults and children and young people with a diagnosis of sickle cell disease who present with an acute painful sickle cell episode Within this population, pregnant women will be considered as a sub-group as appropriate Consideration will also be given to age-specific sub groups as appropriate		
Intervention	non-pharmacological interventions to manage an acute painful episode	Search terms (please restrict to the following): distraction techniques, acupuncture, TENs and heat therapy, mobilization/immobilisation	The searches that were carried out were broad and no restrictions were made on the type of intervention.
Comparator	placebo or other treatment (including combinations)		
Outcomes	Intensity and duration of pain (using validated and age appropriate scales) Adverse events associated with pain management Survival Health related quality of life Resource use and cost		
Other criteria for inclusion/exclusion of studies	Include: RCTs comparing non-pharmacological intervention for managing the acute painful episode with placebo or other treatment Non-pharmacological interventions may be self-administered all secondary and tertiary settings (inpatient and outpatient)	Any additional criteria applied – duration of follow up etc	

	any follow-up period patients who experience an acute painful episode as an inpatient (e.g. post surgery) Exclude: management of the acute painful episode in other settings (e.g. community) co-medications (unless specifically used to manage the acute painful episode) chronic pain (unless accompanied by acute pain)		
Search strategies	RCTs and systematic reviews		
Review strategies	The NICE methodology checklist for RCTs will be used as a guide to appraise the quality of individual studies Data on all included studies will be extracted into evidence tables Where statistically possible, a meta-analytical approach will be used to give an overall summary effect All key outcomes from evidence will be presented in GRADE profiles or modified profiles and further summarized in evidence statements Sub-group analysis will be undertaken for children and pregnant woman where appropriate		
Identified key studies	N/A		

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	Details	**Additional comments**	**Status**
Review question 3	What are the clinical signs and symptoms to identify patients who are likely to have an acute complication?		
Objectives	Are there any specific signs and symptoms that can predict patients		

	who are high risk of developing acute complications? Does identifying acute complications at an early stage increase survival?		
Language	English		
Study design	Prognostic (cohort, case-control etc)		
Status	Published papers (full papers only)		
Population	Adults and children and young people with a diagnosis of sickle cell disease who present with an acute painful sickle cell episode Within this population, pregnant women will be considered as a sub-group as appropriate Consideration will also be given to age-specific sub groups as appropriate		
Prognostic factor	clinical signs and symptoms or risk factors to predict the development of acute complications		
Comparator	diagnosis of acute complication		
Outcomes	Development of acute complications Survival Health related quality of life	Search terms of acute complications: Acute Chest Syndrome (ACS), acute abdomen (including gall bladder disease), acute anaemia, acute splenic and hepatic sequestration, acute neurological symptoms (including acute stroke), suspected acute osteomyelitis, acute renal disease, acute priapism, febrile patients (including infection)	

Other criteria for inclusion/exclusion of studies	Include: patients with diagnosis of an acute complication associated with painful sickle cell episode focus on risk factors for acute complications in patients with acute painful sickle cell episode any prognostic design laboratory markers as risk factors for acute complications) Exclude: focus on risk factors for acute complications in patients in a 'steady state' of sickle cell (i.e. not experiencing an acute painful episode) focus on management of acute complications narrative reviews of clinical characteristics case studies and case series prevention of acute complications focus on formal diagnostic investigations to confirm an acute complication	Any additional criteria applied – duration of follow up etc	
Search strategies	No restriction on study design		
Review strategies	Appropriate NICE methodology checklists (depending on the study design) will be used as a guide to appraise the quality of individual studies Data on all included studies will be extracted into evidence tables Where statistically possible, a meta-analytical approach will be used to give an overall summary effect All key outcomes from evidence will be presented in GRADE profiles or modified profiles and further summarized in evidence statements Sub-group analysis will be undertaken for children when appropriate		
Identified key studies	N/A		

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	Details	Additional comments	Status
Review question 4	Where should an acute painful episode be managed? What skills/ knowledge are required by healthcare professionals and teams providing care?		
Objectives	To identify the most appropriate setting and skills for managing an acute painful episode		
Language	English		
Study design	RCTs, systematic reviews, cohort studies, case-control studies		
Status	Published papers (full papers only)		
Population	Adults and children and young people with a diagnosis of sickle cell disease who present with an acute painful sickle cell episode Within this population, pregnant women will be considered as a sub-group as appropriate Consideration will also be given to age-specific sub groups as appropriate		
Intervention	management of an acute painful episode in specialist settings (including secondary care with specialist input)		
Comparator	management of an acute painful episode in secondary care (without specialist sickle cell input)		
Outcomes	Adverse events associated with pain management Survival Health related quality of life Resource use and cost		
Other criteria for inclusion/exclusion of studies	Include: Any study design focusing on organisation of care or skills/ knowledge of healthcare professionals Exclude:		

	management of an acute painful episode in other settings (e.g. community) opinion piece/editorial/letter focus on clinical pathway without reference to organisation of care or skills/ knowledge of healthcare professionals		
Search strategies	No restriction on study design		
Review strategies	Appropriate NICE methodology checklists (depending on the study design) will be used as a guide to appraise the quality of individual studies Data on all included studies will be extracted into evidence tables Where statistically possible, a meta-analytical approach will be used to give an overall summary effect All key outcomes from evidence will be presented in GRADE profiles or modified profiles and further summarized in evidence statements Sub-group analysis will be undertaken for children when appropriate		
Identified key studies	N/A		

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	Details	Additional comments	Status
Review question 5	What information do people need during an acute painful sickle cell episode and at discharge?		The review question was amended post GDG 1 to specifically cover both discharge information requirements and those required

			during the episode
Objectives	To identify the information and support needs of patients and their carers during an episode of acute painful sickle cell		
Language	English		
Study design	RCT, cohort studies, case-control studies, qualitative studies		
Status	Published papers (full papers only)		
Population	Adults and children and young people with a diagnosis of sickle cell disease who present with an acute painful sickle cell episode Within this population, pregnant women will be considered as a sub-group as appropriate Consideration will also be given to age-specific sub groups as appropriate		
Intervention	information/support needs of patients and their family/carers		
Comparator	standard care		
Outcomes	Patient satisfaction or experience of pain management Health related quality of life		
Other criteria for inclusion/exclusion of studies	Include: any patient education intervention related to an acute painful sickle cell episode focus on patient experiences during inpatient management of acute painful episode focus on identified needs/information during inpatient management of acute painful episode Exclude: not focused on patient experience or needs		
Search strategies	No restriction on study design		

Review strategies	Appropriate NICE methodology checklists (depending on the study design) will be used as a guide to appraise the quality of individual studies Data on all included studies will be extracted into evidence tables Where statistically possible, a meta-analytical approach will be used to give an overall summary effect All key outcomes from evidence will be presented in GRADE profiles or modified profiles and further summarized in evidence statements Sub-group analysis will be undertaken for children when appropriate		
Identified key studies	N/A		

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Excluded studies

List of excluded studies for review questions 1 and 2: Pharmacological and non-pharmacological management

Vandy, B.L. & Smith, W.R. 2010. Evidence-based mini-review: Are systemic corticosteroids an effective treatment for acute pain in sickle cell disease? [Review]. Hematology, 2010, 416-417
Ref ID: 7
EXCLUDE-REVIEW

Ballas, S.K., Bauserman, R.L., McCarthy, W.F., Castro, O.L., Smith, W.R., Waclawiw, M.A., & Investigators of the Multicenter Study of Hydroxyurea in Sickle Cell Anemia 2010. Hydroxyurea and acute painful crises in sickle cell anemia: effects on hospital length of stay and opioid utilization during hospitalization, outpatient acute care contacts, and at home. Journal of Pain & Symptom Management, 40, (6) 870-882
Ref ID: 24
EXCLUDE-TREATMENT NOT GIVEN IN-HOSPITAL

Edwards, L.Y. & Edwards, C.L. 2010. Psychosocial treatments in pain management of sickle cell disease. [Review]. Journal of the National Medical Association, 102, (11) 1084-1094
Ref ID: 55
EXCLUDE-REVIEW

Oniyangi, O. & Cohall, D.H. 2010. Phytomedicines (medicines derived from plants) for sickle cell disease. [Review][Update of Cochrane Database Syst Rev. 2004;(3):CD004448; PMID: 15266534]. Cochrane Database of Systematic Reviews (10) CD004448
Ref ID: 77
EXCLUDE-NOT IN-HOSPITAL TREATMENT OF ACUTE PAINFUL EPISODE (FOCUS ON PREVENTION)

Mousa, S.A., Al, M.A., Al, S.F., Al, J.S., Nasrullah, Z., Al, S.H., Alabdullatif, A., Al, S.M., Al, Z.H., Hegazi, M., Al, M.A., Alsulaiman, A., Omer, A., Al, K.S., Tarawa, A., Al, O.F., & Qari, M. 2010. Management of painful vaso-occlusive

crisis of sickle-cell anemia: consensus opinion. [Review]. Clinical & Applied Thrombosis/Hemostasis, 16, (4) 365-376
Ref ID: 82
EXCLUDE-REVIEW

Barakat, L.P., Schwartz, L.A., Salamon, K.S., & Radcliffe, J. 2010. A family-based randomized controlled trial of pain intervention for adolescents with sickle cell disease. Journal of Pediatric Hematology/Oncology, 32, (7) 540-547
Ref ID: 87
EXCLUDE-PATIENTS NOT HAVING PAINFUL EPISODE

Fartoukh, M., Lefort, Y., Habibi, A., Bachir, D., Galacteros, F., Godeau, B., Maitre, B., & Brochard, L. 2010. Early intermittent noninvasive ventilation for acute chest syndrome in adults with sickle cell disease: a pilot study. Intensive Care Medicine, 36, (8) 1355-1362
Ref ID: 116
EXCLUDE-FOCUS ON MANAGEMENT OF ACS

Wright, J. & Ahmedzai, S.H. 2010. The management of painful crisis in sickle cell disease. [Review] [64 refs]. Current Opinion in Supportive & Palliative Care, 4, (2) 97-106
Ref ID: 138
EXCLUDE-REVIEW

Voskaridou, E., Christoulas, D., Bilalis, A., Plata, E., Varvagiannis, K., Stamatopoulos, G., Sinopoulou, K., Balassopoulou, A., Loukopoulos, D., & Terpos, E. 2010. The effect of prolonged administration of hydroxyurea on morbidity and mortality in adult patients with sickle cell syndromes: results of a 17-year, single-center trial (LaSHS). Blood, 115, (12) 2354-2363
Ref ID: 156
EXCLUDE-FOCUS ON PREVENTION OF ACUTE PAINFUL SICKLE CELL EPISODES

Zempsky, W.T. 2009. Treatment of sickle cell pain: fostering trust and justice. JAMA, 302, (22) 2479-2480

Ref ID: 211
EXCLUDE-COMMENTARY

Telfer, P., Criddle, J., Sandell, J., Davies, F., Morrison, I., & Challands, J. 2009. Intranasal diamorphine for acute sickle cell pain. Archives of Disease in Childhood, 94, (12) 979-980
Ref ID: 216
EXCLUDE-NOT AN RCT

Lemanek, K.L., Ranalli, M., & Lukens, C. 2009. A randomized controlled trial of massage therapy in children with sickle cell disease. Journal of Pediatric Psychology, 34, (10) 1091-1096
Ref ID: 224
EXCLUDE-NOT SPECIFIC TO IN-HOSPITAL MANAGEMENT OF ACUTE PAINFUL EPISODES

Howard, J., Thomas, V.J., & Rawle, H.M. 2009. Pain management and quality of life in sickle cell disease. [Review] [49 refs]. Expert Review of Pharmacoeconomics & Outcomes Research, 9, (4) 347-352
Ref ID: 262
EXCLUDE-DESCRIPTIVE OVERVIEW

Richard, R.E. 2009. The management of sickle cell pain. [Review] [25 refs]. Current Pain & Headache Reports, 13, (4) 295-297
Ref ID: 279
EXCLUDE-DESCRIPTIVE OVERVIEW

Turner, J.M., Kaplan, J.B., Cohen, H.W., & Billett, H.H. 2009. Exchange versus simple transfusion for acute chest syndrome in sickle cell anemia adults. Transfusion, 49, (5) 863-868
Ref ID: 302
EXCLUDE-FOCUS ON TREATMENT OF ACS

Niscola, P., Sorrentino, F., Scaramucci, L., de, F.P., & Cianciulli, P. 2009. Pain syndromes in sickle cell disease: an update. [Review] [103 refs]. Pain Medicine, 10, (3) 470-480

Ref ID: 304
EXCLUDE-REVIEW

Koch, J., Manworren, R., Clark, L., Quinn, C.T., Buchanan, G.R., & Rogers, Z.R. 2008. Pilot study of continuous co-infusion of morphine and naloxone in children with sickle cell pain crisis. American Journal of Hematology, 83, (9) 728-731
Ref ID: 419
EXCLUDE-NOT AN RCT

Lanzkron, S., Strouse, J.J., Wilson, R., Beach, M.C., Haywood, C., Park, H., Witkop, C., Bass, E.B., & Segal, J.B. 2008. Systematic review: Hydroxyurea for the treatment of adults with sickle cell disease. [Review] [89 refs]. Annals of Internal Medicine, 148, (12) 939-955
Ref ID: 450
EXCLUDE-REVIEW (FOCUS ON PREVENTION OF ACUTE PAINFUL SICKLE CELL EPISODES)

Brawley, O.W., Cornelius, L.J., Edwards, L.R., Gamble, V.N., Green, B.L., Inturrisi, C., James, A.H., Laraque, D., Mendez, M., Montoya, C.J., Pollock, B.H., Robinson, L., Scholnik, A.P., & Schori, M. 2008. National Institutes of Health Consensus Development Conference statement: hydroxyurea treatment for sickle cell disease. [0 refs]. Annals of Internal Medicine, 148, (12) 932-938
Ref ID: 451
EXCLUDE-CONFERENCE STATEMENT (FOCUS ON PREVENTION OF ACUTE PAINFUL EPISODES)

Segal, J.B., Strouse, J.J., Beach, M.C., Haywood, C., Witkop, C., Park, H., Wilson, R.F., Bass, E.B., & Lanzkron, S. 2008. Hydroxyurea for the treatment of sickle cell disease. [Review] [196 refs]. Evidence Report/Technology Assessment (165) 1-95
Ref ID: 470

EXCLUDE-FOCUS ON PREVENTION

Strouse, J.J., Takemoto, C.M., Keefer, J.R., Kato, G.J., & Casella, J.F. 2008. Corticosteroids and increased risk of readmission after acute chest syndrome in children with sickle cell disease. Pediatric Blood & Cancer, 50, (5) 1006-1012
Ref ID: 490
EXCLUDE-NOT AN RCT

Geller, A.K. & O'Connor, M.K. 2008. The sickle cell crisis: a dilemma in pain relief. [Review] [57 refs]. Mayo Clinic Proceedings, 83, (3) 320-323
Ref ID: 497
EXCLUDE-DESCRIPTIVE OVERVIEW

Phillips, W.J., Gadiraju, S., Dickey, S., Galli, R., & Lerant, A.A. 2007. Dexmedetomidine relieves pain associated with acute sickle cell crisis. Journal of Pain & Symptom Management, 34, (4) 346-349
Ref ID: 585
EXCLUDE-NOT AN RCT

Okomo, U. & Meremikwu, M.M. 2007. Fluid replacement therapy for acute episodes of pain in people with sickle cell disease. [Review] [33 refs]. Cochrane Database of Systematic Reviews (2) CD005406
Ref ID: 656
EXCLUDE-NO TRIALS IDENTIFIED

Dunlop, R.J. & Bennett, K.C. 2006. Pain management for sickle cell disease. [Review] [67 refs]. Cochrane Database of Systematic Reviews (2) CD003350
Ref ID: 835
EXCLUDE-REVIEW-REFERENCES CHECKED

Dumaplin, C.A. 123. Avoiding admission for afebrile pediatric sickle cell pain: pain management methods. [Review] [36 refs]. Journal of Pediatric Health Care, 20, (2) 115-122
Ref ID: 847
EXCLUDE-OVERVIEW OF PAIN MANAGEMENT

Kotila, T.R. 2005. Management of acute painful crises in sickle cell disease. Clinical & Laboratory Haematology, 27, (4) 221-223
Ref ID: 924
EXCLUDE-NOT AN RCT

Hsu, L.L., Batts, B.K., & Rau, J.L. 2005. Positive expiratory pressure device acceptance by hospitalized children with sickle cell disease is comparable to incentive spirometry. Respiratory Care, 50, (5) 624-627
Ref ID: 952
EXCLUDE-FOCUS ON PREVENTION OF ACS

Cheung, A.T., Chan, M.S., Ramanujam, S., Rangaswami, A., Curl, K., Franklin, P., & Wun, T. 2004. Effects of poloxamer 188 treatment on sickle cell vaso-occlusive crisis: computer-assisted intravital microscopy study. Journal of Investigative Medicine, 52, (6) 402-406
Ref ID: 1010
EXCLUDE-FOCUS ON LABORATORY OUTCOMES

De, F.L., Finco, G., Vassanelli, A., Zaia, B., Ischia, S., & Corrocher, R. 2004. A pilot study on the efficacy of ketorolac plus tramadol infusion combined with erythrocytapheresis in the management of acute severe vaso-occlusive crises and sickle cell pain. Haematologica, 89, (11) 1389-1391
Ref ID: 1021
EXCLUDE-NOT AN RCT

Perlman, K.M., Myers-Phariss, S., & Rhodes, J.C. 2004. A shift from demerol (meperidine) to dilaudid (hydromorphone) improves pain control and decreases admissions for patients in sickle cell crisis. Journal of Emergency Nursing, 30, (5) 439-446
Ref ID: 1037
EXCLUDE-NOT AN RCT

Brousseau, D.C., Scott, J.P., Hillery, C.A., & Panepinto, J.A. 2004. The effect of magnesium on length of stay for pediatric sickle cell pain crisis. Academic Emergency Medicine, 11, (9) 968-972

Ref ID: 1043
EXCLUDE-NOT AN RCT

Alam, M. & Saqib, M. 2004. Management of painful sickle cell crisis in pregnancy. Jcpsp, Journal of the College of Physicians & Surgeons - Pakistan, 14, (2) 115-116
Ref ID: 1067
EXCLUDE-NOT AN RCT

Bodhise, P.B., Dejoie, M., Brandon, Z., Simpkins, S., & Ballas, S.K. 2004. Non-pharmacologic management of sickle cell pain. Hematology, 9, (3) 235-237
Ref ID: 1074
EXCLUDE-NOT AN RCT

Chen, E., Cole, S.W., & Kato, P.M. 2004. A review of empirically supported psychosocial interventions for pain and adherence outcomes in sickle cell disease. [Review] [48 refs]. Journal of Pediatric Psychology, 29, (3) 197-209
Ref ID: 1091
EXCLUDE-REVIEW

Liem, R.I., O'Gorman, M.R., & Brown, D.L. 2004. Effect of red cell exchange transfusion on plasma levels of inflammatory mediators in sickle cell patients with acute chest syndrome. American Journal of Hematology, 76, (1) 19-25
Ref ID: 1097
EXCLUDE-NOT AN RCT

Kopecky, E.A., Jacobson, S., Joshi, P., & Koren, G. 2004. Systemic exposure to morphine and the risk of acute chest syndrome in sickle cell disease. Clinical Pharmacology & Therapeutics, 75, (3) 140-146
Ref ID: 1119
EXCLUDE-FOCUS ON RISK OF ACS (TO ASSESS FOR RQ2)

Gibbs, W.J. & Hagemann, T.M. 2004. Purified poloxamer 188 for sickle cell vaso-occlusive crisis. [Review] [19 refs]. Annals of Pharmacotherapy, 38, (2) 320-324

Ref ID: 1131
EXCLUDE-REVIEW

D'Arcy, Y. 2004. Managing sickle-cell crisis. Nursing, 34, (1) 24-25
Ref ID: 1132
EXCLUDE-OVERVIEW

Melzer-Lange, M.D., Walsh-Kelly, C.M., Lea, G., Hillery, C.A., & Scott, J.P. 2004. Patient-controlled analgesia for sickle cell pain crisis in a pediatric emergency department. Pediatric Emergency Care, 20, (1) 2-4
Ref ID: 1133
EXCLUDE-NOT AN RCT

Jacob, E., Miaskowski, C., Savedra, M., Beyer, J.E., Treadwell, M., & Styles, L. 2003. Management of vaso-occlusive pain in children with sickle cell disease. Journal of Pediatric Hematology/Oncology, 25, (4) 307-311
Ref ID: 1229
EXCLUDE-NOT AN RCT

Weiner, D.L., Hibberd, P.L., Betit, P., Cooper, A.B., Botelho, C.A., & Brugnara, C. 2003. Preliminary assessment of inhaled nitric oxide for acute vaso-occlusive crisis in pediatric patients with sickle cell disease.[Erratum appears in JAMA. 2004 Aug 25;292(8):925]. JAMA, 289, (9) 1136-1142
Ref ID: 1242
EXCLUDE-ABSTRACT ONLY

Rees, D.C., Olujohungbe, A.D., Parker, N.E., Stephens, A.D., Telfer, P., Wright, J., & British Committee for Standards in Haematology General Haematology Task Force by the Sickle Cell Working Party 2003. Guidelines for the management of the acute painful crisis in sickle cell disease. British Journal of Haematology, 120, (5) 744-752
Ref ID: 1246
EXCLUDE-GUIDELINE (NOT SPECIFIC TO MANAGEMENT OF ACUTE PAINFUL EPISODE)

Anie, K.A. & Green, J. 2002. Psychological therapies for sickle cell disease and pain. [Review] [23 refs][Update of Cochrane Database Syst Rev. 2000;(3):CD001916; PMID: 10908516]. Cochrane Database of Systematic Reviews (2) CD001916
Ref ID: 1332
EXCLUDE-REVIEW (NOT FOCUSED ON MANAGING ACUTE PAIN IN HOSPITAL)

Beiter, J.L., Jr., Simon, H.K., Chambliss, C.R., Adamkiewicz, T., & Sullivan, K. 2001. Intravenous ketorolac in the emergency department management of sickle cell pain and predictors of its effectiveness. Archives of Pediatrics & Adolescent Medicine, 155, (4) 496-500
Ref ID: 1487
EXCLUDE-NOT AN RCT

Gil, K.M., Anthony, K.K., Carson, J.W., Redding-Lallinger, R., Daeschner, C.W., & Ware, R.E. 2001. Daily coping practice predicts treatment effects in children with sickle cell disease. Journal of Pediatric Psychology, 26, (3) 163-173
Ref ID: 1495
EXCLUDE-NOT SPECIFICALLY IN-HOSPITAL MANAGEMENT OF ACUTE PAINFUL EPISODES

Sherer, J.T. & Glover, P.H. 2000. Pentoxifylline for sickle-cell disease. [Review] [24 refs]. Annals of Pharmacotherapy, 34, (9) 1070-1074
Ref ID: 1565
EXCLUDE-REVIEW

Lopez, B.L., Davis-Moon, L., Ballas, S.K., & Ma, X.L. 2000. Sequential nitric oxide measurements during the emergency department treatment of acute vasoocclusive sickle cell crisis. American Journal of Hematology, 64, (1) 15-19
Ref ID: 1598
EXCLUDE-NOT AN RCT

Beyer, J.E., Platt, A.F., Kinney, T.R., & Treadwell, M. 1999. Practice guidelines for the assessment of children with sickle cell pain. [Review] [49 refs]. Journal of the Society of Pediatric Nurses, 4, (2) 61-73
Ref ID: 1656
EXCLUDE-REVIEW

Tachakra, S.S. & Davies, S.C. 1998. Management of sickle cell crisis. British Association for Accident and Emergency Medicine guidelines. Journal of Accident & Emergency Medicine, 15, (5) 356-357
Ref ID: 1751
EXCLUDE-GUIDELINE

Bernini, J.C., Rogers, Z.R., Sandler, E.S., Reisch, J.S., Quinn, C.T., & Buchanan, G.R. 1998. Beneficial effect of intravenous dexamethasone in children with mild to moderately severe acute chest syndrome complicating sickle cell disease. Blood, 92, (9) 3082-3089
Ref ID: 1766

EXCLUDE-FOCUS ON MANAGEMENT OF ACS

Trentadue, N.O., Kachoyeanos, M.K., & Lea, G. 1998. A comparison of two regimens of patient-controlled analgesia for children with sickle cell disease. Journal of Pediatric Nursing, 13, (1) 15-19
Ref ID: 1830
EXCLUDE-NOT AN RCT

Gillis, J.C. & Brogden, R.N. 1997. Ketorolac. A reappraisal of its pharmacodynamic and pharmacokinetic properties and therapeutic use in pain management. [Review] [293 refs]. Drugs, 53, (1) 139-188
Ref ID: 1915
Notes: UI - 9010653
EXCLUDE-OVERVIEW

el-Hazmi, M.A., Warsy, A.S., al-Fawaz, I., Opawoye, A.O., Taleb, H.A., Howsawi, Z., Mohamed, A.A., Aly, A.W., Refai, S., Sugathan, P.S., Rab, A.S., Ahmed, H.B., Abulaban, M., Abdulkader, A.M., & Farid, M. 1996. Piracetam is

useful in the treatment of children with sickle cell disease. Acta Haematologica, 96, (4) 221-226
Ref ID: 1946
EXCLUDE-FOCUS ON PREVEVENTION OF PAINFUL EPISODES (NO RELEVANT OUTCOMES)

Christensen, M.L., Wang, W.C., Harris, S., Eades, S.K., & Wilimas, J.A. 1996. Transdermal fentanyl administration in children and adolescents with sickle cell pain crisis. Journal of Pediatric Hematology/Oncology, 18, (4) 372-376
Ref ID: 1955
EXCLUDE-NOT AN RCT

Quevedo, S.F. 1996. Use of calcitonin in sickle cell bone crisis. Blood, 88, (4) 1520
Ref ID: 1991
EXCLUDE-LETTER

Williams, L.L., Wilimas, J.A., Harris, S.C., Day, S.W., Dancy, R.M., & Wang, W.C. 1996. Outpatient therapy with ceftriaxone and oral cefixime for selected febrile children with sickle cell disease. Journal of Pediatric Hematology/Oncology, 18, (3) 257-261
Ref ID: 1996
EXLUDE-PATIENTS NOT EXPERIENCING PAINFUL SICKLE CELL EPISODE

Carbajal, R., Hubert, P., Treluyer, J.M., Jouvet, P., & Olivier-Martin, M. 1996. Nitrous oxide and morphine in children with sickle cell crisis. Lancet, 347, (9015) 1621
Ref ID: 2005
EXCLUDE-LETTER

Bellet, P.S., Kalinyak, K.A., Shukla, R., Gelfand, M.J., & Rucknagel, D.L. 1995. Incentive spirometry to prevent acute pulmonary complications in sickle cell diseases. New England Journal of Medicine, 333, (11) 699-703
Ref ID: 2079
EXCLUDE-FOCUS ON PREVENTION OF COMPLICATION

Styles, L.A. & Vichinsky, E. 1994. Effects of a long-term transfusion regimen on sickle cell-related illnesses. Journal of Pediatrics, 125, (6:Pt 1) t-11
Ref ID: 2124
EXCLUDE-NOT AN RCT

Yaster, M., Tobin, J.R., Billett, C., Casella, J.F., & Dover, G. 1994. Epidural analgesia in the management of severe vaso-occlusive sickle cell crisis. Pediatrics, 93, (2) 310-315
Ref ID: 2179
EXCLUDE-NOT AN RCT

Richardson, P. & Steingart, R. 1993. Meperidine and ketorolac in the treatment of painful sickle cell crisis. Annals of Emergency Medicine, 22, (10) 1639-1640
Ref ID: 2221
EXCLUDE-CORRESPONDENCE

Shapiro, B.S., Cohen, D.E., & Howe, C.J. 1993. Patient-controlled analgesia for sickle-cell-related pain. Journal of Pain & Symptom Management, 8, (1) 22-28
Ref ID: 2261
EXCLUDE-NOT AN RCT

Ackerman, W.E., III & Juneja, M. 1993. Patient-controlled analgesia for management of pain associated with acute sickle cell crisis. Southern Medical Journal, 86, (2) 254
Ref ID: 2285
EXCLUDE-LETTER

Hagmeyer, K.O., Mauro, L.S., & Mauro, V.F. 1993. Meperidine-related seizures associated with patient-controlled analgesia pumps. [Review] [8 refs]. Annals of Pharmacotherapy, 27, (1) 29-32
Ref ID: 2287
EXCLUDE-NOT AN RCT

Koren, A. 1992. Parenteral acetylsalicylic acid treatment in children with sickle cell pain crisis: a preliminary report. Pediatric Hematology & Oncology, 9, (4) 373-376
Ref ID: 2303
EXCLUDE-NOT AN RCT

Holbrook, C.T. 1990. Patient-controlled analgesia pain management for children with sickle cell disease. Journal of the Association for Academic Minority Physicians, 1, (3) 93-96
Ref ID: 2449
EXCLUDE-NOT AN RCT

McPherson, E., Perlin, E., Finke, H., Castro, O., & Pittman, J. 1990. Patient-controlled analgesia in patients with sickle cell vaso-occlusive crisis. American Journal of the Medical Sciences, 299, (1) 10-12
Ref ID: 2515
EXCLUDE-NOT AN RCT

Billett, H.H., Kaul, D.K., Connel, M.M., Fabry, M.E., & Nagel, R.L. 1989. Pentoxifylline (Trental) has no significant effect on laboratory parameters in sickle cell disease. Nouvelle Revue Francaise d Hematologie, 31, (6) 403-407
Ref ID: 2526
EXCLUDE-NO RELEVANT OUTCOMES ASSESSED (LABORATORY PARAMETERS ONLY)

Schechter, N.L., Berrien, F.B., & Katz, S.M. 1988. PCA for adolescents in sickle-cell crisis. American Journal of Nursing, 88, (5) 719-2
Ref ID: 2644
EXCLUDE-NOT AN RCT

Schechter, N.L., Berrien, F.B., & Katz, S.M. 1988. The use of patient-controlled analgesia in adolescents with sickle cell pain crisis: a preliminary report. Journal of Pain & Symptom Management, 3, (2) 109-113
Ref ID: 2648
EXCLUDE-NOT AN RCT

Manrique, R.V. 1987. Placebo controlled double-blind study of pentoxifylline in sickle cell disease patients. Journal of Medicine, 18, (5-6) 277-291
Ref ID: 2665
EXCLUDE-PATIENTS INCLUDED WERE NOT IN PAINFUL CRISIS

Gupta, V.L. & Chaubey, B.S. 1987. Efficacy of oral zinc therapy in the management of sickle cell crises. Indian Journal of Medical Research, 86, 803-807
Ref ID: 2666
EXCLUDE-NOT AN RCT

Cozzi, L., Tryon, W.W., & Sedlacek, K. 1987. The effectiveness of biofeedback-assisted relaxation in modifying sickle cell crises. Biofeedback & Self Regulation, 12, (1) 51-61
Ref ID: 2683
EXCLUDE-PATIENTS NOT HAVING PAINFUL EPISODE

Martin, J.N., Jr., Martin, R.W., & Morrison, J.C. 1986. Acute management of sickle cell crisis in pregnancy. [Review] [90 refs]. Clinics in Perinatology, 13, (4) 853-868
Ref ID: 2751
EXCLUDE-REVIEW

1986. Meperidine usage in patients with sickle cell crisis. Annals of Emergency Medicine, 15, (12) 1506-1508
Ref ID: 2758
EXCLUDE-LETTER

Benjamin, L.J., Berkowitz, L.R., Orringer, E., Mankad, V.N., Prasad, A.S., Lewkow, L.M., Chillar, R.K., & Peterson, C.M. 1986. A collaborative, double-blind randomized study of cetiedil citrate in sickle cell crisis. Blood, 67, (5) 1442-1447
Ref ID: 2799
EXCLUDE-NOT LICENCED

Powers, R.D. 1986. Management protocol for sickle-cell disease patients with acute pain: impact on emergency department and narcotic use. American Journal of Emergency Medicine, 4, (3) 267-268
Ref ID: 2801
EXCLUDE-NOT AN RCT

Thomas, J.E., Koshy, M., Patterson, L., Dorn, L., & Thomas, K. 1984. Management of pain in sickle cell disease using biofeedback therapy: a preliminary study. Biofeedback & Self Regulation, 9, (4) 413-420
Ref ID: 2882
EXCLUDE-NOT AN RCT

Khosla, A.A. & Chintu, C. 1984. A pilot study: an open clinical trial of pentoxiphylline in patients with painful sickle cell crises. East African Medical Journal, 61, (11) 829-836
Ref ID: 2884
EXCLUDE-NOT AN RCT

Charache, S., Moyer, M.A., & Walker, W.G. 1983. Treatment of acute sickle cell crises with a vasopressin analogue. American Journal of Hematology, 15, (4) 315-319
Ref ID: 2954
EXCLUDE-NOT AN RCT

Ritschel, W.A., Bykadi, G., Ford, D.J., Bloomfield, S.S., & Levy, R.C. 1983. Pilot study on disposition and pain relief after IM administration of meperidine during the day or night. International Journal of Clinical Pharmacology, Therapy, & Toxicology, 21, (5) 218-223
Ref ID: 2988
EXCLUDE-NOT AN RCT

Rozzell, M.S., Hijazi, M., & Pack, B. 1983. Sickle cell disease. The painful episode. Nursing Clinics of North America, 18, (1) 185-199
Ref ID: 2997
EXCLUDE-OVERVIEW OF SICKLE CELL DISEASE

Rosa, R.M., Bierer, B., Thomas, R., Stoff, J.S., Kruskall, M., Robinson, S., Bunn, H.F., & Epstein, F.H. 1980. Prevention and treatment of sickle cell crisis by induced hyponatremia. Transactions of the Association of American Physicians, 93, 164-174
Ref ID: 3103
EXCLUDE-NOT AN RCT

Co, L.L., Schmitz, T.H., Havdala, H., Reyes, A., & Westerman, M.P. 1979. Acupuncture: an evaluation in the painful crises of sickle cell anaemia. Pain, 7, (2) 181-185
Ref ID: 3146
EXCLUDE-NOT AN RCT

Seeler, R.A. & Royal, J.E. 1977. Acute and chronic management of children with sickle cell anemia and cerebrovascular occlusive crisis. IMJ - Illinois Medical Journal, 151, (4) 267-269
Ref ID: 3227
EXCLUDE-NOT AN RCT

Halstead, L. 1974. The use of crisis intervention in obstetrical nursing. Nursing Clinics of North America, 9, (1) 69-76
Ref ID: 3306
EXCLUDE-DESCRIPTIVE OVERVIEW

1974. Therapy for sickle cell vaso-occlusive crises. Controlled clinical trials and cooperative study of intravenously administered alkali. Cooperative urea trials group. JAMA, 228, (9) 1129-1131
Ref ID: 3316
EXCLUDE-UNCLEAR MEASUREMENT OF PAIN

1974. Treatment of sickle cell crisis with urea in invert sugar. A controlled trial. Cooperative urea trials group. JAMA, 228, (9) 1125-1128
Ref ID: 3317
EXCLUDE-UNCLEAR MEASUREMENT OF PAIN

1974. Clinical trials of therapy for sickle cell vaso-occlusive crises. Cooperative urea trials group. JAMA, 228, (9) 1120-1124
Ref ID: 3318
EXCLUDE-UNCLEAR MEASUREMENT OF PAIN

Haddock, D.R., Bonotey-Ahulu, F.I., Janosi, M., Ankra-Badu, G., & Reid, H.A. 1973. Thrombosis in sickle-cell pain crises? Controlled trial of ancrod (Arvin) in young adults. Journal of Tropical Medicine & Hygiene, 76, (11) 274-278
Ref ID: 3327
EXCLUDE-NOT LICENCED

Opio, E. & Barnes, P.M. 1972. Intravenous urea in management of sickle-cell crisis. Lancet, 2, (7781) 828
Ref ID: 3343
EXCLUDE-LETTER

Nalbandian, R.M. 1972. Intravenous urea in management of sickle-cell crisis. Lancet, 2, (7780) 759
Ref ID: 3344
EXCLUDE-LETTER

Mann, J.R., Deeble, T.J., Breeze, G.R., & Stuart, J. 1972. Ancrod in sickle-cell crisis. Lancet, 1, (7757) 934-937
Ref ID: 3354
EXCLUDE-NOT LICENCED

Isaacs, W.A., Effiong, C.E., & Ayeni, O. 1972. Steroid treatment in the prevention of painful episodes in sickle-cell disease. Lancet, 1, (7750) 570-571
Ref ID: 3360
EXCLUDE-FOCUS ON PREVENTION

Nalbandian, R.M., Shultz, G., Lusher, J.M., Anderson, J.W., & Henry, R.L. 1971. Sickle cell crisis terminated by intravenous urea in sugar solutions--a preliminary report. American Journal of the Medical Sciences, 261, (6) 309-324

Ref ID: 3365
EXCLUDE-NOT AN RCT

Freedman, M.L. 1971. Treatment of crises in sickle cell anemia. [Review] [36 refs]. American Journal of the Medical Sciences, 261, (6) 304-308
Ref ID: 3366
EXCLUDE-DESCRIPTIVE OVERVIEW

Ringelhann, B. & Konotey-Ahulu, F.I. 1971. Sickle cell crisis and acid-base balance. Clinica Chimica Acta, 34, (1) 63-66
Ref ID: 3371
EXCLUDE-NOT AN RCT

McCurdy, P.R. & Mahmood, L. 1971. Intravenous urea treatment of the painful crisis of sickle-cell disease. A preliminary report. New England Journal of Medicine, 285, (18) 992-994
Ref ID: 3375
EXCLUDE-NOT AN RCT

Scott, R.B. 1971. Urea therapy in sickle-cell anemia. New England Journal of Medicine, 285, (18) 1025-1026
Ref ID: 3376
EXCLUDE-OPINION PIECE

Nalbandian, R.M. 1971. Urea treatment of sickle-cell crisis. New England Journal of Medicine, 285, (7) 408
Ref ID: 3379
EXCLUDE-CORRESPONSENCE

Lourie, J.A. & Kontopoulos, I. 1971. Gin and the sickle-cell crisis. Lancet, 1, (7713) 1354
Ref ID: 3383
EXCLUDE-EDITORIAL

Reynolds, J.D. 1971. Painful sickle cell crisis. Successful treatment with hyperbaric oxygen therapy. JAMA, 216, (12) 1977-1978

Ref ID: 3384
EXCLUDE-NOT AN RCT

Nalbandian, R.M. 1971. Urea for sickle-cell crises. New England Journal of Medicine, 284, (24) 1381
Ref ID: 3386
EXCLUDE-UNCLEAR MEASUREMENT OF PAIN

Desforges, J.F. 1971. Treatment of sickle crisis. New England Journal of Medicine, 284, (15) 913-915
Ref ID: 3388
EXCLUDE-EDITORIAL

Barreras, L. & Diggs, L.W. 1971. Sodium citrate orally for painful sickle cell crises. JAMA, 215, (5) 762-768
Ref ID: 3389
EXCLUDE-NOT AN RCT

Brody, J.I., Goldsmith, M.H., Park, S.K., & Soltys, H.D. 1970. Symptomatic crises of sickle cell anemia treated by limited exchange transfusion. Annals of Internal Medicine, 72, (3) 327-330
Ref ID: 3395
EXCLUDE-NOT AN RCT

Mahmood, A. 1969. A double-blind trial of a phenothiazine compound in the treatment of clinical crisis of sickle cell anaemia. British Journal of Haematology, 16, (1) 181-184
Ref ID: 3402
EXCLUDE-RELEVANT OUTCOMES NOT ASSESSED

Reid, H.A. & Galles, H.M. 1969. Arvin treatment in sickle-cell crisis. Transactions of the Royal Society of Tropical Medicine & Hygiene, 63, (1) 22-23
Ref ID: 3403
EXCLUDE-NOT AN RCT

Pitney, W.R. 1968. Arvin treatment for sickle-cell crisis. Lancet, 2, (7569) 682
Ref ID: 3410
EXCLUDE-LETTER

Gilles, H.M., Reid, H.A., Odutola, A., Ransome-Kuti, O., Ransome-Kuti, S., & Lesi, F. 1968. Arvin treatment for sickle-cell crisis. Lancet, 2, (7567) 542-543
Ref ID: 3411
EXCLUDE-NOT AN RCT

Barnes, P.M. 1966. Treatment of painful sickle cell crises: assessment of new methods. Clinical Pediatrics, 5, (11) 650-651
Ref ID: 3421
EXCLUDE-OVERVIEW OF RCT (FULL ARTICLE ASSESSED)

Oski, F.A., VINER, E.D., PURUGGANAN, H., & MCELFRESH, A.E. 1965. Low molecular weight dextran in sickle-cell crisis. JAMA, 191, 43
Ref ID: 3427
EXCLUDE-NOT AN RCT

Barnes, P.M., Hendrickse, R.G., & Watson-Williams, E.J. 1965. Low-molecular-weight dextran in treatment of bone-pain crises in sickle-cell disease. A double-blind trial. Lancet, 2, (7425) 1271-1273
Ref ID: 3428
EXCLUDE-UNCLEAR MEASUREMENT OF PAIN

Schwartz, E. & MCELFRESH, A.E. 1964. Treatment of painful crises of sickle cell disease. A double blind study. Journal of Pediatrics, 64, 132-133
Ref ID: 3434
EXCLUDE-INSUFFICIENT DATA TO EXTRACT

Diggs, L.W. & WILLIAMS, D.L. 1963. Treatment of painful sickle cell crises with papaverine: preliminary report. Southern Medical Journal, 56, 472-474
Ref ID: 3438
EXCLUDE-NOT AN RCT

Wang, W.C., Ware, R.E., Miller, S.T., Iyer, R.V., Casella, J.F., Minniti, C.P., Rana, S., Thornburg, C.D., Rogers, Z.R., Kalpatthi, R.V., Barredo, J.C., Brown, R.C., Sarnaik, S.A., Howard, T.H., Wynn, L.W., Kutlar, A., Armstrong, F.D., Files, B.A., Goldsmith, J.C., Waclawiw, M.A., Huang, X., Thompson, B.W., & BABY, H.i. 2011. Hydroxycarbamide in very young children with sickle-cell anaemia: a multicentre, randomised, controlled trial (BABY HUG). Lancet, 377, (9778) 1663-1672
Ref ID: 3469
EXCLUDE-FOCUS ON PREVENTION

Singh, H., Dulhani, N., Kumar, B.N., Singh, P., & Tiwari, P. 2010. Effective control of sickle cell disease with hydroxyurea therapy. Indian Journal of Pharmacology, 42, (1) 32-35
Ref ID: 3499
EXCLUDE-FOCUS ON THE PREVENTION OF ACUTE SICKLE CELL EPISODES

Moody, K., Vadnais, M., Santizo, R., Abrahams, B., & Ader, J. 2010. Yoga for pain in pediatric hematology-oncology patients. Journal of the Society for Integrative Oncology, Conference: 7th International Conference of the Society for Integrative Oncology New York, NY United States. Conference Start: 20101111 Conference End: 20101113. Conference Publication: (var.pagings) 196-197
Ref ID: 3547
EXCLUDE-CONFERENCE ABSTRACT

Morris, C.R., Ansari, M., Lavrisha, L., Sweeters, N., Kuypers, F.A., & Vichinsky, E.P. 2010. L-arginine: A promising nitric oxide-based therapy for vaso-occlusive pain episodes in sickle cell disease (SCD). Nitric Oxide - Biology and Chemistry, Conference: 6th International Conference Biology, Chemistry, and Therapeutic Applications of Nitric Oxide of the Nitric Oxide Society. Joint Meeting 2nd International Conference NO and Cancer and 10th Annual Meeting of the Nitric Oxide Society Japan Kyoto Japan. Conference Start: 20100614 Conference End: 20100618 Sponsor: Asahi Kasei Pharma Corporation, Astellas Pharma Inc., Astra Zeneca K.K., BANYU

PHARMACEUTICAL CO., LTD., Bayer Yakuhin, Ltd., et al.. Conference Publication: (var.pagings) S25-S26
Ref ID: 3711
EXCLUDE-CONFERENCE ABSTRACT

Adam, S.S., Telen, M.J., Jonassaint, C.R., De Castro, L.M., & Jonassaint, J.C. 2010. The relationship of opioid analgesia to quality of life in an adult sickle cell population. Health Outcomes Research in Medicine, 1, (1) e29-e37
Ref ID: 3851
EXCLUDE-NOT AN RCT

Mousa, S.A., Momen, A.A., Sayegh, F.A., Jaouni, S.A., Nasrullah, Z., Saeed, H.A., Alabdullatif, A., Sayegh, M.A., Zahrani, H.A., Hegazi, M., Mohamadi, A.A., Alsulaiman, A., Omer, A., Kindi, S.A., Tarawa, A., Othman, F.A., & Qari, M. 2010. Review: Management of painful vaso-occlusive crisis of sickle-cell anemia: Consensus opinion. Clinical and Applied Thrombosis/Hemostasis, 16, (4) 365-376
Ref ID: 3917
EXCLUDE-REVIEW

Sobota, A., Graham, D.A., Heeney, M.M., & Neufeld, E.J. 2010. Corticosteroids for acute chest syndrome in children with sickle cell disease: Variation in use and association with length of stay and readmission (American Journal of Hematology (2010) DOI: 10.1002/ajh.21565). American Journal of Hematology, 85, (5) 399
Ref ID: 3962
EXCLUDE-CORRECTION ONLY

Queiroz, A.P.A., Queiroz, M.M., Lobo, C.L.C., & Carvalho, E.M.S. 2009. Full-dose opioid for the treatment of acute pain in sickle cell disease. American Journal of Hematology, Conference: 3rd Annual Sickle Cell Disease Research and Educational Symposium and Grant Writing Institute and Annual National Sickle Cell Disease Scientific Meeting Fort Lauderdale, FL United States. Conference Start: 20090215 Conference End: 20090220. Conference Publication: (var.pagings) E107

Ref ID: 4171
EXCLUDE-CONFERENCE ABSTRACT

Anie, K.A., Cho, G., & Layton, M. 2009. An evaluation of the effectiveness of ibuprofen and morphine for acute pain in sickle cell disease: (Swim trial). American Journal of Hematology, Conference: 3rd Annual Sickle Cell Disease Research and Educational Symposium and Grant Writing Institute and Annual National Sickle Cell Disease Scientific Meeting Fort Lauderdale, FL United States. Conference Start: 20090215 Conference End: 20090220. Conference Publication: (var.pagings) E72
Ref ID: 4186
EXCLUDE-CONFERENCE ABSTRACT

Queiroz, A.P.A., Queiroz, A.M.M., Lobo, C.L.C., Wendling, P.A., Madeira, T.S., Ayoubi, E.K., & Carvalho, E.M.S. 2009. Use of intravenous ketorolac in emergency room pain management protocol for patients with sickle cell disease. American Journal of Hematology, Conference: 3rd Annual Sickle Cell Disease Research and Educational Symposium and Grant Writing Institute and Annual National Sickle Cell Disease Scientific Meeting Fort Lauderdale, FL United States. Conference Start: 20090215 Conference End: 20090220. Conference Publication: (var.pagings) E46
Ref ID: 4191
EXCLUDE-CONFERENCE ABSTRACT

Queiroz, A.P.A., Carvalho, E.M.S., Cerqueira, E.C.R., Queiroz, A.M.M., & Lobo, C.L.C. 2009. Evaluation of the use of hydroxyurea in pain crisis of sickle cell disease at Hemorio. American Journal of Hematology, Conference: 3rd Annual Sickle Cell Disease Research and Educational Symposium and Grant Writing Institute and Annual National Sickle Cell Disease Scientific Meeting Fort Lauderdale, FL United States. Conference Start: 20090215 Conference End: 20090220. Conference Publication: (var.pagings) E44
Ref ID: 4193
EXCLUDE-CONFERENCE ABSTRACT

Berzolla, C.E., Seligman, N.S., Dysart, K., Baxter, J.K., Axelrod, D., Riggio, J., & Ballas, S.K. 2009. Obstetrical outcomes of pregnancies complicated by sickle crisis. American Journal of Hematology, Conference: 3rd Annual Sickle Cell Disease Research and Educational Symposium and Grant Writing Institute and Annual National Sickle Cell Disease Scientific Meeting Fort Lauderdale, FL United States. Conference Start: 20090215 Conference End: 20090220. Conference Publication: (var.pagings) E40
Ref ID: 4197
EXCLUDE-CONFERENCE ABSTRACT

Jaja, C. 2009. Clinical pharmacogenetics and analgesic therapeutics for sickle cell disease pain management: A structured review. American Journal of Hematology, Conference: 3rd Annual Sickle Cell Disease Research and Educational Symposium and Grant Writing Institute and Annual National Sickle Cell Disease Scientific Meeting Fort Lauderdale, FL United States. Conference Start: 20090215 Conference End: 20090220. Conference Publication: (var.pagings) E33
Ref ID: 4200
EXCLUDE-CONFERENCE ABSTRACT

Imran, H., Brown, E., Bamba, R., Lemley, T., Cousineau, L.K., & Kalpatthi, R. 2009. Use of corticosteroids for acute chest syndrome in children with sickle cell anemia: A systematic review. Pediatric Blood and Cancer, Conference: American Society of Pediatric Hematology/Oncology 22nd Annual Meeting San Diego, CA United States. Conference Start: 20090422 Conference End: 20090425. Conference Publication: (var.pagings) 727
Ref ID: 4219
EXCLUDE-CONFERENCE ABSTRACT

Sandoval, M., Coleman, P., Govani, R., Siddiqui, S., & Todd, K.H. 2009. Hyaluronidase-enhanced subcutaneous hydration and opioid administration for sickle cell disease acute pain episodes. Annals of Emergency Medicine, Conference: American College of Emergency Physicians, ACEP 2009 Research Forum Boston, MA United States. Conference Start: 20091005 Conference End: 20091006. Conference Publication: (var.pagings) S127-

S128

Ref ID: 4244

EXCLUDE-CONFERENCE ABSTRACT

Morris, C.R., Ansari, M., Lavrisha, L., Sweeters, N., Kuypers, F.A., & Vichinsky, E.P. 2009. Arginine therapy for vaso-occlusive pain episodes in sickle cell disease. Blood, Conference: 51st Annual Meeting of the American Society of Hematology, ASH New Orleans, LA United States. Conference Start: 20091205 Conference End: 20091208. Conference Publication: (var.pagings)

Ref ID: 4332

EXCLUDE-CONFERENCE ABSTRACT

Alhashimi, D., Alhashimi, F., Dastgiri, S., Fedorowicz, Z., & Nasser, M. 2009. Blood transfusions for treating acute chest syndrome in people with sickle cell disease. Cochrane Database of Systematic Reviews (2)

Ref ID: 4505

EXCLUDE-FOCUS ON MANAGEMENT OF ACS

Marti-Carvajal, A., Pena-Marti, G., Comunian, G., & Marti-Pena, A. 2007. Interventions for treating painful sickle cell crisis during pregnancy. Cochrane Database of Systematic Reviews (4)

Ref ID: 4927

EXCLUDE-NO RCTS IDENTIFIED

Rogers, Z.R. 2006. Review: Clinical transfusion management in sickle cell disease. Immunohematology, 22, (3) 126-131

Ref ID: 5184

EXCLUDE-REVIEW

Anie, K.A., Green, J., Tata, P., Fotopoulos, C.E., Oni, L., & Davies, S.C. 2002. Self-help manual-assisted cognitive behavioural therapy for sickle cell disease. Behavioural and Cognitive Psychotherapy, 30, (4) 451-458

Ref ID: 5883

EXCLUDE-PATIENTS NOT HAVIING PAINFUL EPISODE

Agargun, M.Y., Oner, A.F., & Akbayram, S. 2001. Hypnotic intervention for pain management in a child with sickle cell anemia. Sleep and Hypnosis, 3, (3) 127-128
Ref ID: 5999
EXCLUDE-NOT AN RCT

2001. Erratum: Oral morphine for sickle cell crises (Drug and Therapeutics Bulletin (2001) vol. 39 (33-37)). Drug and Therapeutics Bulletin, 39, (8) 64
Ref ID: 6047
EXCLUDE-CORRECTION ONLY

1999. Guideline offers help in managing sickle-cell pain. American Journal of Health-System Pharmacy, 56, (22) 2272
Ref ID: 6272
EXCLUDE-EDITORIAL

Wade, E.L., Eddy, L.J., Green, D., & Radin, A.I. 1996. Fluosol in the treatment of sickle cell crisis. Transfusion Science, 17, (2) 309-313
Ref ID: 6615
EXCLUDE-NOT LICENCED

Ward, S.J., Simini, B., Meltzer, B.A., Forbes, K., Hanks, G.W., Justins, D.M., Cherry, D.A., Davies, S.C., & Bevan, D.H. 1996. Sickle cell pain crisis [4]. Lancet, 347, (8996) 261-263
Ref ID: 6655
EXCLUDE-LETTER

Sangare, A., Sanogo, I., Durbec, J.P., & Aly, E.M. 1993. An open comparative study of parenteral piroxicam and parenteral lysine acetylsalicylate in the treatment of acute painful articular attacks of sickle cell disease. Current Therapeutic Research - Clinical and Experimental, 54, (5) 544-549
Ref ID: 6838
EXCLUDE-INACCESSIBLE

Sangare, A. 1990. Treatment results of ketoprofen (profenid) in the treatment of painful crises in sickle cell anemia. Medecine d'Afrique Noire, 37, (11) 693-

699
Ref ID: 7056
EXCLUDE-INACCESSIBLE

Leikin, J.B., Ehrenpreis, E.D., Barkin, R.L., Presperin, C., Harper-Brown, D., & Koshy, M. 1990. Nalbuphine vs. meperidine in sickle cell anemia. DICP, Annals of Pharmacotherapy, 24, (7-8) 781-782
Ref ID: 7114
EXCLUDE-LETTER

Cabannes, R., Sangare, A., & Cho, Y.W. 1983. Acute painful sickle-cell crises in children. A double-blind, placebo-controlled evaluation of efficacy and safety of cetiedil. Clinical Trials Journal, 20, (4) 207-218
Ref ID: 7488
EXCLUDE-NOT LICENCED

Ritschel, W.A., Bykadi, G., & Ford, D.J. 1982. Disposition and pain relief after I.M. administration of meperidine during day or night. Clinical Research, 30, (2) 635A
Ref ID: 7500
EXCLUDE-ABSTRACT ONLY

Martí-Carvajal, A.J., Peña-Martí, G.E., Comunián, C.G., & Martí-Peña, A.J. 2009. Interventions for treating painful sickle cell crisis during pregnancy. Cochrane Database of Systematic Reviews (1)
Ref ID: 7654

EXCLUDE-REVIEW (NO PAPERS IDENTIFIED)

Wallen, G.R., Handel, D., Mendoza, J., Chestnut, W., Nichols, J., Yates, J., Ames, N., Hoernes, P., Egan, S., Berger, A., Morris, N., Gladwin, M.T., & Kato, G.J. 2007. A randomized pilot study exploring hypnosis as a pain and symtom management strategy in patients with sickle cell disease [abstract]. 35th Anniversary Convention of the National Sickle Cell Disease Program; 2007 Sep 17-22; Washington DC, USA. 261

Ref ID: 7701
EXCLUDE-CONFERENCE ABSTRACT

van Beers, E.J., Nieuwkerk, P.T., Friederich, P.W., Van Tuijn, C.F.J., Franken, J.H., & Biemond, B.J. 2006. Patient controlled analgesia versus continuous infusion of morphine during vaso-occlusive crisis in sickle cell disease: a randomized controlled trial. Haematologica, 91, (Suppl 1) 8
Ref ID: 7716
EXCLUDE-CONFERENCE ABSTRACT

van Beers, E.J., Nieuwkerk, P.T., Van Tuijn, C.F.J., Friederich, P.W., Vranken, J.H., & Biemond, B.J. 2005. A randomized controlled trial of patient controlled analgesia versus continuous infusion of morphine during vaso-occlusive crisis in sickle cell disease [abstract]. Blood, 106, (11) Abst
Ref ID: 7719
EXCLUDE-CONFERENCE ABSTRACT

Qari, M.H., Mousa, S., Alsaigh, M.A., Zografos, P., Aljaouni, S.K., Fatani, H., Alalfi, A., Alsayes, F.M., Beirouti, B.T., Alamin, M.A., & Gadi, A. 2005. Tinzaparine in the Management of Painful Vaso-Occlusive Crisis of Sickle Cell Anaemia [abstract]. Blood, 106, (11 Part 1) 658
Ref ID: 7725
EXCLUDE-ABSTRACT ONLY

Radcliffe, J., Barakat, L.P., Boyd, R.C., Thigpen, N., Benton, T.D., & Kazak, A.E. 2004. Controlled pain intervention for adolescents with sickle cell disease [abstract]. 27th Annual Meeting of the National Sickle Cell Disease Program; 2004 April 18-21; Los Angeles, California. 57
Ref ID: 7727
EXCLUDE-CONFERENCE ABSTRACT

Wook, H.W., Quinn, C.T., Rogers, Z.R., Dale, J.C., Williams, B.F., & Buchanan, G.R. 2004. Follow-up study of intravenous dexamethasone therapy for children with acute chest syndrome complicating sickle cell disease [abstract]. 27th Annual Meeting of the National Sickle Cell Disease program; 2004 April 18-21; Los Angeles, California 73

Ref ID: 7730
EXCLUDE-CONFERENCE ABSTRACT

Godeau, B., Roudot-Thoraval, F., Havivi, A., Elmur, T., Bachir, D., Paul, M., Schaeffer, A., & Galacteros, F. 2003. Assessment of ketoprofen for acute vaso-occlusive crisis in adult patients with sickle cell disease. A randomized double blind monocentric study [abstract]. Blood, 102, (11) Abst
Ref ID: 7735
EXCLUDE-ABSTRACT ONLY

Weiner, D.L., Hibberd, P.L., Betit, P., & Brugnara, C. 2002. Effectiveness and safety of inhaled nitric oxide for the treatment of vaso-occlusive crisis in pediatric sickle cell disease. Pediatric Research, 51, (4) 86A
Ref ID: 7743
EXCLUDE-ABSTRACT ONLY

Weiner, D.L., Hibberd, P.L., Betit, P., Botelho, C.A., Cooper, A.B., & Brugnara, C. 2002. Inhaled nitric oxide for treatment of acute vaso-occlusive crisis in sickle cell disease [abstract]. Blood, 100, (11 Pt 1) 11a
Ref ID: 7745
EXCLUDE-ABSTRACT ONLY

Casella, J., Wojtowicz-Praga, S., Grindel, J., & Investigators of the Multicenter Study of Flocor 2000. A phase III multicenter, randomized, double-blind, placebo-controlled study of flocor (purified poloxamer 188) in patients with sickle cell disease in acute vaso-occlusive crisis [abstract]. The National Sickle Cell Disease Program Annual Meeting Conference Proceedings; 2000 April 85a
Ref ID: 7761
EXCLUDE-CONFERENCE ABSTRACT

Casella, J.F., Watanabe, M., Files, B., Shafer, F., Luchtman-Jones, L., Wun, T., Emanuele, R.M., & Grindel, J.M. 2000. FLOCOR's efficacy and safety in pediatric sickle cell patients experiencing acute vaso-occlusive crisis: a subgroup analysis [abstract]. Blood, 96, (11 (Pt 1)) 22a

Ref ID: 7766
EXCLUDE-ABSTRACT ONLY

Koshy, M., Wojtowicz-Praga, S., Grindel, J.M., & Investigators of the Multicenter Study of Flocor 1999. A phase III multicenter, randomized, double-blind, placebo-controlled study of flocor (purified poloxamer 188) in patients with sickle cell disease in acute vaso-occlusive crisis [abstract]. Blood, 94, (10 Suppl 1) 25b
Ref ID: 7771
EXCLUDE-ABSTRACT ONLY

Dziewanowska, Z.E., Karwatowska-Prokopczuk, E., Marangos, P.J., Fox, A.W., Green, D., Rosse, W., Steinberg, M., Adler, B., Koshy, M., & Guthrie, T. 1999. Preliminary results of efficacy & safety study of Cordox (fructose-1,6-diphosphate) for the treatment of acute painful episodes of sickle cell disease [abstract]. The National Sickle Cell Disease Programme 23rd Annual Meeting Conference Proceedings, March 1999 82
Ref ID: 7778
EXCLUDE-CONFERENCE ABSTRACT

Ortiz, F., Karwa, M., Najeebi, S., Benjamin, L., & Aldrich, T.K. 1998. Non-invasive ventilatory support shortens the duration of vaso-occlusive crisis in sickle cell disease [abstract]. American Journal of Respiratory and Critical Care Medicine, 157, (3 Suppl) A225
Ref ID: 7786
EXCLUDE-ABSTRACT ONLY

Thomas, V.J. 1997. Cognitive behavioural therapy for the management of pain in sickle cell disease [abstract]. The National Sickle Cell Disease Program Annual Meeting Conference Proceedings, Sept 1997 38
Ref ID: 7793
EXCLUDE-CONFERENCE ABSTRACT

Yosef, S., Lombardo, F.A., Perlin, E., Kark, J., & Castro, O. 1997. Comparison of tramadol efficiency versus oxycodone/acetaminophen in the management of pain associated with sickle cell anemia [abstract]. The National Sickle Cell

Disease Program Annual Meeting Conference Proceedings, Sept 1997 349
Ref ID: 7795
EXCLUDE-CONFERENCE ABSTRACT

Rogers, Z.R., Dale, J.C., Bernini, J.C., Reisch, J.S., Primm, P.A., & Buchanan, G.R. 1995. Dexamethasone shortens the duration of painful events requiring hospitalisation in children with sickle cell disease: results of a randomized double-blind placebo-controlled trial. Blood, 86, (10 Suppl 1) 250a, Abstract
Ref ID: 7815
EXCLUDE-ABSTRACT ONLY

Bernini, J.C., Tkaczewski, I., Rogers, Z.R., Sandler, E., Reisch, J.S., & Buchanan, G.R. 1995. Dexamethasone therapy for children with acute chest syndrome (ACS) complicating sickle cell disease (SCD): a randomized , double-blind, placebo-controlled pilot study [Abstract]. Blood, 86, (10 Suppl 1) 142a
Ref ID: 7817
EXCLUDE-ABSTRACT ONLY

Rucknagel, D.L., Bellet, P.S., Kalinyak, K.A., Gelfand, M.J., & Shukla, R. 1995. Prevention of acute pulmonary complications by incentive spirometry in children with sickle cell diseases [abstract]. The National Sickle Cell Disease Program Annual Meeting Conference Proceedings; 1995 March 236
Ref ID: 7823
EXCLUDE-CONFERENCE ABSTRACT

Adams-Graves, P., Kedar, A., Koshy, M., Steinberg, M., Veith, R., & Ward, D. 1995. RheothRx (poloxamer 188) injection for the acute painful episode of sickle cell disease (SCD): a pilot study. [abstract]. The National Sickle Cell Disease Program 20th Annual Meeting Conference Proceedings, March 1995 118
Ref ID: 7824
EXCLUDE-CONFERENCE ABSTRACT

Al Momen, A.K., Harakati, M., Al, M.F., Ajarim, D., Diab, A., & Al, Y.M. 1995. Tramadol for the management of acute painful episodes in patients with sickle cell disease [abstract]. The National Sickle Cell Disease Program 20th Annual Meeting Conference Proceedings, March 1995 123
Ref ID: 7825
EXCLUDE-CONFERENCE ABSTRACT

de Araújo, J.T., Comerlatti, L.K., de Araújo, R.A., & Bodemeier, L. 1994. [Treatment of sickle cell anemia crisis with dipyrone, hydrocortisone, and fluid therapy]. Revista do Hospital das Clínicas, 49, (1) 13-16
Ref ID: 7833
EXCLUDE-NON ENGLISH

Perlin, E., Finke, H., Castro, O., Pittman, J., Rana, S., Burt, R., Ruff, C., & McHugh, D. 1993. Intravenous ketorolac thromethamine enhances pain control in sickle cell vaso-occlusive crisis [abstract]. The National Sickle Cell Disease Program 18th Annual Meeting Conference Proceedings, May 1993 65a
Ref ID: 7838
EXCLUDE-CONFERENCE ABSTRACT

Griffin, T.C., Morrison, R.M., & Buchanan, G.R. 1992. High-dose methylprednisolone shortens the duration of painful episodes requiring hospitalization in children with sickle cell disease: results of a randomized, placebo-controlled, double-blind trial [abstract]. The National Sickle Cell Disease Program 17th Annual Meeting Conference Proceedings, March 1992 6a
Ref ID: 7841
EXCLUDE-CONFERENCE ABSTRACT

Benjamin, L.J. 1992. Parenteral anti-inflammatory analgesics (NSAIDs) as an adjunct or alternative to narcotics in the treatment of acute vaso-occlusive sickle pain: Lysine Acetyl Salicylate (LAS) [abstract]. The National Sickle Cell Disease Program 17th Annual Meeting Conference Proceedings, March 1992 79a

Ref ID: 7845
EXCLUDE-CONFERENCE ABSTRACT

Benjamin, L.J. 1991. Update: intravenous lysine acetylsalicylate for the treatment of acute pain in sickle cell disorders: potential alternative to narcotics [abstract]. The National Sickle Cell Disease Program 16th Annual Meeting Conference Proceedings, March 1991 15
Ref ID: 7853
EXCLUDE-CONFERENCE ABSTRACT

Perlin, E., Finke, H., Castro, O., McPherson, E., & Pittman, J. 1989. A randomized trial of PCA vs. intramuscular analgesia in patients with sickle cell vaso-occlusive crisis [abstract]. The National Sickle Cell Disease Program 14th Annual Meeting Conference Proceedings, April 1989 59
Ref ID: 7857
EXCLUDE-CONFERENCE ABSTRACT

Benjamin, L.J. 1989. Intravenous lysine acetylsalicylate for the treatment of acute pain in sickle cell disorders: potential alternative to narcotics [abstract]. The National Sickle Cell Disease Program 14th Annual Meeting Conference Proceedings, April 1989 6
Ref ID: 7859
EXCLUDE-CONFERENCE ABSTRACT

Perlin, E., Finke, H., Adir, J., Castro, O., McPherson, E., & Pittman, J. 1989. Patient controlled analgesia in patients with sickle cell vaso-occlusive crises: report of a randomized study and pharmacological considerations. Blood, 74, (7 Suppl 1) 312a
Ref ID: 7860
EXCLUDE-ABSTRACT ONLY

Wang, W.C., Parker, L.J., George, S.L., Harber, J.R., Presbury, G.J., & Wilimas, J.A. 1985. Transcutaneous electrical nerve stimulation (TENS) treatment of sickle cell painful crises [abstract]. Blood (5 Suppl 1) 67a
Ref ID: 7877
EXCLUDE-ABSTRACT ONLY

Begue, P., Bertrand, E., Bonhomme, J., David, M., Coullet, Y., Pierredon, M., & Sankale, M. 1978. The action of dihydroergotoxine in acute sickling crisis. Results of a double-blind study carried out in French speaking Africa. Nouvelle Presse Medicale, 7, 2449-2452
Ref ID: 7892
EXCLUDE-NON-ENGLISH PAPER

Opio E & Barnes PM 1972. Intravenous urea in treatment of bone-pain crises of sickle-cell disease. A double-blind trial. Lancet , 2, (7769) 160-162
Ref ID: 7900
EXCLUDE-UNCLEAR MEASUREMENT OF PAIN

Health, T.A. 2010. An evaluation of the effectiveness of ibuprofen and morphine for acute pain in sickle cell disease (Project record). Health Technology Assessment
Ref ID: 7909

EXCLUDE-PROJECT RECORD

Smith, R., Ballas, K., McCarthy, F., Bauserman, L., Swerdlow, S., Steinberg, H., & Waclawiw, A. 2011. The Association Between Hydroxyurea Treatment and Pain Intensity, Analgesic Use, and Utilization in Ambulatory Sickle Cell Anemia Patients. Pain Medicine, 12, (5) 697-706
Ref ID: 7945
EXCLUDE-NOT FOCUSED ON IN-HOSPITAL MANAGEMENT OF ACUTE PAINFUL EPISODES

Rehmani, R. 2010. 56: A Randomized, Placebo-Controlled Trial of Paracetamol Versus Morphine for the Treatment of Acute Painful Crisis of Sickle Cell Disease. Annals of Emergency Medicine, 56, (3) S19-NaN
Ref ID: 7969
EXCLUDE-ABSTRACT ONLY

Lambing, A. & Sego, S. 2010. Advisor forum. Nonpharmacologic treatment of pain from sickle-cell disease. Clinical Advisor for Nurse Practitioners, 13, (4) 36-37

Ref ID: 7994
EXCLUDE-NOT AN RCT

Thomas, L. 2010. A pilot study: the effect of healing touch on anxiety, stress, pain, pain medication usage, and physiological measures in hospitalized Sickle cell disease adults experiencing a vaso-occlusive pain episode. Dissertation Abstracts International Section A: Humanities and Social Sciences -NaN
Ref ID: 8010
EXCLUDE-DISSERTATION

Schwartz, L.A., Radcliffe, J., & Barakat, L.P. 2007. The development of a culturally sensitive pediatric pain management intervention for African American adolescents with sickle cell disease. Children's Health Care, 36, (3) 267-284
Ref ID: 8128
EXCLUDE-NOT FOCUSED ON IN-HOSPITAL MANAGEMENT OF ACUTE PAINFUL EPISODES

Dunlop, R. & Bennett, K.C. 2006. Pain management for sickle cell disease in children and adults. Cochrane Database of Systematic Reviews (2) CD003350-CD003NaN
Ref ID: 8185

EXCLUDE-REVIEW-REFERENCES CHECKED

De, D. 2005. Pain management. Sickle cell anaemia 2: management approaches of painful episodes. British Journal of Nursing (BJN), 14, (9) 484-490
Ref ID: 8227
EXCLUDE-DESCRIPTIVE OVERVIEW

McGlone, M.E. 2004. Oxygen level affects sickle cell pain... "Sickle cell: the problem of pain," February 9, 2004. Nursing Spectrum -- Philadelphia Tri -- State Edition, 13, (5) 4-5

Ref ID: 8277
EXCLUDE-DESCRIPTIVE OVERVIEW

Niemann, J.T. 2003. Purified poloxamer 188 for treatment of acute vaso-occlusive crisis of sickle cell disease: a randomized controlled trial. Annals of Emergency Medicine, 41, (4) 596-598
Ref ID: 8326
EXCLUDE-ABSTRACT ONLY

Rucknagel, D.L. 1996. Incentive spirometry and sickle-cell disease... acute chest syndrome (ACS). RT: The Journal for Respiratory Care Practitioners, 9, (6) 127-130
Ref ID: 8502
EXCLUDE-MAGAZINE ARTICLE

Nichols, R. 1996. Pain control. Pain during sickle-cell crisis. American Journal of Nursing, 96, (1) 59-61
Ref ID: 8513
EXCLUDE-OPINION PIECE

1994. Corticosteroid may cut sickle cell pain. RN, 57, (7) 78-79
Ref ID: 8534
EXCLUDE-EDITORIAL

Brookoff, D. 1992. A protocol for defusing sickle cell crisis. Emergency Medicine (00136654), 24, (1) 130-137
Ref ID: 8553

EXCLUDE-PROTOCOL

Eke, F.U., Obamyonyi, A., Eke, N.N., & Oyewo, E.A. 2000. An open comparative study of dispersible piroxicam versus soluble acetylsalicylic acid for the treatment of osteoarticular painful attack during sickle cell crisis. Tropical Medicine & International Health, 5, (2) 81-84
Ref ID: 1609

EXCLUDE-PIROXICAM NOT USED FOR ACUTE PAINFUL EPISODES IN UK

Perlin, E., Finke, H., Castro, O., Bang, K.M., Rana, S., Taylor, R., Addo, K., Adir, J., Miller, A.K., Elemihe, U.N., & Curry, C.E. 1988. Treatment of sickle cell pain crisis. A clinical trial of diflunisal (Dolobid). Clinical Trials Journal, 25, (4) 254-264
Ref ID: 7202
EXCLUDE-UNLICENCED DRUG

Uzun, B., Kekec, Z., & Gurkan, E. 2010. Efficacy of tramadol vs meperidine in vasoocclusive sickle cell crisis. American Journal of Emergency Medicine, 28, (4) 445-449
Ref ID: 131
EXCLUDE-BOTH TRAMADOL AND PETHIDINE ARE NOT USED IN UK

Full list of excluded papers for review question 3: Clinical signs and symptoms of acute complications

Abramson N. Sickle cell disease with abdominal pain. Blood 2007;109(3):858.
Reason for exclusion: Case series or case study

Ahmed S., Siddiqui A.K., Siddiqui R.K., Kimpo M., Russo L., Mattana J. Acute pancreatitis during sickle cell vaso-occlusive painful crisis. American Journal of Hematology 2003;73(3):190-93.
Reason for exclusion: Case series or case study

Ahmed S.G., Ibrahim U.A., Hassan A.W. Hematological parameters in sickle cell anemia patients with and without priapism. Annals of Saudi Medicine 2006;26(6):439-43.
Reason for exclusion: Not all patients with acute episode

Ajayi A.O., Bojuwoye B.J., Braimoh K., Ndububa D.A. Clinical and laboratory indices of cholelithiasis in adult Nigerians with sickle-cell anaemia. Tropical Doctor 2006;36(1):41-42.
Reason for exclusion: Not all patients with acute episode

Akakpo-Numado G.K., Gnassingbe K., Abalo A., Boume M.A., Sakiye K.A., Tekou H. Locations of osteomyelitis in children with sickle-cell disease at Tokoin teaching hospital (Togo). Pediatric Surgery International 2009;25(8):723-26.
Reason for exclusion: Not focused on risk factors for acute complication or not clinical/laboratory risk factor

Akinola N.O., Bolarinwa R.A., Faponle A.F. The import of abdominal pain in adults with sickle cell disorder. West African Journal of Medicine 2009;28(2):83-86.
Reason for exclusion: Not acute complication/no diagnosis of acute complication/no specific acute complication

Al-Dabbous I.A. Acute chest syndrome in sickle cell disease in Saudi Arab Children in the Eastern Province. Annals of Saudi Medicine 2002;22(3-

4):167-71.
Reason for exclusion: Not all patients with acute episode

Al-Malki T.A. & Ibrahim A.H. Common hepatic duct perforation in a sickle cell disease child. Annals of Saudi Medicine 2004;24(1):43-45.
Reason for exclusion: Case series or case study

Al-Mendalawi M.D. Anemic crisis due to Mycoplasma pneumoniae complication in sickle cell patients. Saudi Medical Journal 2009;30(8):1105.
Reason for exclusion: Editorial/letter

Al-Mulhim A.S. Appendectomy during pregnancy in sickle cell disease patients. Saudi Journal of Gastroenterology 2008;14(3):114-17.
Reason for exclusion: Not all patients with acute episode

Al-Nazer M.A., Al-Saeed H.H., Al-Salem A.H. Acute appendicitis in patients with sickle cell disease. Saudi Medical Journal 2003;24(9):974-77.
Reason for exclusion: Not focused on risk factors for acute complication or not clinical/laboratory risk factor

Alonso M.H. Gall bladder abnormalities in children with sickle cell disease: Management with laparoscopic cholecystectomy. Journal of Pediatrics 2004;145(5):580-81.
Reason for exclusion: Editorial/letter

Al-Rimawi H.S., Abdul-Qader M., Jallad M.F., Amarin Z.O. Acute splenic sequestration in female children with sickle cell disease in the North of Jordan. Journal of Tropical Pediatrics 2006;52(6):416-20.
Reason for exclusion: Not all patients with acute episode

Al-Trabolsi H.A. & Alshehri M. Acute chest syndrome in children with sickle cell disease: Saudi Arabian experience. Current Pediatric Research 2005;9(1-2):23-26.
Reason for exclusion: Not all patients with acute episode

Al-Trabolsi H.A. & Alshehri M. Acute chest syndrome in children with sickle cell disease. Bahrain Medical Bulletin 2005;27(3):119-22.

Reason for exclusion: Not focused on risk factors for acute complication or not clinical/laboratory risk factor

Ambrusko S.J., Gunawardena S., Sakara A., Windsor B., Lanford L., Michelson P., Krishnamurti L. Elevation of tricuspid regurgitant jet velocity, a marker for pulmonary hypertension in children with sickle cell disease. Pediatric Blood & Cancer 2006;47(7):907-13.
Reason for exclusion: Not all patients with acute episode

Araujo A.N. Acute splenic sequestration in children with sickle cell anemia. Jornal de Pediatria ;85(4):373-Aug.
Reason for exclusion: Editorial/letter

Arkuszewski M., Melhem E.R., Krejza J. Neuroimaging in assessment of risk of stroke in children with sickle cell disease. [Review]. Advances in Medical Sciences 2010;55(2):115-29.
Reason for exclusion: Review

Aslam A.K., Rodriguez C., Aslam A.F., Vasavada B.C., Khan I.A. Cardiac troponin I in sickle cell crisis. International Journal of Cardiology 2009;133(1):138-39.
Reason for exclusion: Not acute complication/no diagnosis of acute complication/no specific acute complication

AYCOCK E.K. & WESTON W. Jr. Coexistent sickle cell disease and acute rheumatic fever. Journal - South Carolina Medical Association 1960;56:89-92.
Reason for exclusion: Inaccessible

Bakhotmah M.A. Symptomatic cholelithiasis in children: A hospital-based review. Annals of Saudi Medicine 1999;19(3):251-52.
Reason for exclusion: Not all patients with acute episode

Ballas S.K. Neurocognitive complications of sickle cell anemia in adults. JAMA 2010;303(18):1862-63.
Reason for exclusion: Editorial/letter

Ballas S.K., Files B., Luchtman-Jones L., Benjamin L., Swerdlow P., Hilliard L., et al. Secretory phospholipase A2 levels in patients with sickle cell disease and acute chest syndrome. Hemoglobin 2006;30(2):165-70.
Reason for exclusion: Focus on diagnosis

Bargoma E.M., Mitsuyoshi J.K., Larkin S.K., Styles L.A., Kuypers F.A., Test S.T. Serum C-reactive protein parallels secretory phospholipase A2 in sickle cell disease patients with vasoocclusive crisis or acute chest syndrome. Blood 2005;105(8):3384-85.
Reason for exclusion: Editorial/letter

Becton L.J., Kalpatthi R.V., Rackoff E., Disco D., Orak J.K., Jackson S.M., Shatat I.F. Prevalence and clinical correlates of microalbuminuria in children with sickle cell disease. Pediatric Nephrology 2010;25(8):1505-11.
Reason for exclusion: Not all patients with acute episode

Bernard A.W. & Venkat A. Full blood count and reticulocyte count in painful sickle crisis. Emergency Medicine Journal 2006;23(4):302-04.
Reason for exclusion: Not acute complication/no diagnosis of acute complication/no specific acute complication

Bernard A.W., Venkat A., Lyons M.S. Best evidence topic report. Full blood count and reticulocyte count in painful sickle crisis. Emergency Medicine Journal 2006;23(4):302-03.
Reason for exclusion: Review

Bernard A.W., Yasin Z., Venkat A. Acute chest syndrome of sickle cell disease. Hospital Physician 2007;43(1):15-NaN.
Reason for exclusion: Review

Bernaudin F., Strunk R.C., Kamdem A., Arnaud C., An P., Torres M., et al. Asthma is associated with acute chest syndrome, but not with an increased rate of hospitalization for pain among children in France with sickle cell anemia: a retrospective cohort study. Haematologica 2008;93(12):1917-18.
Reason for exclusion: Not focused on risk factors for acute complication or not clinical/laboratory risk factor

Bode-Thomas F., Hyacinth H.I., Ogunkunle O., Omotoso A. Myocardial ischaemia in sickle cell anaemia: evaluation using a new scoring system. Annals of Tropical Paediatrics 2011;31(1):67-74.
Reason for exclusion: Focus on diagnosis

Bonadio W.A. Clinical features of abdominal painful crisis in sickle cell anemia. Journal of Pediatric Surgery 1990;25(3):301-02.
Reason for exclusion: Descriptive prevalence/cross sectional study

Bono M.J. & Anglemeyer B.L. How to recognize and manage sickle cell crises. Emergency Medicine (00136654) 2005;37(12):39-44.
Reason for exclusion: Review

Boyd J.H., DeBaun M.R., Morgan W.J., Mao J., Strunk R.C. Lower airway obstruction is associated with increased morbidity in children with sickle cell disease. Pediatric Pulmonology 2009;44(3):290-96.
Reason for exclusion: Not all patients with acute episode

Caboot J.B. & Allen J.L. Pulmonary complications of sickle cell disease in children. Current Opinion in Pediatrics 2008;20(3):279-87.
Reason for exclusion: Descriptive prevalence/cross sectional study

Carvalho E.M.S., Queiroz A.M.M., Lobo C.L.C., Guimares F.A.P., Souza D.X.S., Queiroz A.P.A. No-Pain Hospital: 6th Vital sign - Pulse oximetry. It's importance in Acute Chest Syndrome (ACS). American Journal of Hematology 2009;Conference: 3rd Annual Sickle Cell Disease Research and Educational Symposium and Grant Writing Institute and Annual National Sickle Cell Disease Scientific Meeting Fort Lauderdale, FL United States. Conference Start: 20090215 Conference End: 20090220. Co(var.pagings)
Reason for exclusion: Prevention of acute complications

Charache S., Scott J.C., Charache P. 'Acute chest syndrome' in adults with sickle cell anemia. Microbiology, treatment, and prevention. Archives of Internal Medicine 1979;139(1):67-69.
Reason for exclusion: Descriptive prevalence/cross sectional study

CHARMOT G., REYNAUD R., BERGOT J. Cryoglobulinaemia and cold agglutinins in painful crises of sickle-cell anaemia. Lancet 1963;2(7307):540.
Reason for exclusion: Not acute complication/no diagnosis of acute complication/no specific acute complication

Clark C.G. & Boulos P.B. Abdominal pain in the overseas visitor or immigrant. Practitioner 1979;222(1330):487-96.
Reason for exclusion: Review

Cohen R.T., DeBaun M.R., Blinder M.A., Strunk R.C., Field J.J. Smoking is associated with an increased risk of acute chest syndrome and pain among adults with sickle cell disease. Blood 2010;115(18):3852-54.
Reason for exclusion: Not focused on risk factors for acute complication or not clinical/laboratory risk factor

Crabtree E.A., Mariscalco M.M., Hesselgrave J., Iniguez S.F., Hilliard T.J., Katkin J.P., et al. Improving care for children with sickle cell disease/acute chest syndrome. Pediatrics 2011;127(2):e480-88.
Reason for exclusion: Inaccessible

Dampier C., LeBeau P., Rhee S., Lieff S., Kesler K., Ballas S., et al. Health-related quality of life in adults with sickle cell disease (SCD): a report from the comprehensive sickle cell centers clinical trial consortium. American Journal of Hematology 2011;86(2):203-05.
Reason for exclusion: Not all patients with acute episode

Dar J., Mughal I., Hassan H., Al Mekki T.E., Chapunduka Z., Hassan I.S. Raised D-dimer levels in acute sickle cell crisis and their correlation with chest X-ray abnormalities. German Medical Science 2010;8:Doc25.
Reason for exclusion: Not acute complication/no diagnosis of acute complication/no specific acute complication

Davies S.C., Luce P.J., Win A.A., Riordan J.F., Brozovic M. Acute chest syndrome in sickle-cell disease. Lancet 1984;1(8367):36-38.
Reason for exclusion: Descriptive prevalence/cross sectional study

Davis S.J. & Safar A. Retinal arteriolar occlusions during a sickle cell crisis. New England Journal of Medicine 2010;362(6):536.
Reason for exclusion: Case series or case study

Dowling M.M., Quinn C.T., Rogers Z.R., Buchanan G.R. Acute silent cerebral infarction in children with sickle cell anemia. Pediatric Blood & Cancer 2010;54(3):461-64.
Reason for exclusion: Not all patients with acute episode

Duckworth L., Hsu L., Feng H., Wang J., Sylvester J.E., Kissoon N., et al. Physician-diagnosed asthma and acute chest syndrome: associations with NOS polymorphisms. Pediatric Pulmonology 2007;42(4):332-38.
Reason for exclusion: Not all patients with acute episode

Ebert E.C., Nagar M., Hagspiel K.D. Gastrointestinal and hepatic complications of sickle cell disease. Clinical Gastroenterology & Hepatology - 326;8(6):483-89.
Reason for exclusion: Review

El Sayed Zaki M. Clinical and hematological of parvovirus B19 infection on Egyptian children with chronic hemolytic anemia. Journal of Pediatric Infectious Diseases 2010;5(4):347-52.
Reason for exclusion: Not all patients with acute episode

Epstein F.H. Hypokalemia during sickle cell crisis. American Journal of Kidney Diseases 2008;52(1):196-97.
Reason for exclusion: Editorial/letter

Field J.J., Krings J., White N.L., Yan Y., Blinder M.A., Strunk R.C., DeBaun M.R. Urinary cysteinyl leukotriene E(4) is associated with increased risk for pain and acute chest syndrome in adults with sickle cell disease. American Journal of Hematology 2009;84(3):158-60.
Reason for exclusion: Not all patients with acute episode

Ganesh A., Al-Zuhaibi S., Pathare A., William R., Al-Senawi R., Al-Mujaini A., et al. Orbital infarction in sickle cell disease. American Journal of

Ophthalmology 2008;146(4):595-601.
Reason for exclusion: Case series or case study

George I.O., Briggs A.I.F., Ihezie C.O. Childhood osteomyelitis: A five-year analysis of patients with sickle cell anaemia in Port Harcourt, Nigeria. Pakistan Journal of Medical Sciences 2011;27(1):107-09.
Reason for exclusion: Not focused on risk factors for acute complication or not clinical/laboratory risk factor

Gladwin M.T. & Vichinsky E. Pulmonary complications of sickle cell disease. New England Journal of Medicine 2008;359(21):2254-65.
Reason for exclusion: Review

Goel R., Viswanathan P., Krishnamurti L. Current epidemiology and hospitalization characteristics for acute chest syndrome: A nationally representative survey. Blood 2009;Conference: 51st Annual Meeting of the American Society of Hematology, ASH New Orleans, LA United States. Conference Start: 20091205 Conference End: 20091208. Conference Publication:(var.pagings)
Reason for exclusion: Abstract only

Gumiero A.P., Bellomo-Brandao M.A., Costa-Pinto E.A. Gallstones in children with sickle cell disease followed up at a Brazilian hematology center. Arquivos de Gastroenterologia 2008;45(4):313-18.
Reason for exclusion: Not all patients with acute episode

Haddy T.B., Lusher J.M., Hendricks S., Trosko B.K. Erythropoiesis in sickle cell anaemia during acute infection and crisis. Scandinavian Journal of Haematology 1979;22(4):289-95.
Reason for exclusion: Descriptive prevalence/cross sectional study

Hagar R.W., Michlitsch J.G., Gardner J., Vichinsky E.P., Morris C.R. Clinical differences between children and adults with pulmonary hypertension and sickle cell disease. British Journal of Haematology 2008;140(1):104-12.
Reason for exclusion: Not all patients with acute episode

Hampton R.R., Balasa V., Allen Bracey S.E. Emergencies in patients with inherited hemoglobin disorders - An emergency department perspective. Clinical Pediatric Emergency Medicine 2005;6(3):138-48.
Reason for exclusion: Case series or case study

Hassell K.L., Eckman J.R., Lane P.A. Acute multiorgan failure syndrome: a potentially catastrophic complication of severe sickle cell pain episodes. American Journal of Medicine 1994;96(2):155-62.
Reason for exclusion: Descriptive prevalence/cross sectional study

Haynes Jr & Kirkpatrick M.B. The acute chest syndrome of sickle cell disease. American Journal of the Medical Sciences 1993;305(5):326-30.
Reason for exclusion: Review

Hernigou P., Daltro G., Flouzat-Lachaniette C.H., Roussignol X., Poignard A. Septic arthritis in adults with sickle cell disease often is associated with osteomyelitis or osteonecrosis. Clinical Orthopaedics & Related Research 2010;468(6):1676-81.
Reason for exclusion: Not all patients with acute episode

Hiran S. Multiorgan dysfunction syndrome in sickle cell disease. Journal of the Association of Physicians of India 2005;53:19-22.
Reason for exclusion: Descriptive prevalence/cross sectional study

Jaitly M., Mohan S., Park C.M., Anderson H.L., Cheng J.T., Pogue V.A. Hypokalemia during sickle cell crises apparently due to intermittent mineralocorticoid excess. American Journal of Kidney Diseases 2008;51(2):319-25.
Reason for exclusion: Case series or case study

Jaiyesimi O. & Kasem M. Acute chest syndrome in Omani children with sickle cell disease: epidemiology and clinical profile. Annals of Tropical Paediatrics 2007;27(3):193-99.
Reason for exclusion: Descriptive prevalence/cross sectional study

Khademian Z., Speller-Brown B., Nouraie S.M., Minniti C.P. Reversible posterior leuko-encephalopathy in children with sickle cell disease. Pediatric Blood & Cancer 2009;52(3):373-75.
Reason for exclusion: Not all patients with acute episode

Kirkham F.J. Therapy insight: stroke risk and its management in patients with sickle cell disease. Nature Clinical Practice Neurology 2007;3(5):264-78.
Reason for exclusion: Review

Knight J.S. & Lamparelli M.J. Acute abdominal pain for the general physician - Who, when and how to refer to the on-call surgeon. Acute Medicine 2005;4(1):37-39.
Reason for exclusion: Review

Koduri P.R. Acute splenic sequestration crisis in adults with sickle cell anemia. American Journal of Hematology 2007;82(2):174-75.
Reason for exclusion: Case series or case study

Kreindler J.L. Acute chest syndrome of sickle cell disease - Presentation, pathophysiology, and management. Office and Emergency Pediatrics 2000;13(5-6):175-79.
Reason for exclusion: Case series or case study

Kuypers F.A. & Styles L.A. The role of secretory phospholipase A2 in acute chest syndrome. Cellular & Molecular Biology 2004;50(1):87-94.
Reason for exclusion: Review

Kwiatkowski J.L., Zimmerman R.A., Pollock A.N., Seto W., Smith-Whitley K., Shults J., et al. Silent infarcts in young children with sickle cell disease. British Journal of Haematology 2009;146(3):300-05.
Reason for exclusion: Not all patients with acute episode

Lippi G., De Franceschi L., Salvagno G.L., Pavan C., Montagnana M., Guidi G.C. Cardiac troponin T during sickle cell crisis. International Journal of Cardiology 2009;136(3):357-58.
Reason for exclusion: Editorial/letter

Lopez B.L., Griswold S.K., Navek A., Urbanski L. The complete blood count and reticulocyte count--are they necessary in the evaluation of acute vasoocclusive sickle-cell crisis? Academic Emergency Medicine 1996;3(8):751-57.
Reason for exclusion: Not acute complication/no diagnosis of acute complication/no specific acute complication

Malik S., Duffy P., Shulte P.A. Acute splenic infarction. CMAJ Canadian Medical Association Journal 2006;175(3):244.
Reason for exclusion: Editorial/letter

Matthews M.S. Cholelithiasis: a differential diagnosis in abdominal 'crisis' of sickle cell anemia. Journal of the National Medical Association 1981;73(3):271-73.
Reason for exclusion: Case series or case study

McBurney P.G., Hanevold C.D., Hernandez C.M., Waller J.L., McKie K.M. Risk factors for microalbuminuria in children with sickle cell anemia. Journal of Pediatric Hematology/Oncology 2002;24(6):473-77.
Reason for exclusion: Not all patients with acute episode

McIntosh S., Rooks Y., Ritchey A.K., Pearson H.A. Fever in young children with sickle cell disease. Journal of Pediatrics 1980;96(2):199-204.
Reason for exclusion: Not all patients with acute episode

Mekontso Dessap A., Leon R., Habibi A., Nzouakou R., Roudot-Thoraval F., Adnot S., et al. Pulmonary hypertension and cor pulmonale during severe acute chest syndrome in sickle cell disease. American Journal of Respiratory & Critical Care Medicine 2008;177(6):646-53.
Reason for exclusion: Not focused on risk factors for acute complication or not clinical/laboratory risk factor

MINTZ A.A., CHURCH G., ADAMS E.D. Relationship of cholelithiasis to sickle cell crises. Southern Medical Journal 1956;49(3):205-09.
Reason for exclusion: Case series or case study

Mock L.J. & Berman B.W. Clinical and laboratory profile of acute splenic sequestration in children with sickle cell disease. A 10-year single institutional experience. International Journal of Pediatric Hematology/Oncology 1998;5(5):287-91.
Reason for exclusion: Not all patients with acute episode

Mohtat D., Thomas R., Du Z., Boakye Y., Moulton T., Driscoll C., Woroniecki R. Urinary transforming growth factor beta-1 as a marker of renal dysfunction in sickle cell disease. Pediatric Nephrology 2011;26(2):275-80.
Reason for exclusion: Not all patients with acute episode

Naprawa J.T., Bonsu B.K., Goodman D.G., Ranalli M.A. Serum biomarkers for identifying acute chest syndrome among patients who have sickle cell disease and present to the emergency department. Pediatrics 2005;116(3):e420-25.
Reason for exclusion: Focus on diagnosis

Noreldeen S.A., Oppenheimer C., Chapman C., Pavord S. Postpartum acute splenic sequestration in sickle cell disease. Journal of Obstetrics & Gynaecology 2008;28(4):440-41.
Reason for exclusion: Case series or case study

Norris S., Johnson C.S., Haywood L.J. Sickle cell anemia: does myocardial ischemia occur during crisis? Journal of the National Medical Association 1991;83(3):209-13.
Reason for exclusion: Descriptive prevalence/cross sectional study

Nur E., Brandjes D.P., Schnog J.J., Otten H.M., Fijnvandraat K., Schalkwijk C.G., et al. Plasma levels of advanced glycation end products are associated with haemolysis-related organ complications in sickle cell patients. British Journal of Haematology 2010;151(1):62-69.
Reason for exclusion: Not all patients with acute episode

Nur E., Mairuhu W., Biemond B.J., van Zanten A.P., Schnog J.J., Brandjes D.P., et al. Urinary markers of bone resorption, pyridinoline and deoxypyridinoline, are increased in sickle cell patients with further increments

during painful crisis. American Journal of Hematology 2010;85(11):902-04.
Reason for exclusion: Not acute complication/no diagnosis of acute complication/no specific acute complication

Oliveira C.C., Ciasca S.M., Moura-Ribeiro M.V. Stroke in patients with sickle cell disease: clinical and neurological aspects. Arquivos de Neuro-Psiquiatria 2008;66(1):30-33.
Reason for exclusion: Not all patients with acute episode

Onuaguluchi G. & Akande E.O. Severe crises with jaundice in young non-pregnant adults with sickle-cell haemoglobin-C disease. Lancet 1966;1(7440):737-39.
Reason for exclusion: Case series or case study

Pannu R., Zhang J., Andraws R., Armani A., Patel P., Mancusi-Ungaro P. Acute myocardial infarction in sickle cell disease: a systematic review. Critical Pathways in Cardiology: A Journal of Evidence-Based Medicine 2008;7(2):133-38.
Reason for exclusion: Review

Polizzotto M.N., Shortt J., Cole-Sinclair M.F. Acute splenic sequestration complicating sickle cell disease. European Journal of Haematology 2008;81(1):81.
Reason for exclusion: Case series or case study

Poncz M., Kane E., Gill F.M. Acute chest syndrome in sickle cell disease: etiology and clinical correlates. Journal of Pediatrics 1985;107(6):861-66.
Reason for exclusion: Descriptive prevalence/cross sectional study

Radel E.G., Kochen J.A., Finberg L. Hyponatremia in sickle cell disease. A renal salt-losing state. Journal of Pediatrics 1976;88(5):800-05.
Reason for exclusion: Inaccessible

Reagan M.M., DeBaun M.R., Frei-Jones M.J. Multi-modal intervention for the inpatient management of sickle cell pain significantly decreases the rate of acute chest syndrome. Pediatric Blood & Cancer 2011;56(2):262-66.

Reason for exclusion: Not focused on risk factors for acute complication or not clinical/laboratory risk factor

Roberts G.J., Haas R.A., King F.M. Emergency-room crises in sickle-cell disease. Lancet 1973;1(7818):1511.
Reason for exclusion: Editorial/letter

Savage W.J., Everett A.D., Casella J.F. Plasma glial fibrillary acidic protein levels in a child with sickle cell disease and stroke. Acta Haematologica 2011;125(3):103-06.
Reason for exclusion: Case series or case study

Scott L.K., Grier L.R., Arnold T.C., Conrad S.A. Serum procalcitonin concentration as a negative predictor of serious bacterial infection in acute sickle cell pain crisis. Medical Science Monitor 2003;9(10):CR426-31.
Reason for exclusion: Focus on diagnosis

Seeler R.A. & Shwiaki M.Z. Acute splenic sequestration crises (ASSC) in young children with sickle cell anemia. Clinical observations in 20 episodes in 14 children. Clinical Pediatrics 1972;11(12):701-04.
Reason for exclusion: Management of acute complication

Seidman C., Kirkham F., Pavlakis S. Pediatric stroke: current developments. Current Opinion in Pediatrics 2007;19(6):657-62.
Reason for exclusion: Review

Sen N., Kozanoglu I., Karatasli M., Ermis H., Boga C., Eyuboglu F.O. Pulmonary function and airway hyperresponsiveness in adults with sickle cell disease. Lung 2009;187(3):195-200.
Reason for exclusion: Not all patients with acute episode

Serafini A.N., Spoliansky G., Sfakianakis G.N., Montalvo B., Jensen W.N. Diagnostic studies in patients with sickle cell anemia and acute abdominal pain. Archives of Internal Medicine 1987;147(6):1061-62.
Reason for exclusion: Not focused on risk factors for acute complication or not clinical/laboratory risk factor

Silva C.M., Giovani P., Viana M.B. High reticulocyte count is an independent risk factor for cerebrovascular disease in children with sickle cell anemia. Pediatric Blood & Cancer 2011;56(1):116-21.
Reason for exclusion: Not all patients with acute episode

Sokol J.A., Baron E., Lantos G., Kazim M. Orbital compression syndrome in sickle cell disease. Ophthalmic Plastic & Reconstructive Surgery 2008;24(3):181-84.
Reason for exclusion: Case series or case study

Sprinkle R.H., Cole T., Smith S., Buchanan G.R. Acute chest syndrome in children with sickle cell disease. A retrospective analysis of 100 hospitalized cases. American Journal of Pediatric Hematology/Oncology 1986;8(2):105-10.
Reason for exclusion: Descriptive prevalence/cross sectional study

Stankovic Stojanovic K., Steichen O., Lionnet F., Bachmeyer C., Lecomte I., Avellino V., et al. Is procalcitonin a marker of invasive bacterial infection in acute sickle-cell vaso-occlusive crisis? Infection 2011;39(1):41-45.
Reason for exclusion: Focus on diagnosis

Strouse J.J., Hulbert M.L., DeBaun M.R., Jordan L.C., Casella J.F. Primary hemorrhagic stroke in children with sickle cell disease is associated with recent transfusion and use of corticosteroids. Pediatrics 2006;118(5):1916-24.
Reason for exclusion: Not all patients with acute episode

Strouse J.J., Jordan L.C., Lanzkron S., Casella J.F. The excess burden of stroke in hospitalized adults with sickle cell disease. American Journal of Hematology 2009;84(9):548-52.
Reason for exclusion: Not all patients with acute episode

Sylvester K.P., Patey R.A., Rafferty G.F., Rees D., Thein S.L., Greenough A. Airway hyperresponsiveness and acute chest syndrome in children with sickle cell anemia. Pediatric Pulmonology 2007;42(3):272-76.
Reason for exclusion: Not all patients with acute episode

Tanner M.A., Westwood M.A., Pennell D.J. Myocardial infarction following sickle cell chest syndrome. British Journal of Haematology 2006;134(1):2.
Reason for exclusion: Case series or case study

Uong E.C., Boyd J.H., DeBaun M.R. Daytime pulse oximeter measurements do not predict incidence of pain and acute chest syndrome episodes in sickle cell anemia. Journal of Pediatrics 2006;149(5):707-09.
Reason for exclusion: Not all patients with acute episode

Valman H.B. ABC of 1 to 7: Acute abdominal pain. British Medical Journal Clinical Research Ed 1981;282(6279):1858-60.
Reason for exclusion: Case series or case study

van Beers E.J., van Tuijn C.F., Mac Gillavry M.R., van der Giessen A., Schnog J.J., Biemond B.J., CURAMA study group. Sickle cell disease-related organ damage occurs irrespective of pain rate: implications for clinical practice. Haematologica 2008;93(5):757-60.
Reason for exclusion: Not all patients with acute episode

Viana M.B., Rezende P.V., Murao M., Janurio J.N., Chaves A.C.L., Ribeiro.A.C.F. Acute splenic sequestration in a cohort of children derived from the Newborn Screening Program for sickle cell anemia in Minas Gerais, Brazil. American Journal of Hematology 2009;Conference: 3rd Annual Sickle Cell Disease Research and Educational Symposium and Grant Writing Institute and Annual National Sickle Cell Disease Scientific Meeting Fort Lauderdale, FL United States. Conference Start: 20090215 Conference End: 20090220. Co(var.pagings)
Reason for exclusion: Not all patients with acute episode

Vichinsky E.P., Styles L.A., Colangelo L.H., Wright E.C., Castro O., Nickerson B. Acute chest syndrome in sickle cell disease: clinical presentation and course. Cooperative Study of Sickle Cell Disease. Blood 1997;89(5):1787-92.
Reason for exclusion: Not all patients with acute episode

Wajima T. Nitroblue tetrazolium test in patients with sickle-cell anemia. American Journal of Clinical Pathology 1975;64(5):608-12.
Reason for exclusion: Focus on diagnosis

Wells B.L., Vizioli T.L., Counselman F.L. The reticulocyte count: is it needed for evaluating typical sickle cell crisis presenting to the ED? American Journal of Emergency Medicine 2002;20(1):69-70.
Reason for exclusion: Not focused on risk factors for acute complication or not clinical/laboratory risk factor

Wilson W.A. & Alleyne G.A. Renal function during painful sickle cell crisis. West Indian Medical Journal 1975;24(2):84-89.
Reason for exclusion: Not acute complication/no diagnosis of acute complication/no specific acute complication

Winter S.S., Kinney T.R., O'Branski E.E., Ware R.E. Evaluation and management of acute neurologic symptoms in children with sickle cell disease. International Journal of Pediatric Hematology/Oncology 1997;4(4):339-46.
Reason for exclusion: Not all patients with acute episode

Wong A.L., Sakamoto K.M., Johnson E.E. Differentiating osteomyelitis from bone infarction in sickle cell disease. Pediatric Emergency Care 1964;17(1):60-63.
Reason for exclusion: Inaccessible

WRIGHT C.S. & GARDNER E Jr. A study of the role of acute infections in precipitating crises in chronic hemolytic states. Annals of Internal Medicine 1960;52:530-37.
Reason for exclusion: Not human study

Yates A.M., Hankins J.S., Mortier N.A., Aygun B., Ware R.E. Simultaneous acute splenic sequestration and transient aplastic crisis in children with sickle cell disease. Pediatric Blood & Cancer 2009;53(3):479-81.
Reason for exclusion: Case series or case study

No authors listed. Acute complications of sickle cell disease in children. Drug & Therapeutics Bulletin 2001;39(5):33-37.

Reason for exclusion: Review

No authors listed. Multiorgan failure during sickle cell pain. Emergency Medicine (00136654) 1995;27(6):71-74.

Reason for exclusion: Review

Full list of excluded papers for review question 4: Settings and skills for managing an acute painful episode

1989. Sickle cell disease and the non-specialist. Drug and Therapeutics Bulletin, 27, (3) 9-12
Ref ID: 7167
Notes: UI - 1989046825
EXCLUDE-NARRATIVE REVIEW/OPINION PIECE

2003. A multipronged approach needed for successful management of sickle cell anaemia. Drugs & Therapy Perspectives, 19, (5) 10-14
Ref ID: 8324
EXCLUDE-NARRATIVE OVERVIEW OF SICKLE CELL DISEASE

Adewoye, A.H., Nolan, V., McMahon, L., Ma, Q., & Steinberg, M.H. 2007. Effectiveness of a dedicated day hospital for management of acute sickle cell pain. Haematologica, 92, (6) 854-855
Ref ID: 637

EXCLUDE-LETTER

Artz, N., Whelan, C., & Feehan, S. 2010. Caring for the adult with sickle cell disease: results of a multidisciplinary pilot program. Journal of the National Medical Association, 102, (11) 1009-1016
Ref ID: 60
EXCLUDE-NOT FOCUSED ON ACUTE SICKLE CELL PAINFUL EPISODES

Ballas, S.K., Axelrod, D.J., Riggio, J.M., & Riddick-Burden, G. 2009. Serum levels of opioids in patients with sickle cell disease treated in the day unit. Pain Medicine, Conference: 25th Annual Meeting of the American Academy of Pain Medicine, AAPM Honolulu, HI United States. Conference Start: 20090127 Conference End: 20090131. Conference Publication: (var.pagings) 243-244
Ref ID: 4373
EXCLUDE-CONFERENCE ABSTRACT

Beach, M.C., Brown, R., Hughes, M., Haywood, C., Lanzkron, S., Massa, M., & Ratanawongsa, N. 2010. Improving clinician attitudes toward patients with sickle cell disease: The impact of a film intervention. Journal of General Internal Medicine, Conference: 33rd Annual Meeting of the Society of General Internal Medicine Minneapolis, MN United States. Conference Start: 20100428 Conference End: 20100501. Conference Publication: (var.pagings) S307
Ref ID: 3756

EXCLUDE-CONFERENCE ABSTRACT

Bellevue, R., Guillaume, E., Sundaram, R., Duroseau, H., D'Agustine, J., Singh, S., Blackwood, M., Souffrant, H., Webb, C., Boliscar, R., & Escobar, L. 2009. A model of coordinated comprehensive care for pediatrics and adult patients with sickle cell disease in Brooklyn, New York. American Journal of Hematology, Conference: 3rd Annual Sickle Cell Disease Research and Educational Symposium and Grant Writing Institute and Annual National Sickle Cell Disease Scientific Meeting Fort Lauderdale, FL United States. Conference Start: 20090215 Conference End: 20090220. Conference Publication: (var.pagings) E160
Ref ID: 4152
EXCLUDE-ABSTRACT ONLY

Benjamin, L. 2008. Pain management in sickle cell disease: palliative care begins at birth? Hematology 466-474
Ref ID: 380
EXCLUDE-OVERVIEW OF PAIN MANAGEMENT

Bojanowski, C. 1989. Use of protocols for ED patients with sickle cell anemia. JEN: Journal of Emergency Nursing, 15, (2) 83-88
Ref ID: 8560
EXCLUDE-DESCRIPTION OF MANAGEMENT PROTOCOL

Brandow, A.M., Weisman, S.J., & Panepinto, J.A. 2011. The impact of a multidisciplinary pain management model on sickle cell disease pain

hospitalizations. Pediatric Blood & Cancer, 56, (5) 789-793
Ref ID: 3488
EXCLUDE-SET IN PAIN CLINIC (NOT FOCUSED ON ACUTE PAIN)

Brownlee, J. 2009. Patient education and nurse's education can improve compliance in Sickle Cell patients. American Journal of Hematology, Conference: 3rd Annual Sickle Cell Disease Research and Educational Symposium and Grant Writing Institute and Annual National Sickle Cell Disease Scientific Meeting Fort Lauderdale, FL United States. Conference Start: 20090215 Conference End: 20090220. Conference Publication: (var.pagings) E132
Ref ID: 4160

EXCLUDE-CONFERENCE ABSTRACT

Burnette, M. 2009. Providing culturally competent sickle cell care. Minority Nurse 28-32
Ref ID: 8048

EXCLUDE-OPINION ARTICLE

Carvalho, E.M.M., Queiroz, A.M.M., Moraes, M.H.P., Lobo, C.L.C., & Queiroz, A.P.A. 2009. Disclosure Project for awareness of pain in healthcare treatment. American Journal of Hematology, Conference: 3rd Annual Sickle Cell Disease Research and Educational Symposium and Grant Writing Institute and Annual National Sickle Cell Disease Scientific Meeting Fort Lauderdale, FL United States. Conference Start: 20090215 Conference End: 20090220. Conference Publication: (var.pagings) E43
Ref ID: 4194
EXCLUDE-CONFERENCE ABSTRACT

Co, J.P., Johnson, K.B., Duggan, A.K., Casella, J.F., & Wilson, M. 2003. Does a clinical pathway improve the quality of care for sickle cell anemia? Joint Commission Journal on Quality & Safety, 29, (4) 181-190
Ref ID: 1225

EXCLUDE-FOCUS ON CLINICAL PATHWAY WITH NO FOCUS ON ORGANISATION OF CARE OR SKILLS/KNOWLEDGE OF HEALTHCARE PROFESSIONALS

Cooper, G.S., Armitage, K.B., Ashar, B., Costantini, O., Creighton, F.A., Raiz, P., Wong, R.C., & Carlson, M.D. 2000. Design and implementation of an inpatient disease management program. American Journal of Managed Care, 6, (7) 793-801
Ref ID: 1553
EXCLUDE-NOT FOCUSED ON SICKLE CELL DISEASE AND NO FOCUS ON ORGANISATION OF CARE OR SKILLS/ KNOWLEDGE OF HEALTHCARE PROFESSIONALS

Crockett, R.K. 1989. Pain management in the pediatric emergency department. International Pediatrics, 4, (1) 14-18
Ref ID: 7147
EXCLUDE-NARRATIVE REVIEW OF PAIN IN SICKLE CELL DISEASE

Day, J. 1998. Crisis management... a nurse-led programme of pain management for patients with sickle cell crisis... NT/3M National Nursing Awards. Nursing Times, 94, (1) 28-30
Ref ID: 8482
EXCLUDE-OPINION PIECE

De, D. 2005. Pain management. Sickle cell anaemia 2: management approaches of painful episodes. British Journal of Nursing (BJN), 14, (9) 484-490
Ref ID: 8227
EXCLUDE-NARRATIVE REVIEW

De, D. 2008. Acute nursing care and management of patients with sickle cell. [Review] [21 refs]. British Journal of Nursing, 17, (13) 818-823
Ref ID: 403
EXCLUDE-NARRATIVE REVIEW/OPINION PIECE

Dohrenwend, A. & Sehgal, R. 2005. Lost between the cracks: pain patients denied inpatient treatment for illicit drug addiction. Psychosomatic Medicine, 67, (4) 677-678
Ref ID: 925
EXCLUDE-LETTER

Elander, J., Marczewska, M., Amos, R., Thomas, A., & Tangayi, S. 2006. Factors affecting hospital staff judgments about sickle cell disease pain. Journal of Behavioral Medicine, 29, (2) 203-214
Ref ID: 843
EXCLUDE-FOCUS ON JUDGEMENTS OF HEALTHCARE PROFESSIONALS

Forbes, K., Forbes, B., & Lee, A. 1998. "Sickle cell-related pain: Perceptions of medical practitioners": Comment. Journal of Pain and Symptom Management, 15, (6) 333-334
Ref ID: 8777
EXCLUDE-LETTER

Freed, J. & Ender, K.L. 2009. Acute management of vaso-occlusive pain in pediatric sickle cell disease. Pediatric Blood and Cancer, Conference: American Society of Pediatric Hematology/Oncology 22nd Annual Meeting San Diego, CA United States. Conference Start: 20090422 Conference End: 20090425. Conference Publication: (var.pagings) 727
Ref ID: 4220

EXCLUDE-CONFERENCE ABSTRACT

Haywood, C. & Beach, M.C. 2009. Previous interpersonal experiences with health care and sickle cell patient trust. American Journal of Hematology, Conference: 3rd Annual Sickle Cell Disease Research and Educational Symposium and Grant Writing Institute and Annual National Sickle Cell Disease Scientific Meeting Fort Lauderdale, FL United States. Conference Start: 20090215 Conference End: 20090220. Conference Publication: (var.pagings) E25

Ref ID: 4204
EXCLUDE-ABSTRACT ONLY

Haywood, C., Jr., Lanzkron, S., Hughes, M.T., Brown, R., Massa, M., Ratanawongsa, N., & Beach, M.C. 2011. A video-intervention to improve clinician attitudes toward patients with sickle cell disease: the results of a randomized experiment. Journal of General Internal Medicine, 26, (5) 518-523
Ref ID: 3484
EXCLUDE-EFFECTIVENESS OF EDUCATIONAL INTERVENTION

Hei, D.L. & Lottenberg, R. 2001. Helping patients through a sickle cell crisis. Patient Care, 35, (24) 29-36
Ref ID: 8375
EXCLUDE-LITERATURE REVIEW

Houser, B., Plawecki, H.M., Carr, J., Smith, M.A., & Plawecki, J.A. 1992. A holistic approach to vaso-occlusive pain crisis in children with sickle cell disease. Journal of Holistic Nursing, 10, (1) 62-75
Ref ID: 2299
EXCLUDE-NARRATIVE REVIEW OF PAIN IN SICKLE CELL DISEASE

Imbach, P. 2008. Day hospital versus inpatient management: An economic initiative of a pediatric center, examplified on uncomplicated vaso-occlusive crises of children with sickle cell disease. Pediatric Blood & Cancer, 51, (3) 317
Ref ID: 431
EXCLUDE-COMMENT

Jayaram, A., Nagel, R.W., & Jasty, R. 2010. Impact of clinical pathway on quality of care in sickle cell patients. Journal of Pediatric Hematology/Oncology, 32, (7) 537-539
Ref ID: 86
EXCLUDE-CLINICAL PATHWAY NOT FOCUSED ON ORGANISATION OF CARE OR COMPETENCIES OF HEALTHCARE PROFESSIONALS PROVIDING CARE

Khattab, A.D., Rawlings, B., & Ali, I.S. 2006. Sickle cell disease. Care of patients with haemoglobin abnormalities: nursing management... second of two articles. British Journal of Nursing (BJN), 15, (19) 1057-1063
Ref ID: 8170
EXCLUDE-NARRATIVE REVIEW

Labbe, E., Herbert, D., & Haynes, J. 2005. Physicians' attitude and practices in sickle cell disease pain management.[Erratum appears in J Palliat Care. 2006 Spring;22(1):64]. Journal of Palliative Care, 21, (4) 246-251
Ref ID: 869
EXCLUDE-FOCUS ON PERCEPTIONS/ATTITUDES OF HEALTHCARE PROFESSIONALS PROVIDING CARE

Larsen, L.S., Neverett, S.G., & Larsen, R.F. 2001. Clinical nurse specialist as facilitator of interdisciplinary collaborative program for adult sickle cell population. [Review] [22 refs]. Clinical Nurse Specialist, 15, (1) 15-22
Ref ID: 1393
EXCLUDE-DESCRIPTION OF CLINICAL PATHWAY

Lewing, K., Britton, K., Debaun, M., & Woods, G. 2011. The impact of parenteral narcotic choice in the development of acute chest syndrome in sickle cell disease. Journal of Pediatric Hematology/Oncology, 33, (4) 255-260
Ref ID: 3478
EXCLUDE-TO CONSIDER FOR RQ3

Lombard, M.R.P., Xie, Y., & Niihara, Y. 2001. Disease-specific management in a primary care setting: case studies of successful outpatient management of sickle cell painful crises. Medicine of the Americas, 2, (1) 70-75
Ref ID: 8409
EXCLUDE-UNAVAILABLE

Lorenzi, E.A. 1993. The effects of comprehensive guidelines for the care of sickle-cell patients in crisis on the nurses' knowledge base and job satisfaction for care given. Journal of Advanced Nursing, 18, (12) 1923-1930
Ref ID: 2198

EXCLUDE-FOCUS ON IMPACT OF EDUCATIONAL INTERVENTION ON KNOWLEDGE WITH NO FOCUS ON ORGANISATION OF CARE

McGreal, S., Ahearne, M., & Chapman, C. 2009. Patient satisfaction in sickle cell disease. British Journal of Haematology, Conference: 49th Annual Scientific Meeting of the British Society for Haematology Brighton United Kingdom. Conference Start: 20090427 Conference End: 20090429. Conference Publication: (var.pagings) 25
Ref ID: 4213
EXCLUDE-POSTER ABSTRACT

Morris, K. 1999. Addressing the crisis of care for sickle-cell disease. Lancet, 353, (9163) 1504
Ref ID: 1675
EXCLUDE-OPINION PIECE

Neumayr, L., Pringle, S., Giles, S., Quirolo, K.C., Paulukonis, S., Vichinsky, E.P., & Treadwell, M.J. 2010. Chart card: Feasibility of a tool for improving emergency department care in sickle cell disease. Journal of the National Medical Association, 102, (11) 1017-1023
Ref ID: 3807

EXCLUDE- NO FOCUS ON ORGANISATION OF CARE

Odesina, V.O. 10 A.D. Sickle cell pain management in the emergency department: A two phase quality improvement project. Dissertation Abstracts International: Section B: The Sciences and Engineering, 71, (4-B) 2315
Ref ID: 8585
EXCLUDE-DISSERTATION ABSTRACT ONLY

Pack-Mabien, A., Labbe, E., Herbert, D., & Haynes, J., Jr. 2001. Nurses' attitudes and practices in sickle cell pain management. Applied Nursing Research, 14, (4) 187-192
Ref ID: 1421
EXCLUDE-FOCUS ON FACTORS AFFECTING NURSES ATTITUDES

Paulukonis, S., Neumayr, L., Treadwell, M., Quirolo, K., Pringle, S., Giles, S., Harrison, R., Orsini, F., Hagar, W., Hale, L., Rutherford, M., Hawk, W., Schrager, S., Lubin, B., & Vichinsky, E. 2009. Chart card: A tool for improving emergency room care in sickle cell disease. American Journal of Hematology, Conference: 3rd Annual Sickle Cell Disease Research and Educational Symposium and Grant Writing Institute and Annual National Sickle Cell Disease Scientific Meeting Fort Lauderdale, FL United States. Conference Start: 20090215 Conference End: 20090220. Conference Publication: (var.pagings) E157-E158
Ref ID: 4153
EXCLUDE-ABSTRACT ONLY

Pervaiz, S.M., McConalogue, D., Chacon, A., Poulton, J., & Mehta, P. 2009. Survey of patient's perception of a haemoglobinopathy service in the hospital and in the community: Is there a need for the role of a clinical nurse specialist? British Journal of Haematology, Conference: 49th Annual Scientific Meeting of the British Society for Haematology Brighton United Kingdom. Conference Start: 20090427 Conference End: 20090429. Conference Publication: (var.pagings) 70
Ref ID: 4211
EXCLUDE-POSTER ABSTRACT

Platt, A., Eckman, J.R., Beasley, J., & Miller, G. 2002. Treating sickle cell pain: an update from the Georgia Comprehensive Sickle Cell Center. JEN: Journal of Emergency Nursing, 28, (4) 297-310
Ref ID: 8351
EXCLUDE-OPINION PIECE FROM CLINICAL EXPERIENCE

Platt, A.F., Jr. & Eckman, J.R. 1989. The multidisciplinary management of pain in patients with sickle cell syndrome. Journal of the American Academy of Physician Assistants, 2, (2) 104-114
Ref ID: 8561
EXCLUDE-DESCRIPTION OF PAIN MANAGEMENT

Preboth, M. 2000. Practice guidelines. Management of pain in sickle cell disease. American Family Physician, 61, (5) 1544-1547
Ref ID: 8432

EXCLUDE-GUIDELINE

Queiroz, A.P.A., Queiroz, A.M.M., Neves, A.F., Lobo, C.L.C., & Carvalho, E.M. 2009. Development and evaluation of a tool to improve the quality of service provided to Sickle cell disease patients at HEMORIO. American Journal of Hematology, Conference: 3rd Annual Sickle Cell Disease Research and Educational Symposium and Grant Writing Institute and Annual National Sickle Cell Disease Scientific Meeting Fort Lauderdale, FL United States. Conference Start: 20090215 Conference End: 20090220. Conference Publication: (var.pagings) E42
Ref ID: 4195
EXCLUDE-ABSTRACT ONLY

Rausch, M. & Pollard, D. 1998. Management of the patient with sickle cell disease. Journal of Intravenous Nursing, 21, (1) 27-40
Ref ID: 6464
EXCLUDE-NARRATIVE REVIEW OF SICKLE CELL DISEASE

Schrag, D., Xu, F., Hanger, M., Elkin, E., Bickell, N.A., & Bach, P.B. 2006. Fragmentation of care for frequently hospitalized urban residents. Medical Care, 44, (6) 560-568
Ref ID: 8186
EXCLUDE-NOT FOCUSED ON ORGANISATION OF CARE OR COMPETENCIES OF HEALTHCARE PROFESSIONALS

Shaiova, L. & Wallenstein, D. 2004. Outpatient management of sickle cell pain with chronic opioid pharmacotherapy. Journal of the National Medical Association, 96, (7) 984-986
Ref ID: 1065
EXCLUDE-CASE SERIES

Shapiro, B.S., Benjamin, L.J., Payne, R., & Heidrich, G. 1997. Sickle cell-related pain: perceptions of medical practitioners. Journal of Pain & Symptom Management, 14, (3) 168-174
Ref ID: 1873
EXCLUDE-FOCUS ON PERCEPTIONS/ATTITUDES OF HEALTHCARE PROFESSIONALS PROVIDING CARE

Smith-Wynter, L. & van, O. 1999. Research study. The feasibility of nursing patients with sickle cell crisis at home. British Journal of Community Nursing, 4, (10) 531-538
Ref ID: 8446
EXCLUDE-PAIN MANAGEMENT IN COMMUNITY SETTINGS

Solomon, L.R. 2008. Treatment and prevention of pain due to vaso-occlusive crises in adults with sickle cell disease: an educational void. Blood, 111, (3) 997-1003
Ref ID: 513
EXCLUDE-PERSPECTIVE FOCUSING ON PAIN MANAGEMENT INFORMTAION IN MEDICAL TEXT BOOKS

Swinburne, C. 2002. Crisis management... sickle-cell anaemia. Nursing Times, 98, (15) 28-30
Ref ID: 8365
EXCLUDE-OPINION ARTICLE

Tanabe, P., Myers, R., Zosel, A., Brice, J., Ansari, A.H., Evans, J., Martinovich, Z., Todd, K.H., & Paice, J.A. 2007. Emergency department management of acute pain episodes in sickle cell disease. Academic Emergency Medicine, 14, (5) 419-425
Ref ID: 650
EXCLUDE-PROVIDES OVERVIEW OF CLINICAL PRACTICE (NO FOCUS ON ORGANISATION OF CARE OR COMPETENCIES)

Tanabe, P., Hafner, J.W., Courtney, D.M., Martinovich, Z., Zvirbulis, E., & Artz, N. 2009. The emergency department pain experience for adults With sickle cell disease. Annals of Emergency Medicine, Conference: American

College of Emergency Physicians, ACEP 2009 Research Forum Boston, MA United States. Conference Start: 20091005 Conference End: 20091006. Conference Publication: (var.pagings) S14
Ref ID: 4246
EXCLUDE-CONFERENCE ABSTRACT

Tanabe, P., Lyons, J.S., Reddin, C.J., Thornton, V.L., Wun, T., & Todd, K.H. 2009. A qualitative study assessing the information needed to manage adults in the emergency department with sickle cell disease. Annals of Emergency Medicine, Conference: American College of Emergency Physicians, ACEP 2009 Research Forum Boston, MA United States. Conference Start: 20091005 Conference End: 20091006. Conference Publication: (var.pagings) S14
Ref ID: 4247
EXCLUDE-CONFERENCE ABSTRACT

Tanabe, P., Wun, T., Thornton, V., Todd, K., & Lyons, J.S. 2009. Development of a decision support tool to guide management of adults with sickle cell disease: The emergency department sickle cell assessment of strengths and needs (ED-SCANS). Blood, Conference: 51st Annual Meeting of the American Society of Hematology, ASH New Orleans, LA United States. Conference Start: 20091205 Conference End: 20091208. Conference Publication: (var.pagings)
Ref ID: 4320
EXCLUDE-POSTER ABSTRACT

Tanabe, P., Reddin, C., Thornton, V.L., Todd, K.H., Wun, T., & Lyons, J.S. 2010. Emergency Department Sickle Cell Assessment of Needs and Strengths (ED-SCANS), a focus group and decision support tool development project. Academic Emergency Medicine, 17, (8) 848-858
Ref ID: 81

EXCLUDE-FOCUS ON INITIAL ASSESSMENT

Tanabe, P., Artz, N., Mark Court, Martinovich, Z., Weiss, K.B., Zvirbulis, E., & Hafner, J.W. 2010. Adult emergency department patients with sickle cell pain

crisis: a learning collaborative model to improve analgesic management. Academic Emergency Medicine, 17, (4) 399-407
Ref ID: 150
EXCLUDE-DESCRIPTIVE STUDY WITH NO COMPARISONS AND LIMITED DETAILS OF INTERVENTION

Thomas, V.N. & Westerdale, N. 1996. Managing sickle cell disease: the hospital-community interface. British Journal of Community Health Nursing, 1, (8) 466-472
Ref ID: 8501
EXCLUDE-OPINION PIECE

Valente, S., Alexander, J., Blount, M., Fair, J., Goldsmith, C., & Williams, L. 2010. Sickle cell disease in emergency department: education for emergency nurses. JOCEPS: The Journal of Chi Eta Phi Sorority, 54, (1) 11-15
Ref ID: 8005

EXCLUDE-UNAVAILABLE

Vichinsky, E.P., Johnson, R., & Lubin, B.H. 1982. Multidisciplinary approach to pain management in sickle cell disease. American Journal of Pediatric Hematology/Oncology, 4, (3) 328-333
Ref ID: 3019
EXCLUDE-NOT FOCUSED ON ORGANISATION OF CARE OR COMPETENCIES OF HEALTHCARE PROFESSIONALS

Waldrop, R.D. & Mandry, C. 1995. Health professional perceptions of opioid dependence among patients with pain. American Journal of Emergency Medicine, 13, (5) 529-531
Ref ID: 2075
EXCLUDE-FOCUS ON THE PERCEPTIONS OF HEALTHCARE PROFESSIONALS

Ware, M.A. 1998. Fast track admission for children with sickle cell crises. Jamaican sickle cell clinics offer an alternative to admission. BMJ, 316, (7135) 934

Ref ID: 1810
EXCLUDE-LETTER

Ware, M.A., Hambleton, I., Ochaya, I., & Serjeant, G.R. 1999. Day-care management of sickle cell painful crisis in Jamaica: a model applicable elsewhere? British Journal of Haematology, 104, (1) 93-96
Ref ID: 1698
EXCLUDE-DESCRIPTIVE STUDY OF DAY CARE MANAGEMENT

Webb, T., Roth, G., Wilson, S., & Lavender, A. 2009. Use of an internet-based, care coordination tool in patient-centered, collaborative care. American Journal of Hematology, Conference: 3rd Annual Sickle Cell Disease Research and Educational Symposium and Grant Writing Institute and Annual National Sickle Cell Disease Scientific Meeting Fort Lauderdale, FL United States. Conference Start: 20090215 Conference End: 20090220. Conference Publication: (var.pagings) E192
Ref ID: 4134
EXCLUDE-ABSTRACT ONLY

Wilsey, B., Fishman, S., Rose, J.S., & Papazian, J. 2004. Pain management in the ED. American Journal of Emergency Medicine, 22, (1) 51-58
Ref ID: 8296
EXCLUDE-NARRATIVE REVIEW

Wood, D.A. 2003. RNs help take the edge off sickle cell pain. Nursing Spectrum -- Florida Edition, 13, (16) 10-11
Ref ID: 8315
EXCLUDE-OVERVIEW OF PAIN MANAGEMENT

Yale, S.H., Nagib, N., & Guthrie, T. 2000. Approach to the vaso-occlusive crisis in adults with sickle cell disease. American Family Physician, 61, (5) 1349-1364
Ref ID: 6232
EXCLUDE-NARRATIVE REVIEW

Zempsky, W.T., Loiselle, K.A., McKay, K., Lee, B.H., Hagstrom, J.N., & Schechter, N.L. 2010. Do children with sickle cell disease receive disparate care for pain in the emergency department? Journal of Emergency Medicine, 39, (5) 691-695

Ref ID: 47

EXCLUDE-NOT FOCUSED ON ORGANISATION OF CARE OR COMPETENECIES OF HEALTHCARE PROFESSIONALS

List of excluded studies for review question 5-Information and support needs for patients and their carers during an acute painful episode

008. Summaries for patients. Pain and health care visits in patients with sickle cell disease. Annals of Internal Medicine, 148, (2) I36
Ref ID: 525
EXCLUDE: PAIN AT HOME

2010. Study reveals high rates of rehospitalizations and emergency pain treatment for sickle cell disease. AHRQ Research Activities (358) 16-18
Ref ID: 7977
EXCLUDE: DOES NOT CONSIDER PATIENT EXPERIENCES

Anderson, L.P. 1982. The relationship between perception of pain, cognitive behavioral variables and coping strategies in chronic pain patients. Dissertation Abstracts International, 42, (11-B) 4566
Ref ID: 8845
EXCLUDE: ABSTRACT ONLY

Anionwu, E. & Bennett, L. 2008. The sickle cell crisis. Interview by Stephanie Northen. Nursing Standard, 23, (8) 22-23
Ref ID: 395
EXCLUDE: DESCRIPTIVE OVERVIEW

Ballas, S.K., Park, C.H., & Jacobs, S.R. 1995. The spectrum of painful episodes in adult sickle cell disease. Pain Digest, 5, (2) 73-89
EXCLUDE: REVIEW ARTICLE

Barakat, L.P., Schwartz, L.A., Salamon, K.S., & Radcliffe, J. 2010. A family-based randomized controlled trial of pain intervention for adolescents with sickle cell disease. Journal of Pediatric Hematology/Oncology, 32, (7) 540-547
Ref ID: 87
EXCLUDE: HOME PAIN MANAGEMENT

Brandow, A.M., Brousseau, D.C., & Panepinto, J.A. 2009. Post-discharge pain, functional limitations and impact on caregivers of children with sickle cell disease treated for painful events. British Journal of Haematology, 144, (5)

782-788
Ref ID: 195
EXCLUDE: HOME PAIN MANAGEMENT

Britto, M.T., DeVellis, R.F., Hornung, R.W., DeFriese, G.H., Atherton, H.D., & Slap, G.B. 2004. Health care preferences and priorities of adolescents with chronic illnesses. Pediatrics, 114, (5) 1272-1280
Ref ID: 1024
EXCLUDE: OTHER CONDITIONS COVERED AS WELL AS SICKLE CELL DISEASE

Brownlee, J. 2009. Patient education and nurses education can improve compliance in Sickle Cell patients. American Journal of Hematology, Conference: 3rd Annual Sickle Cell Disease Research and Educational Symposium and Grant Writing Institute and Annual National Sickle Cell Disease Scientific Meeting Fort Lauderdale, FL United States. Conference Start: 20090215 Conference End: 20090220. Conference Publication: (var.pagings) E132
Ref ID: 4160
EXCLUDE: ABSTRACT ONLY

Butler, D.J. & Beltran, L.R. 1993. Functions of an adult sickle cell group: education, task orientation, and support. Health & Social Work, 18, (1) 49-56
Ref ID: 2281
EXCLUDE: NOT ABOUT PATIENT EXPERIENCES

Campbell, A.D., Ross, P.T., Kumagai, A.K., Christner, J.G., & Lypson, M.L. 2010. Coming of age with sickle cell disease and the role of patient as teacher. Journal of the National Medical Association, 102, (11) 1073-1078
Ref ID: 57
EXCLUDE: NOT ABOUT INPATIENT EXPERIENCES

Clare, N. 1998. Management of sickle cell disease. Management would improve if doctors listened more to patients. BMJ, 316, (7135) 935
Ref ID: 1808
EXCLUDE: INTERVIEW SYNOPSIS ONLY

Cobb, F.M. 1998. Coping responses and pain-associated emotions: How parents and their children manage painful episodes in sickle cell disease. Dissertation Abstracts International: Section B: The Sciences and Engineering, 59, (3-B) 1389
Ref ID: 8772
EXCLUDE: ABSTRACT ONLY

Collins, M., Kaslow, N., Doepke, K., Eckman, J., & Johnson, M. 1998. Psychosocial interventions for children and adolescents with sickle cell disease (SCD). Journal of Black Psychology, 24, (4) 432-454
Ref ID: 8774
EXCLUDE: REVIEW ARTICLE

Dampier, C., Ely, B., Aertker, L., Kesler, K., Brodecki, D., & Coleman, C. 2011. Longitudinal analysis of vaso-occlusive pain in young children with sickle cell disease. Journal of Pain, Conference: 30th Annual Scientific Meeting of the American Pain Society Austin, TX United States. Conference Start: 20110519 Conference End: 20110521. Conference Publication: (var.pagings) 25
Ref ID: 3674
EXCLUDE: ABSTRACT ONLY

Dobson, C. 2007. Guided imagery for pain management by children with sickle cell disease ages 6 to 11 years. Dissertation Abstracts International: Section B: The Sciences and Engineering, 67, (10-B) 5662
Ref ID: 8646
EXCLUDE: ABSTRACT ONLY

Edwards, L.Y. 2009. Behavioral and psycho-educational support for pain management in adults with sickle cell disease. Dissertation Abstracts International: Section B: The Sciences and Engineering, 69, (10-B) 6409
Ref ID: 8614
EXCLUDE: ABSTRACT ONLY

Elander, J., Lusher, J., Bevan, D., Telfer, P., & Burton, B. 2004. Understanding the causes of problematic pain management in sickle cell

disease: evidence that pseudoaddiction plays a more important role than genuine analgesic dependence. Journal of Pain & Symptom Management, 27, (2) 156-169
Ref ID: 1089
EXCLUDE: NOT INPATIENT EXPERIENCE/NEEDS

Fertleman, C.R., Gallagher, A., & Rossiter, M.A. 1997. Evaluation of fast track admission policy for children with sickle cell crises: questionnaire survey of parents' preferences. BMJ, 315, (7109) 650
Ref ID: 1870
EXCLUDE: ABSTRACT ONLY

Fletcher, C. 2000. Practice applications of research. Appraisal and coping with vaso-occlusive crisis in adolescents with sickle cell disease. Pediatric Nursing, 26, (3) 319-325
Ref ID: 8428
EXCLUDE: STUDY FOCUSES ON CORRELATION BETWEEN APPRAISALS OF VOC AND COPING BEHAVIOURS

Granados, R. & Jacob, E. 182. Pain experience in hospitalized adults with sickle cell disease. MEDSURG Nursing, 18, (3) 161-167
Ref ID: 278
EXCLUDE: NOT PATIENT EXPERIENCE – STUDY CONSIDERS THE SITE OF PAIN

Haywood, C., Lanzkron, S., & Beach, M.C. 2009. Hospital self-discharge among adults with sickle cell disease: Associations with trust and provider communication. American Journal of Hematology, Conference: 3rd Annual Sickle Cell Disease Research and Educational Symposium and Grant Writing Institute and Annual National Sickle Cell Disease Scientific Meeting Fort Lauderdale, FL United States. Conference Start: 20090215 Conference End: 20090220. Conference Publication: (var.pagings) E170
Ref ID: 4145
EXCLUDE: ABSTRACT ONLY

Haywood, C., Lanzkron, S., Ratanawongsa, N., Bediako, S.M., Lattimer, L., Powe, N.R., & Beach, M.C. 2010. The association of provider communication with trust among adults with sickle cell disease. [References]. Journal of General Internal Medicine, 25, (6) 543-548
Ref ID: 8595
EXCLUDE: DOES NOT CONSIDER PATIENT INFORMATION NEEDS DURING THE EPISODE

Haywood, C.J. 2009. Patient-centered care and trust in the medical profession among adults with sickle cell disease. Dissertation Abstracts International: Section B: The Sciences and Engineering, 70, (4-B) 2246
Ref ID: 8612
EXCLUDE: ABSTRACT ONLY

Haywood, J., Beach, M.C., Lanzkron, S., Strouse, J.J., Wilson, R., Park, H., Witkop, C., Bass, E.B., & Segal, J.B. 2009. A systematic review of barriers and interventions to improve appropriate use of therapies for sickle cell disease. Journal of the National Medical Association, 101, (10) 1022-1033
Ref ID: 4452
EXCLUDE: REVIEW – INCLUDED STUDIES CONSIDERED

Hei, D.L. & Lottenberg, R. 2001. Helping patients through a sickle cell crisis. Patient Care, 35, (24) 29-36
Ref ID: 8375
EXCLUDE: REVIEW ARTICLE

Huiras, R. 2007. Study focuses on sickle cell's painful reality. Nursing Spectrum -- Florida Edition, 17, (11) 26-28
Ref ID: 8140
EXCLUDE: STUDY NOT AVAILABLE THROUGH IS

Jacob, E., Beyer, J.E., Miaskowski, C., Savedra, M., Treadwell, M., & Styles, L. 2005. Are there phases to the vaso-occlusive painful episode in sickle cell disease? Journal of Pain & Symptom Management, 29, (4) 392-400
Ref ID: 957
EXCLUDE: DESCRIPTIONS OF PAIN ONLY

Jacob, E., Miaskowski, C., Savedra, M., Beyer, J.E., Treadwell, M., & Styles, L. 2006. Changes in sleep, food intake, and activity levels during acute painful episodes in children with sickle cell disease. Journal of Pediatric Nursing, 21, (1) 23-34
Ref ID: 858
EXCLUDE: NOT PATIENT EXPERIENCES

Jacob, E. & Mueller, B.U. 2008. Pain experience of children with sickle cell disease who had prolonged hospitalizations for acute painful episodes. Pain Medicine, 9, (1) 13-21
Ref ID: 508
EXLUDE: NOT FIRST HAND PATIENT EXPERIENCES- STUDY BASED ON NURSES RECORDS ONLY

Konotey-Ahulu, F.I.D. 2005. Sickle-cell disease and the patient [3]. Lancet, 365, (9457) 382-383
Ref ID: 5512
EXCLUDE: ABSTRACT ONLY

Kunkel, N., Rackoff, W.R., Katolik, L., & Ohene-Frempong, K. 1994. Utilization of a pediatric emergency department by patients with sickle cell disease. Pediatric Emergency Care, 10, (2) 79-82
Ref ID: 2152
EXCLUDE: NOT FIRST HAND PATIENT - REVIEW OF PATIENT RECORDS

Mahat, G., Scoloveno, M.A., & Donnelly, C.B. 2007. Written educational materials for families of chronically ill children. Journal of the American Academy of Nurse Practitioners, 19, (9) 471-476
Ref ID: 597
EXCLUDE: STUDY EXPLORES THE VALIDITY OF METHODOLOGY ONLY

Maikler, V.E., Broome, M.E., Bailey, P., & Lea, G. 2001. Children's and adolescents' use of diaries for sickle cell pain. [References]. Journal of the Society of Pediatric Nurses, 6, (4) 161-169
Ref ID: 8740
EXCLUDE: STUDY FOCUSED ON HOME PAIN MANAGEMENT

Maxwell, K., Streetly, A., & Bevan, D. 1999. Experiences of hospital care and treatment-seeking behavior for pain from sickle cell disease: qualitative study. Western Journal of Medicine, 171, (5-6) 306-313
Ref ID: 3523
EXCLUDE: REPUBLISHED PAPER

Mcclendon, E.M. 2001. Cross roads: A faith-based support group to supplement medical treatments for pain management for patients with sickle cell disease. Dissertation Abstracts International Section A: Humanities and Social Sciences, 62, (3-A) 1062
Ref ID: 8734
EXCLUDE: ABSTRACT ONLY

McGreal, S., Ahearne, M., & Chapman, C. 2009. Patient satisfaction in sickle cell disease. British Journal of Haematology, Conference: 49th Annual Scientific Meeting of the British Society for Haematology Brighton United Kingdom. Conference Start: 20090427 Conference End: 20090429. Conference Publication: (var.pagings) 25
Ref ID: 4213
EXCLUDE: ABSTRACT ONLY

Modi, A.C., Crosby, L.E., Guilfoyle, S.M., Lemanek, K.L., Witherspoon, D., & Mitchell, M.J. 2009. Barriers to treatment adherence for pediatric patients with sickle cell disease and their families. Children's Health Care, 38, (2) 107-122
Ref ID: 4584
EXCLUDE: HOME PAIN MANAGEMENT

Morrison, R.A. & Vedro, D.A. 1989. Pain management in the child with sickle cell disease. Pediatric Nursing, 15, (6) 595-601
Ref ID: 8557
Notes: EXCLUDE: REVIEW ARTICLE

Moskowitz, J.T., Butensky, E., Harmatz, P., Vichinsky, E., Heyman, M.B., Acree, M., Wrubel, J., Wilson, L., & Folkman, S. 2007. Caregiving time in sickle cell disease: psychological effects in maternal caregivers. Pediatric Blood & Cancer, 48, (1) 64-71

Ref ID: 699
EXCLUDE: HOME CARE

Nadel, C. & Portadin, G. 1977. Sickle cell crises: psychological factors associated with onset. New York State Journal of Medicine, 77, (7) 1075-1078
Ref ID: 3221
EXCLUDE: PRECIPITATORS OF PAIN ONLY

Oni, L. 1998. Sickle cell disease and the carer-client relationship. Nursing Times, 94, (26) 64-66
Ref ID: 8476
Notes: EXCLUDE: REVIEW ARTICLE

Pervaiz, S.M., McConalogue, D., Chacon, A., Poulton, J., & Mehta, P. 2009. Survey of patient's perception of a haemoglobinopathy service in the hospital and in the community: Is there a need for the role of a clinical nurse specialist? British Journal of Haematology, Conference: 49th Annual Scientific Meeting of the British Society for Haematology Brighton United Kingdom. Conference Start: 20090427 Conference End: 20090429. Conference Publication: (var.pagings) 70
Ref ID: 4211
EXCLUDE: ABSTRACT ONLY

Platt, A., Beasley, J., Miller, G., & Eckman, J.R. 2002. Managing sickle-cell pain... and all that goes with it: learn the complex problems this disease triggers and how to support your patient during a crisis. Nursing, 32, (12) 32hn1-NaN
Ref ID: 8343
EXCLUDE: NURSING CARE ONLY

Powers, S.W., Mitchell, M.J., Graumlich, S.E., Byars, K.C., & Kalinyak, K.A. 2002. Longitudinal assessment of pain, coping, and daily functioning in children with Sickle Cell disease receiving pain management skills training. [References]. Journal of Clinical Psychology in Medical Settings, 9, (2) 109-119

Ref ID: 8718
EXCLUDE: HOME PAIN MANAGEMENT

Sawyer, J. 2005. Sickle cell pain management meets technology: Everybody wins. Acute Pain, 7, (1) 1-3
Ref ID: 5456
EXCLUDE: REVIEW ARTICLE

Schechter, N.L., Berrien, F.B., & Katz, S.M. 1988. The use of patient-controlled analgesia in adolescents with sickle cell pain crisis: a preliminary report. Journal of Pain & Symptom Management, 3, (2) 109-113
Ref ID: 2648
EXCLUDE: NOT PATIENT EXPERINCES OF PCA

Schwartz, L., Radcliffe, J., & Barakat, L.P. 2006. Pain-related predictors of parent and family functioning in teens with sickle cell disease [abstract]. Pain-related predictors of parent and family functioning in teens with sickle cell disease [abstract] 238
Ref ID: 7715
EXCLUDE: ABSTRACT ONLY

Shahine, R., Abboud, M., Karam, D., & Badr, L. 2009. The efficacy of an educational program on the outcome of children with Sickle Cell Disease at the Children's Cancer Center of Lebanon. American Journal of Hematology, Conference: 3rd Annual Sickle Cell Disease Research and Educational Symposium and Grant Writing Institute and Annual National Sickle Cell Disease Scientific Meeting Fort Lauderdale, FL United States. Conference Start: 20090215 Conference End: 20090220. Conference Publication: (var.pagings) E126
Ref ID: 4162
EXCLUDE: ABSTRACT ONLY

Shapiro, B.S., Cohen, D.E., & Howe, C.J. 1993. Patient-controlled analgesia for sickle-cell-related pain. Journal of Pain & Symptom Management, 8, (1) 22-28

Ref ID: 2261
EXCLUDE: BASED ON NURSES NOTES ONLY

Shelley B, K. K. N. KB. Sickle cell mutual assistance groups and the health services delivery system. J Health Soc Policy 5[3-4], 243-259. 2011.
Ref Type: Generic
Ref ID: 8846
EXCLUDE: NOT FIRST HAND PATIENT EXPERIENCE

Smith-Wynter, L. & van, O. 2000. Patient perceptions of crisis pain management in sickle cell disease: a cross-cultural study... including commentary by Anionwu EN. NT Research, 5, (3) 204-215
Ref ID: 8427
EXCLUDE: STUDY FOCUSES ON CROSS CULTURAL DIVERSITY

Smith, W.R., Penberthy, L.T., Bovbjerg, V.E., McClish, D.K., Roberts, J.D., Dahman, B., Aisiku, I.P., Levenson, J.L., & Roseff, S.D. 2008. Daily assessment of pain in adults with sickle cell disease. Annals of Internal Medicine, 148, (2) 94-101
Ref ID: 524
EXCLUDE: STUDY CONSIDERS PREVALENCE OF PAIN

Strickland, O.L., Jackson, G., Gilead, M., McGuire, D.B., & Quarles, S. 2001. Use of focus groups for pain and quality of life assessment in adults with sickle cell disease. Journal of National Black Nurses Association, 12, (2) 36-43
Ref ID: 1390
EXCLUDE: STUDY CONSIDERS EFFECTIVENES OF FOCUS GROUP METHODOLOGY

Tanabe, P., Hafner, J.W., Courtney, D.M., Martinovich, Z., Zvirbulis, E., & Artz, N. 2009. The emergency department pain experience for adults with sickle cell disease. Annals of Emergency Medicine, Conference: American College of Emergency Physicians, ACEP 2009 Research Forum Boston, MA United States. Conference Start: 20091005 Conference End: 20091006. Conference Publication: (var.pagings) S14

Ref ID: 4246
EXCLUDE: ABSTRACT ONLY

Tanabe, P., Lyons, J.S., Reddin, C.J., Thornton, V.L., Wun, T., & Todd, K.H. 2009. A qualitative study assessing the information needed to manage adults in the emergency department with sickle cell disease. Annals of Emergency Medicine, Conference: American College of Emergency Physicians, ACEP 2009 Research Forum Boston, MA United States. Conference Start: 20091005 Conference End: 20091006. Conference Publication: (var.pagings) S14
Ref ID: 4247
EXCLUDE: ABSTRACT ONLY

Tanabe, P., Hafner, J.W., Martinovich, Z., Zvirbulis, E., Wun, T., & Artz, N. 2009. Emergency department follow-up for adults with sickle cell disease. Blood, Conference: 51st Annual Meeting of the American Society of Hematology, ASH New Orleans, LA United States. Conference Start: 20091205 Conference End: 20091208. Conference Publication: (var.pagings)
Ref ID: 4341
Notes: UI - 70246489
EXCLUDE: ABSTRACT ONLY

Tanabe, P., Artz, N., Mark Court, Martinovich, Z., Weiss, K.B., Zvirbulis, E., & Hafner, J.W. 2010. Adult emergency department patients with sickle cell pain crisis: a learning collaborative model to improve analgesic management. Academic Emergency Medicine, 17, (4) 399-407
Ref ID: 150
EXCLUDE: PREVALENCE OF PAIN- INPATIENT EXPERIENCE OBTAINED FROM MEDICAL RECORDS

Telfair, J. & Gardner, M.M. 1999. African American adolescents with sickle cell disease: Support groups and psychological well-being. Journal of Black Psychology, 25, (3) 378-390
Ref ID: 8763
EXCLUDE: NOT ABOUT PATIENT EXPERIENCE

Terrie, Y.C. 2009. Improving pain management for the sickle cell patient. Pharmacy Times, 75, (9) 26-28
Ref ID: 4441
EXCLUDE: REVIEW ARTICLE

Thomas, J.D. 2005. Self-hypnosis and sickle cell disease in children: Impact on self-efficacy and the pain experience. Dissertation Abstracts International: Section B: The Sciences and Engineering, 66, (2-B) 1187
Ref ID: 8682
EXCLUDE: ABSTRACT ONLY