Family Centered Pediatric Emergency Department
Sickle Cell Assessment of Needs and Strengths (FC-Peds-ED-SCANS)
Overall Algorithm
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Decision 1: Triage

Decision 2: Analgesic Management

Decision 3: Diagnostic Evaluation

Decision 4: Disposition

Discharged home?

No

No further action required

Yes

Decision 5: High Risk Evaluation and Referrals

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Pain AND / OR Fever ≥38 C (0-3 mos) or ≥38.5 C (>3 mos)

Yes

Immediate placement
Notify physician
Facilitate treatment for fever AND / OR pain

No

Pain AND:
Seizures or motor weakness
OR
Respiratory distress, chest pain, SPO2 < 93%, abnormal RR (age based)
OR
Abdominal pain, pallor, elevated HR, and/or lower BP (age specific)
OR
Priapism

Yes

Facilitate rapid placement
Notify physician

Facilitate rapid placement
Notify physician

No

Severe pain, dactylitis

No

Triage as appropriate to chief complaint, medical history, and vital signs

Yes

Facilitate rapid placement
Notify physician
Facilitate analgesic management

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Pain Assessment:
- Weight
- Age-appropriate pain scales (Ex: FLACC, FACES)
- Pain medicines at home (name, dose, route, time of last dose)

Does the child have an individualized analgesic plan?
- No
  - Initiate individualized analgesic plan. Include:
    - Appropriate hydration, usually 1.5 x maintenance for pain, 0.75 x maintenance for ACS
    - Non-pharmacologic approaches
- Yes
  - Initiate individualized analgesic plan. Include:
    - Appropriate hydration, usually 1.5 x maintenance for pain, 0.75 x maintenance for ACS
    - Non-pharmacologic approaches
    - Multi-disciplinary team to develop individual protocols when indicated

Does ED have a pediatric SCD analgesic protocol?
- No
  - Initiate Peds SCD analgesic protocol including:
    - Appropriate hydration, (1.5 x maintenance for pain, 0.75 x maintenance for ACS)
    - Non-pharmacologic approaches
    - Multi-disciplinary team to develop individual protocols when indicated
- Yes
  - Initiate Peds SCD analgesic protocol including:
    - Appropriate hydration, (1.5 x maintenance for pain, 0.75 x maintenance for ACS)
    - Non-pharmacologic approaches
    - Multi-disciplinary team to develop individual protocols when indicated

Is the pain mild or moderate and/or responsive to a non-opioid approach?
- No
  - Administer non-steroidals including Tylenol
  - Administer weight based opioids (morphine sulfate or hydromorphone)
  - Routes: IV, intranasal if IV not possible, PCA when possible
  - Re-assess and re-dose q 30 min for unrelieved pain
  - Appropriate hydration, (1.5 x maintenance for pain, 0.75 x maintenance for ACS)
  - Non-pharmacologic approaches
  - Multi-disciplinary team to develop individual protocols when indicated
- Yes
  - Administer NSAIDs including acetaminophen
  - Appropriate hydration, (1.5 x maintenance for pain, 0.75 x maintenance for ACS)
  - Non-pharmacologic approaches
  - Multi-disciplinary team to develop individual protocols when indicated

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Fever
≥ 38 C (0-3 months) OR
≥ 38.5 C (>3 months), OR
Other suspicion for sepsis

Yes
Clinical suspicion of stroke (focal motor deficits, altered LOC, seizures)

No
Clinical suspicion of acute chest syndrome (respiratory distress, and/or SPO2 <93%)

Yes
Clinical suspicion of splenic sequestration (spleen larger than baseline, rapid hemodynamic deterioration)

No
Priapism

Yes
Abdominal pain

No

Yes

No

• Investigate infectious etiologies
• CBC/diff, retic, chem. panel, blood and urine cultures
• CXR (suspicion of ACS)
• Begin empiric antibiotic coverage
• Consult Peds hematologist

• CBC/diff, retic, and type and crossmatch
• Initiate stroke workup (CT scan, MRI when possible)
• Consult neurology and Peds hematologist for possible transfusion management if acute stroke
• Admit

• CBC/diff, retic, and type and crossmatch
• Chest X-ray
• Consider co-existing asthma and treat accordingly
• Administer O2
• Consult Peds hematologist for transfusion protocol for ACS (simple vs. exchange depending upon severity) and probable admission

• CBC/diff, retic, and type and crossmatch
• Initiate IV for transfusion
• Consult Peds hematologist for possible simple transfusion for splenic sequestration and possible need for admission

• CBC/diff, retic, and type and crossmatch
• Obtain history (stuttering, length of current episode)
• Initiate analgesic therapy and IVF
• Consult urologist
• Consult Peds hematologist

• UA, UCG when applicable, consider KUB
• Investigate other sources of pain, including constipation, appendicitis and cholecystitis
• Consult surgery and Peds hematologist

ALL CHILDREN
Review of baseline labs (in particular normal Hgb and Hct)

No

Yes

No

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• CBC/diff, retic, chem. panel, blood and urine cultures
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• Consult Peds hematologist

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FC-Peds-ED-SCANS Decision 4
Disposition
Physician / Nurse / Parent
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Non-VOC, Surgical or medical reason (any fever/sepsis < 12 months, ACS, stroke, splenic sequestration) for hospitalization

No

Pain improving to manageable level, and parents able to support pain control at home?

No

Yes

Discharge home with:
• Written Instructions on:
  • How to manage pain (tylenol, NSAIDS, opiates)
  • When to return to ED, clinic/office, and Day Hospital (when available)
  • When to contact hematologist
• Prescriptions if needed:
  • Analgesics and/or penicillin (< 5 years, not on penicillin (SS, SB°)

Yes

Pain improving in ED after several hours and analgesic doses but not at point that can be managed at home, AND observation area available to continue pain management?

Yes

Transfer to observation area for up to 12 hours of aggressive pain management using PCA protocol

No

Admit to hospital for continued pain management with PCA or round the clock administration of analgesics

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No PCP reported
OR
< 5 years, not on penicillin (SS, SB0)
OR
Not up to date with immunizations (including pneumococcal series)
OR
High number of ED visits or hospitalizations for SCD or missed appointments
OR
Pregnant

No

Signs of abuse / neglect
OR
Depression,
Suicidal (emergent psych eval),
Illicit drug use,
Foster care (if unstable placement),
Suspicion of parent abuse of pain medicines,
Unstable living situation,
Food insecure,
No insurance

No

Parent or child knowledge deficit

No

Yes

Follow-up with peds hematologist within 1 week

Yes

Refer to:
• SCD peds hematologist
• Case management
• Peds-OB (pregnant)

Yes

Refer to:
• Peds hematologist and sickle cell program
• Social services and/or case management
• Child life specialist

Refer to:
• Peds hematologist and sickle cell program
• Local community-based organization

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