KINGDOM OF SAUDI ARABIA
MATERNITY & CHILDREN HOSPITAL , JEDDAH

وزارة الصحة
Ministry of Health

DOCTORS ORDER SHEETS

FOR THE MOST COMMON

PEDIATRIC EMERGENCY CASES

1st Edition

Dr Ahmed Mahah

Pediatric Emergency consultant

Chairman of Emergency department

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2015

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MRN: ---------- ER NO:----------
NAME: ----------
AGE: ---------- GENDER: □ Male□ Female
DATE OF BIRTH: ----------
NATIONALATY: ----------
CONSULTANT IN CHARGE: ----------

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Ministry of Health
Maternity & Children's Hospital
Jeddah - KSA

PEDIATRIC EMERGENCY TRIAGE AND ASSESSMENT FORM

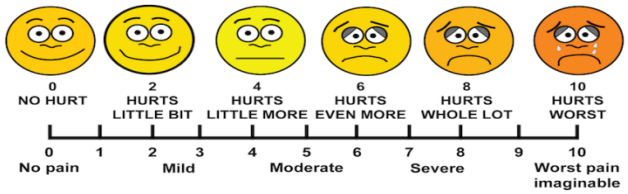
Date Of Arrival: …… Time: ……

Mode Of Arrival	**□ Ambulance**	**□ Trolley**	**□Wheelchair**	**□ Walking**	**□ With Parent**
Chief complain :					

Physical examination	**WT:**		**HT:**			**HC: (If Infant 0-1yr)**
VITAL SIGN (V/S)	**Temp**	**PR**	**RR**	**BP**	**SPO2**	**Blood Sugar**
AVPU Level of consciousness	**□ Alert**	**□ Verbal**	**□ Painful**	**□Unresponsive**		
Skin Color	**□Pale & cold**	**□Cyanosis**	**□ Mottled**	**□ Jaundice**	**□ Pink & warm**	
Breathing Effort	**Within normal parameters •No retractions**	**Greater than 10 above normal parameters •Use of accessory muscles**	**Greater than 20 above normal parameters •Retractions**	**Below normal parameters with retractions**		

Pain Assessment

PAIN MEASUREMENT SCALE



Score : ……/10
Time of onset:……
location:…… Duration:……
Frequency……
Character :
□ sharp □ cramping □ Burning
□ Tearing □ Throb □ Pricking
□ Radiating □ Dull

History

□ Convulsion	**□ Fever**	**Diarrhea□**	**□ Runny Nose**	**□ Bleeding**	**□Red Eye**
□ Ear Pain	**□ Cough**	**□Vomiting**	**□Skin Rash**	**□ Dysurea**	**□ Ear Discharge**
□ Edema	**□ S.O.B**	**□Red Urine**	**□ intoxication**	**□ Limping**	**□ Bite sting**
□ Poor feeding	**□ Loss of consciousness**		**□Muscle weakness**	**□ Surgical History**	
□ Medical History:	**□ Diabetic**	**□ Epileptic**	**□ Bronchial Asthma**	**□ Sickle Cell Anima**	
□ Allergy	**□ No □ Yes If Yes □ Food □ Drugs □ Latex □ Others……**				
□ Immunization	**Up to data:□Yes □ No**				
□ Home Medication:	**Time :**				

FALL RISK	**□ No**	**□ Yes**	**□ Mild**	**□ Moderate**	**□ High Risk**
ACUITY LEVEL	**I**	**II**	**III**	**IV**	**V**
Triage Decision	**□ CCR**	**□ Step Down**	**□ Observation**	**□ Clinic**	
Triage nurse name / stamp		**Signature :**	**Time :**		
Receiving nurse name / stamp		**Signature :**	**Time :**		

PEDIATRIC EMERGENCY ASSESSMENT FORM

DOCTOR SECTION

Date:	**Time of Arrival:**

History Taken From: □ **Patient** □ **Family Member** □ **Others**

Chief Complaint:

Patient has been seen in ER within the last 72hour and discharge: □ **YES** □ **No** □ **Un known**

History:

Time

Medication:

Nutritional Status:

Social, Psychosocial & Economic:

Physical Examination:

Time

PROVISIONAL DIAGNOSIS:

Doctor Order: **Date:** **Time:**

Physician Name: **Signature:**

Reassessment: **Date:** **Time:**

DIAGNOSIS:

Patient Condition on Discharge from ER:

Date & Time of Discharge:

Disposition: □ Observation □ Left without Seen
□ Discharge Home □ Admission □ OPD Follow-up □ DAMA □ Death □ Referral to other Hospital

Physician Name: **Signature:**

NEBULIZATION ROOM

Medication

Date	Drug	Dose	Frequency	Route	Dr's Stamp /Initial	Time given of each dose			Nurse Name/stamp	
						1st	2nd	3rd	SN1	SN2

PEDIATRIC EMERGENCY ASSESSMENT FORM

Vital Signs

Time	BP	HR	RR	Temp	RBS	Spo2	
						%	□ RA □O2 ……. L /min
						%	□ RA □O2 ……. L /min
						%	□ RA □O2 ……. L /min
						%	□ RA □O2 ……. L /min
						%	□ RA □O2 ……. L /min
						%	□ RA □O2 ……. L /min
						%	□ RA □O2 ……. L /min
						%	□ RA □O2 ……. L /min

NURSING SECTION

Date / Time	ER Nurse Note:	Nurse Name& Signature

Disposition: ( ) Discharge HomeDate and Time of Discharge: _____Improved: ( ) Yes ( ) No

BP: Temp: PR: RR: Spo2: Nurse's Stamp/Initial:_____

( ) Admission :Date and Time Transferred to the Unit _____

Latest V/S: BP: Temp: PR: RR: Spo2:

Transferring Nurse: _____Receiving Nurse: _____Date/Time:_____

Triage Paeds modifiers

Level of consciousness

CTAS Level	Level of Consciousness	GCS
I	**Unconscious:** Unresponsive; responds to pain or loud noise only and without purpose; flexion or extension position;continuous seizing; progressive deterioration in level of consciousness; unable to protect airway	3-9
II	**Altered level of consciousness:** Achange from one's "normal"level of consciousness; lethargic; obtunded; localizes to painful stimulus; confused; disoriented; restless; irritable; agitated or combative; inconsolable, poor feeding in an infant; able to protect his/her airway; alert with minor behavioral or abnormal vital sign	10 - 13
III,IVorV	**Conscious:** A state of awareness, implying orientation to person, place and time; interacts appropriately for age (e.g., infantcoos and babbles); consolable	14–15

Hemodynamic Modifiers

CTAS Level	Circulatory Status
I	**Shock:** Evidence of severe end-organ hypoperfusion, marked pallor, cool skin, diaphoresis, weak or thready pulse, hypotension, postural syncope, significant tachycardia or bradycardia, ineffective ventilation or oxygenation, decreased level of consciousness; could also appear as flushed, febrile, toxic, as in septic shock
II	**Hemodynamic compromise:** Delayed capillary refill, tachycardia, decreased urine production and skin changes suggest poor tissue perfusion; vomiting and diarrhea secondary to gastrointestinal infection are a common etiology; the signs of dehydration are not always reliable, particularly in younger patients; hemorrhage in moderate trauma may be masked by a child's ability to maintain his or her blood pressure
III	Volume depletion with abnormal vital signs
IV - V	Normal vital signs

Heart rate by CTAS level, beats/min.							
Age/ level	I	II	III	IV - V	III	II	I
0-3 month	< 40	40 - 65	65 - 90	90 - 180	180 - 205	205 - 230	>230
3-6 month	< 40	40 - 63	63 - 80	80 - 160	160 - 180	180 - 210	>210
6-12 month	< 40	40 - 60	60 - 80	80 - 140	140 - 160	160 - 180	>180
1-3 yr	< 40	40 - 58	58 - 75	75 - 130	130 - 145	145 - 165	>165
3-6 yr	< 40	40 - 55	55 - 70	70 - 110	110 - 125	125 - 140	>140
6-10 yr	< 30	30 - 45	45 - 60	60 - 90	90 - 105	105 - 120	>120

Triage Paeds modifiers

Bleeding Modifiers

Life or Limb Threatening	Moderate or minor bleeds
CTAS level II	CTAS level III
Head (intracranial) & neck	Nose (epistaxis)
Chest,abdomen,pelvis,spine	Mouth (including gums)
Massive vaginal hemorrhage	Joints (hemarthroses)
Iliopsoas muscle & hip	Menorrhagia
Extremity muscle compartments	Abrasions
Fractures & dislocations	Superficial lacerations
Deep lacerations	
Any uncontrolled bleeding	

Pain modifiers

CTAS Level	Acute Pain	CTAS Level	Chronic Pain
II	Acute severe pain (8 -10)	III	Chronic severe pain (8 -10)
III	Acute moderate pain (4 - 7)	IV	Chronic moderate pain (4 - 7)
IV	Acute mild pain (< 4)	V	Chronic mild pain (< 4)

Mechanism of injury modifiers

MOI	CTAS Level II
General Trauma	*MVC: motor vehicle collision -Ejection from vehicle, rollover, extrication time>20 minutes, significant intrusion into passenger's space, death in the same passenger compartment, impact >40 km/h -(unrestrained) or impact >60 km/h (restrained) *MCC: Motor cycle collision -Where impact with a car >30 km/hr, especially if rider is separated from motorcycle -Pedestrian or bicyclist Run over or struck by vehicle at >10 km/h *Fall: of >3 ft (>1 m) or 5 stairs *Penetrating injury: To head, neck, torso or extremities proximal to elbow and knee
Head Trauma	*MVC: Ejection from vehicle, unrestrained passenger striking head on windshield *Pedestrian: struck by vehicle *Fall: from >3 ft (>1 m) or 5 stairs *Assault: With blunt object other than fist or feet
Neck Trauma	*MVC: Ejection from vehicle, rollover, high speed (esp. if driver unrestrained) *MCC: Impact with a car > 30 km/hr, especially if rider is separated from MC. *Fall: from >3 ft (>1 m) or 5 stairs, Axial load to the head

LEVEL I - RESUSCITATION

Threat to life

Time To Nurse&PhysicianAssessment Immediate

Any Child Or Infant Who Requires….
Continuous Assessment & Intervention To Maintain Physiological Stability.

Example:

1. **cardiopulmonary arrest**
2. **Respiratory failure**
3. **Shock**
4. **Coma**
5. **Seizures**
6. **Critical asthma**
7. **Severe RD**
8. **Unconsciousness**
9. **Major burns**
10. **Severe trauma**
11. **Significant bleeding**

By Dr.BasmaAlhujaili
Source: Canadian Pediatric Triage and Acuity Scale(CTAS).
Canadian Journal of Emergency Medicine.2001,Revised 2008

LEVEL II - EMERGENT

Potential threat to life, limb or function

Time to nurse assessment Immediate.
Time to physician assessment <15 minutes.

Example:

1.Fever:Febrile infant < 3 months ,temp >38°C,
Febrile immuncompromized ,
Febrile infant 3-36 mo & unwell.
2.Pain : Acute severe pain 8-10/10 .
3.known metabolic disorder with V / D or fasting
4.DKA
5.Sepsis
6.Severe asthma
7.ALOC (GCS < 13)
8.Toxic ingestion /overdose
9.Seizure (post ictal)
10.Child abuse with ongoing risk
11.Open fracture
12.Violent patients
13.Purpuric rash(rash that doesn't blanch with pressure)
14.Severe testicular pain
15.Laceration or orthopedic injury with NV*compromise
16.Dental injury with an avulsed permanent tooth.
***NV = neurovascular**

By Dr.BasmaAlhujaili
Source: Canadian Pediatric Triage and Acuity Scale (CTAS).
Canadian Journal of Emergency Medicine.2001,Revised 2008

LEVEL III – URGENT

Condition with significant distress

Time to nurseassessment < 20 min.
Time to physician assessment< 30 min.

Child / infant who is alert, oriented, well hydrated with minor alteration in vital signs.

Example:

1. **Fever: Febrile infant 3 months- 3 years**
2. **Febrile child > 3years old & unwell.**
3. **Pain : Acute moderate pain 4-7 /10.**
4. **Simple burns**
5. **Fractures**
6. **Dental injuries**
7. **Pneumonia without distress**
8. **H/O seizure**
9. **Suicide ideation**
10. **Ingestion requiring observation only**
11. **Head trauma GCS 14 or15, alert but with vomiting**

By Dr.BasmaAlhujaili
Source: Canadian Pediatric Triage and Acuity Scale (CTAS).
Canadian Journal of Emergency Medicine.2001,Revised 2008

LEVEL IV - LESS URGENT

Conditions with mild to moderate discomfort

Time for Nurse and physician assessment <1h

Example:

1. **Fever: Febrile child > 3years old & well.**
   Fever with simple complaints such as ear pain, sore throat or nasal congestion
2. **Pain: Acute mild pain 0-3/10.**
3. **Age >2**
4. **Vomiting /diarrhea & no dehydration,**
5. **Simple laceration/sprain/strains**
6. **Head trauma with no symptoms.**

By Dr.BasmaAlhujaili
Source: Canadian Pediatric Triage and Acuity Scale (CTAS).
Canadian Journal of Emergency Medicine.2001,Revised 2008

LEVEL V - NON URGENT

Conditions can be delayed, no distress

Time for nurse and Physician assessment more than 2h

Child/ infant who is…
AFebrile
Alert
Oriented
Well Hydrated
With Normal Vital Signs .

Interventions Are Not Usually Required
Other Than Assessment / Discharge Instruction.

These Patients May Be Referred To Other Areas
Of The Hospital Or Health Care System For Management.

By Dr.BasmaAlhujaili
Source: Canadian Pediatric Triage and Acuity Scale (CTAS).
Canadian Journal of Emergency Medicine.2001,Revised 2008

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EMERGENCY DEPARTMENT

File NO.: ☐☐☐☐☐☐☐☐☐☐

Name: ……

Age: ☐☐ Yrs. / Month Sex: ☐ M ☐ F

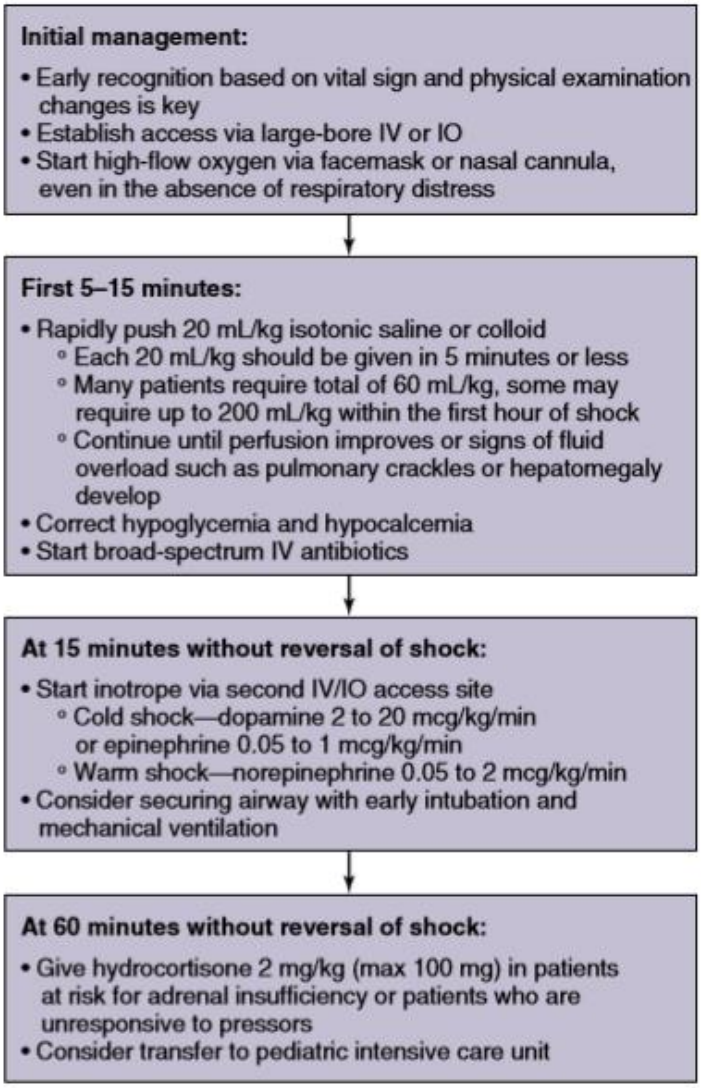
Nationality: ……..

Consultant in Charge: …….

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF HYPOVOLEMIC SHOCK

DATE: / / TIME: ALLERGIES: MEDICATIONS:

Weight ____ Kg Temp: ___ °C HR_____ /min RR ____ /min BP___ /___mmHg



Sourse : Emergency management of pediatric shock—first hour. (From Brierley J, Carcillo JA, Choong K, et al. Clinical practice parameters for hemodynamic support of pediatric and neonatal septic shock: 2007 update from The American College of Critical Care Medicine. Crit Care Med. 2009;37:666-688.)

Note : It is very important to prepare for each step in advance to be able to complete the recommended interventions within the first hour of recognized shock.

TIME: DOCTOR SIGNATURE: NURSE SIGNATURE:

Prepared by : Dr. Yasser Al Dabbagh
House Officer

Reviewed By : Dr. Ahmad Mahah
Chairman of Emergency Department

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Name: ……

Age: ☐☐ **Yrs. / Month** **Sex:** ☐ **M** ☐ **F**

Nationality: ……

Consultant in Charge: ……

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF ANAPHYLAXIS

DATE: **TIME:** **ALLERGIES:**

- **Weight _____ HR_____ /min RR ____ /min BP _____mmHg**
- Admit patient to Resuscitation/Step down unit
- Connect to a cardio-respiratory monitor
- Start high flow Oxygen
- Airway and ventilation support if needed, consider intubation at any time
- Inert IV lines
- Stop/remove suspect allergen (e.g. drug infusion)
- Give **Epinephrine ____ mg IM** (lateral thigh) ☐☐☐
  0.1 mg/kg/dose (**0.01** ml/kg of **1: 1000)** (Max. single 0.5 mg)
  Repeat q 15 min X 3 doses or q 4 hr
- Give **Diphenhydramine** ____ mg (1-2 mg/kg/dose) q 6 hr ☐ PO ☐ IV ☐ IM
- (Max. single dose 50 mg)
- Give **Ranitidine** (H2 antagonist) ____ mg (1 mg/kg/dose) IV q 6 hr ☐
  (Max. single dose 50 mg)
- Give **Methylprednisolone** ____ mg IV (1 – 2 mg/kg/day) q 6 hr ☐
- OR
- Give **Hydrocortisone** ____ mg IV (5 mg/kg/dose) q 8 hr ☐

➢ **If patient is Hypotensive**

- Give **Normal Saline 0.9% bolus** at a rate of _____ ml/hour (20 ml/kg bolus) ☐☐
  May be repeated

➢ **If patient with Bronchospasm**

- Give **VENTOLIN NEBULIZER 2.5 mg X 3 doses** back to back (Wt. < 20 kg) ☐
- Give **VENTOLIN NEBULIZER 5 mg X 3 doses** back to back (wt. > 20 kg) ☐

➢ **If patient with Airway obstruction**

- Give Racemic Epinephrine ____ ml (0.05 ml /kg) nebulization .Max 0.5ml ☐
- Admit to the hospital

DOCTOR SIGNATURE: **NURSE SIGNATURE:**

➢ **In case of persistent hypotension or severe respiratory distress**

- Give IV Adrenaline infusion [(1: 1000) 1mg/ml] at a rate of ____ml/ hr (0.1 - **1.0** mcg/kg/min.) ☐
- Give **Normal Saline 0.9% bolus** at a rate of _____ ml/hour (20 ml/kg bolus) ☐
- Admit to PICU

DOCTOR SIGNATURE: **NURSE SIGNATURE:**

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Name: ……

Age: ☐☐ Yrs. / Month Sex: ☐ M ☐ F

Nationality: ……

Consultant in Charge: ……

DOCTORS ORDER SHEET FORM FOR MANAGEMENT OF Early Septic sock

DATE: / / TIME: ALLERGIES: MEDICATIONS:

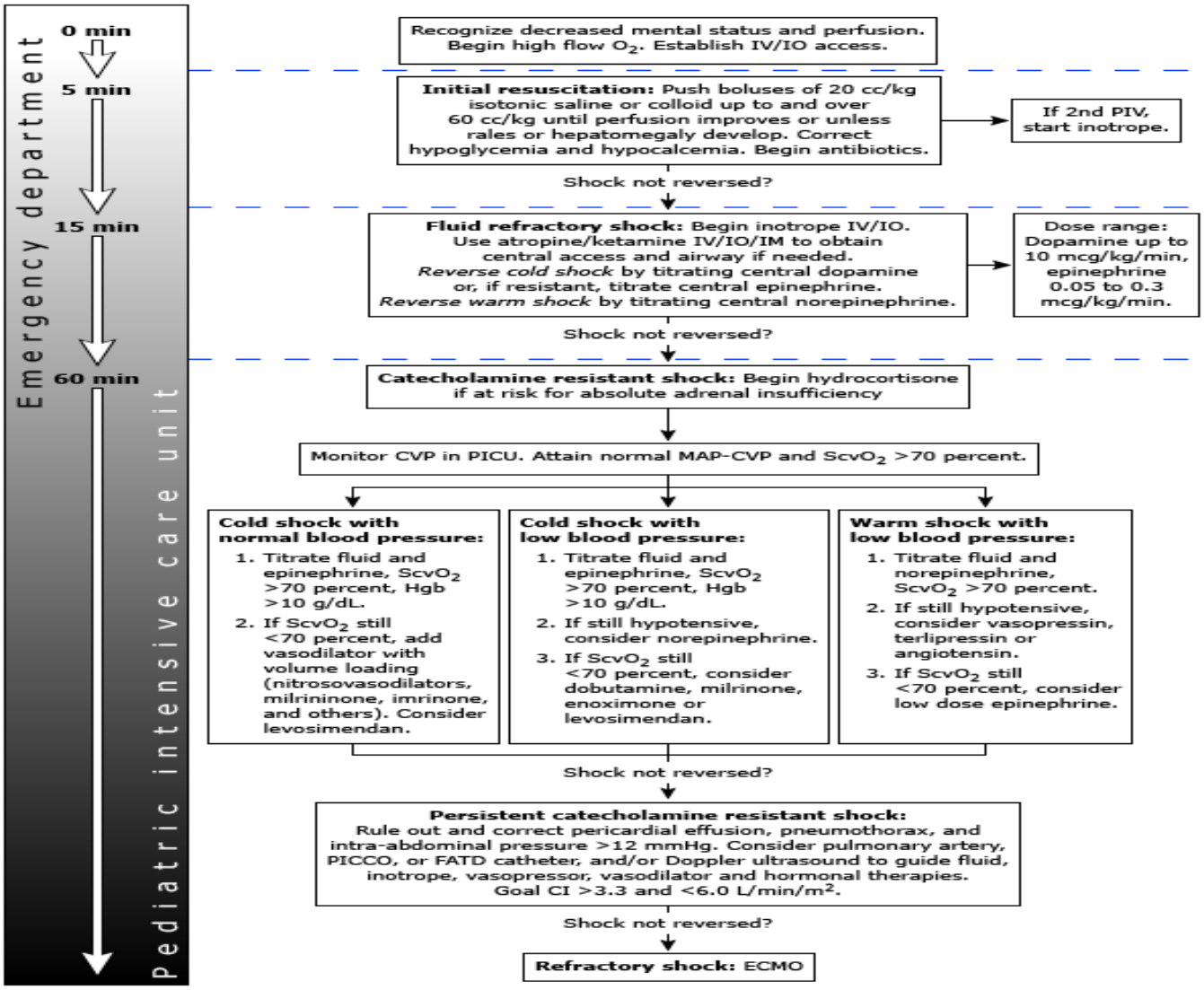
- **Weight ____ Kg HR_____ /min RR ____ /min BP___ /___mmHg O_2 sat ____ % in R/A ☐ %**

- Admit the patient to the hospital.

Does this child have early septic shock?

Features of circulatory and respiratory insufficiency are

1. Tachycardia,Tachypnea and/or desaturation
2. Increasing Systolic to Diastolic difference, Poor peripheral perfusion (cold extremities with prolonged CR)
3. Alteration in conscious state, metabolic acidosis - do not attempt to do an arterial blood gas in thrombocytopaenic patient without discussion with the init Registrar.



Prepared by: Dr. Asma Saif
Pediatric House officer

Dr. Ahmad Mahah
Chairman of Emergency Department

September 10, 2015

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Name: ……

Age: ☐☐ **Yrs. / Month** **Sex:** ☐ **M** ☐ **F**

Nationality: ……..

Consultant in Charge: …….

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF HEART FAILURE

DATE: / / **TIME:** **ALLERGIES:** **MEDICATIONS:**

Weight ____ Kg **Temp: ___ °C** **HR_____ /min** **RR ____ /min** **BP___ /___mmHg**

General measures

- Keep warm, gentle handling.
- Oxygen supplementation, propped up position
- Fluid restriction to ¾ normal maintenance if not dehydrated or in shock
- Optimize caloric intake; low threshold for nasogastric feeding;
  - consider overnight continuous infusion feeds.
- Correct anaemia, electrolyte imbalance, treat concomitant chest infections

Antifailure medications

- **Frusemide (loop diuretic)**
  - Dose: 1 mg/kg/dose OD to QID, oral or IV
  - Continuous IV infusion at 0.1 – 0.5 mg/kg/hour if severe fluid overload
  - Use with potassium supplements (1 - 2 mmol/kg/day) or add potassium sparing diuretics.

- **Spironolactone**
  - (potassium sparing diuretic, modest diuretic effect)
  - Dose: 1 mg/kg/dose BD

- **Captopril**
  - Angiotensin converting enzyme inhibitor, afterload reduction agent
  - Dose: 0.1 mg/kg/dose TDS, gradual increase up to 1 mg/kg/dose TDS
  - Monitor potassium level (risk of hyperkalaemia)

- **Digoxin**
  - Role controversial / **Consult Cardiologist**
  - Useful in heart failure with excessive tachycardia, supraventricular tachyarrhythmias.

- **IV inotropic agents**
  - i.e. Dopamine, Dobutamine, Adrenaline, Milrinone / **Consult Cardiologist**
  - Use in acute heart failure, cardiogenic shock, post-op low output syndrome.

Specific management And Establishment of definitive aetiology is of crucial importance
Specific treatment targeted to underlying aetiology.

TIME: **DOCTOR SIGNATURE:** **NURSE SIGNATURE:**

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House Officer

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Age: ☐☐ Yrs. / Month Sex: ☐ M ☐ F

Nationality: ……..

Consultant in Charge: …….

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF HYPERCYANOTIC SPELLS

DATE: / / TIME: ALLERGIES: MEDICATIONS:

Weight ____ Kg Temp: ___ °C HR_____ /min RR ____ /min BP___ /___mmHg

- Admit patient to Resuscitation unit .
- Connect to a Cardio-Respiratory monitor .
- Consult Cardiology Specalist / Consultant

- Knee-chest/squatting position:
  - Place the baby on the mother's shoulder with the knees tucked up underneath.
  - This provides a calming effect, reduces systemic venous return and increases SVR .

- Administer 100% oxygen
  - Give IV/IM/SC morphine 0.1 – 0.2 mg/kg to reduce distress and hyperpnoea.

If the above measures fail:

- Give IV Propranolol 0.05 – 0.1 mg/kg slow bolus over 10 mins.
- Alternatively, IV Esmolol 0.5 mg/kg slow bolus over 1 min, followed by 0.05 mg/kg/min for 4 mins.
  - Can be given as continuous IV infusion at 0.01 – 0.02 mg/kg/min.
  - Esmolol is an ultra short acting beta blocker

- Volume expander (crystalloid or colloid) 20 ml/kg rapid IV push to increase preload.
- Give IV sodium bicarbonate 1 mEq/kg to correct metabolic acidosis.
- Heavy sedation, intubation and mechanical ventilation.

In resistant cases, consider

- IV Phenylephrine / Noradrenaline infusion to increase systemic vascular resistance and reduce right to left shunt. / Consult Pediatric Surgeon For emergency Blalock Taussig shunt.

Other notes:

- A single episode of hypercyanotic spell is an indication for early surgical referral (either total repair or Blalock Taussig shunt).

- Oral propranolol 0.2 – 1 mg/kg/dose 8 to 12 hourly should be started soon after stabilization while waiting for surgical intervention.

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Name: ……

Age: ☐☐ Yrs. / Month Sex: ☐ M ☐ F

Nationality: ……

Consultant in Charge: ……

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF KAWASAKI DISEASE

DATE: / / TIME: ALLERGIES: MEDICATIONS:

Weight ____ Kg Temp: ___ °C HR_____ /min RR ____ /min BP___ /___mmHg

Diagnostic Criteria for Kawasaki Disease
• Fever lasting at least 5 days.
• At least 4 out of 5 of the following:
• Bilateral non-purulent conjunctivitis.
• Mucosal changes of the oropharynx (injected pharynx, red lips, dry fissured lips, strawberry tongue).
• Changes in extremities (oedema and/or erythema of the hands or feet, desquamation, beginning periungually).
• Rash (usually truncal), polymorphous but non vesicular.
• Cervical lymphadenopathy.
• Illness not explained by other disease process.

INVESTIGATIONS

- Full blood count - anaemia, leucocytosis, thrombocytosis.
- ESR and CRP are usually elevated.
- Serum albumin < 3g / dl; Raised alanine aminotransaminase
- Urine > 10 wbc / hpf
- Chest X-ray, ECG.
- Echocardiogram in the acute phase; Repeat at 6-8 wks/earlier if indicated.

Treatment

Primary treatment

- IV Immunoglobulins 2 Gm/kg infusion over 10 - 12 hours.
  Therapy < 10 days of onset effective in preventing coronary vascular damage.
- Oral Aspirin 30 mg/kg/day for 2 wks or until patient is afebrile for 2-3 days.

Maintainence:

- Oral Aspirin 3-5 mg/kg daily (anti-platelet dose) for 6 - 8 weeks or until ESR and platelet normalise.
- If coronary aneurysm present, then continue aspirin until resolves.
- Alternative: Oral Dipyridamole 3 - 5 mg/kg daily.

Kawasaki Disease not responding to Primary Treatment Defined as persistent or recrudescent fever ≥ 36hrs after completion of initial dose of IV Immunoglobulins.
Treatment • Repeat IV Immunoglobulins 2 Gm/kg infusion over 10 - 12 hours

Vaccinations

- The use of Immunoglobulins may impair efficacy of live-attenuated virus vaccines. Delay these vaccinations for at least 11 months.

TIME: DOCTOR SIGNATURE: NURSE SIGNATURE:

Prepared by : Dr. Yasser Al Dabbagh
House Officer

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KINGDOM OF SAUDI ARABIA

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Ministry of Health

MATERNITY AND CHILDREN HOSPITAL
JEDDAH

EMERGENCY DEPARTMENT

File NO.: ☐☐☐☐☐☐☐☐☐☐

Name: ……

Age: ☐☐ Yrs. / Month Sex: ☐ M ☐ F

Nationality: ……

Consultant in Charge: ……

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF CROUP

DATE: / / TIME: ALLERGIES: MEDICATIONS:

- **Weight ____ Kg Temp: ___ °C HR_____ /min RR ____ /min BP___ /___mmHg**
- **Westley croup severity score**

Clinical feature	Assigned score
Level of consciousness	Normal, including sleep = 0 Disoriented = 5
Cyanosis	None = 0 With agitation = 4 At rest = 5
Stridor	None = 0 With agitation = 1 At rest = 2
Air entry	Normal = 0 Decreased = 1 Markedly decreased = 2
Retractions	None = 0 Mild = 1 Moderate = 2 Severe = 3

Score mild ≥ 2 moderate 3 – 7 severe ≥8

Mild

- Give **PO Dexamethasone ____ mg (0.15 mg/kg – 0.6 mg/kg)** max. Dose 16 mg. ☐
- Discharge after educating parents.

TIME: DOCTOR SIGNATURE: NURSE SIGNATURE:

Moderate

- Admit patient to observation with Minimal intervention
- Give **PO Dexamethasone ____ mg (0.15 mg/kg – 0.6 mg/kg)** max. Dose 16 mg. ☐
- Give **Beudesonide** (pulmicort) **nebulizer 2mg ,if patient is vomiting** ☐

TIME: DOCTOR SIGNATURE: NURSE SIGNATURE:

Severe

- Admit patient to observation with Minimal intervention
- Connect to a Cardio-Respiratory monitor
- Start Oxygen 100% as needed keeping Oxygen saturation >95%
- Give **Racemic Epinephrine Nebulizer ____ml** (0.05 ml/kg/dose**)** max. dose 0.5 ml ☐

OR

- Give **Epinephrine** (1: 1000) **Nebulizer ____ml** (0. 5 ml/kg/dose**)** ☐
  Max. Dose 2.5 ml < 4 yrs &5ml > 4 yrs
- Give **Dexamethasone ____ mg (0.15 mg/kg – 0.6 mg/kg),by____ (IV, IM, PO)** ☐
  Max. Dose 16 mg.
- Give **Beudesonide** (pulmicort) **nebulizer 2mg ,if patient is vomiting** ☐
- **Admit to PICU**
- **Consider intubation at any time**

TIME: DOCTOR SIGNATURE: NURSE SIGNATURE:

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Pediatric Emergency consultant

Dr. Ahmad Mahah
Chairman of Emergency Department

Bronchiolitis

- Children < 2 yrs, look for risk factors for sever +/- complication bronchiolitis

Risk Factors for severe Disease:
1-Prematurity 2- BPD patient.
3-congenital and anatomic defects of the airways.
4-CHD. 5-Immunodeficiency.
6-Neurological disease.

Assess Severity

Mild
-None or end exp. wheeze
-Normal feeding.
-No O2 requirement.
-No/mild indrawing.
-Normal behavior.
-No apnea.

MODERATE
-Entire expiration wheeze
- < Usual frequently stops feeding/ > half-normal feed volumes.
-May require O2.
-Intercostal- supraclavicular retraction.
-Some intermittent irritability.
-No apnea.

SEVERE
-Inspiratory & expiratory wheeze
-Feeding: not interested / < half-normal feeds\ gasping\ coughing.
-Require O2.
-Sever with rascal flaring.
-Irritability / lethargic / Toxic..
-Possible apnea.

Meets Discharge criteria:
1-RR < 70 breaths\min
2- SpO2 >94 % on RA
3-Adequate oral intake (at least> 75% of usual intake).

NO

Admit

-ABC, Monitor vitals, Blood gases.
-urine test if febrile
-supplemental O2 (maintain SpO2 > 90-92%)
- NS nasal drops with nasal bulb suction prior to feeding.

-Hypoxemia (despite O2).
-Hypercapnea (pCO2 > 55mmHg, >7.33 Kpa).
-Apnea.

-Consider PICU: CPAP,HFNC (heated humified high flow nasal cannula).

YES

Discharge home:
*NS nasal drops with nasal bulb suction prior to feeding.

Fedding:
-Asses level of hydration.
-Hold oral feeds if RR >60, swallowing dysfunction, copious oral secretion.
-consider NGT.
-consider IV fluid.

Salbutamol Neb. (trail)
-2.5mg <20Kg
-5mg >20Kg
-over 5-15min
OR MDI salbutamol 4-6 puffs.

Evaluate after 1 hour

No response D/C Salbutamol

2.25% epinephrine (trial for 1 dose) 0.05ml/kg/dose evaluate after 1h D/C if no response, then trial Neb 3% saline.

Response

Cont Salbutamol Neb

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Nationality: ……

Consultant in Charge: ……

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF STATUS ASTHMATICUS

DATE: / / **TIME:** **ALLERGIES:** **MEDICATIONS:**

- **Weight ____ Kg HR_____ /min RR ____ /min BP___ /___mmHg O_2 sat ____ % in R/A %**
- Admit patient to Resuscitation/ Step-down Unit
- Connect to a Cardio-Respiratory monitor
- Start Oxygen 40-60% as needed keeping Oxygen saturation between 92%-95% IF NEEDED

FIRST LINE MANAGEMENT:

If weight is < 20 Kg, use Ventolin2.5 mg & Atrovent 250 micrograms

- Give **VENTOLIN NEBULIZER 2.5 mg X 3 doses** back to back
  PLUS
- Give **ATROVENT NEBULIZER 250 micrograms X 3 doses** back to back ☐

OR

If weight is ≥ 20 Kg, use Ventolin 5 mg & Atrovent 500 micrograms

- Give **VENTOLIN NEBULIZER 5 mg X 3 doses** back to back
  PLUS
- Give **ATROVENT NEBULIZER 500 micrograms X 3 doses** back ☐

- Give **PREDNISOLONE ____ mg** (dose is 1 mg/Kg) **orally** stat ☐

TIME: **DOCTOR SIGNATURE:** **NURSE SIGNATURE:**

SECOND LINE MANAGEMENT: **If patient is still distressed and requires further nebulizer treatment**
After discussion with THE MOST SENIOR EMERGENCY DEPARTMENT TEAM LEADER ON DUTY

- Inert an IV lines
- Laboratory investigations: CBC& Chemistry
- Start on **D5% + 0.45% NS IV Fluids** to run at a rate of ___ **ml/hour** (Calculate maintenance)
- Give **METHYL PREDNISOLONE ____ mg** (dose is 1 mg/Kg) **IV** stat ☐
- Give **VENTOLIN NEBULIZER 2.5 mg X 3 doses** back to back ☐
- Give **VENTOLIN NEBULIZER 5 mg X 3 doses** back to back ☐
- Give **MAGNESIUM SULFATE _____ mg** (dose is 50 mg/kg) (2g max) **IV over 30 minutes** ☐
  (observe BP mean while infusion)

TIME: **DOCTOR SIGNATURE:** **NURSE SIGNATURE:**

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May 17, 2015

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THIRD LINE MANAGEMENT: If patient is still distressed with NO FURTHER IMPROVEMENT

After discussion with a THE MOST SENIOR EMERGENCY DEPARTMENT TEAM LEADER ON DUTY

- **CONTINEOUS VENTOLIN NEBULZER:**

Ventolin Nebulizer solution _____ mg (4 mg/Kg) in 200 ml of 0.9 % Normal Saline to run at a rate of 18 - 20 ml/hour (0.35 - 0.4 mg/Kg/hour) ☐

- Give **ATROVENT NEBULIZER 250 mg** every 4 hour X 24 hours ☐
- Give **ATROVENT NEBULIZER 500 mg** every 4 hour X 24 hours ☐
- Start **D5% + 0.45% Normal Saline + Potassium Chloride 40 mEq/L** at a rate of ___ **ml/hour** (Calculate maintenance) ☐
- **TERBUTALINE IV ____ micrograms** (10 micrograms/kg) (max 300mcg) over 10 minutes bolus ☐

THEN

- **TERBUTALINE CONTINUOUSE INFUSION** at a rate of 0.5 – 1 microgram/Kg/minute ☐
- **AMINOPHYLLINE ____ mg** (6 mg/kg) (max 500mg) loading dose to run over 30 minutes ☐

FOLLOWED BY

- **AMINOPHYLLINE CONTINUOUS INFUSION** at a rate of ____mg/kg/hour ☐

Dose according to age : 2 – 6 year ► **0.4 – 0.5 mg/kg/hr**
6- 11 year ► **0.6 – 0.7 mg/kg/hr**
11 – 12 year ► **0.8 – 1 mg/kg/hr**
≥12 year ► **0.7 mg/kg/hr**

- Consult PICU ☐
- Consult Pulmonologist ☐

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Nationality: ……

Consultant in Charge: ……

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF STATUS EPILEPTICUS

DATE: / / **TIME:** **ALLERGIES:** **MEDICATIONS:**

- **Weight ____ Kg** **Temp: ___ °C** **HR_____ /min** **RR ____ /min** **BP___ /___mmHg**
- Admit patient to Resuscitation unit
- Connect to a Cardio-Respiratory monitor
- Start Oxygen 100% as needed keeping Oxygen saturation between 95%-97%
- Inert an IV lines
- **Laboratory investigations:**
  CBC, Chemistry, Phosphate, calcium, and magnesium, LFT, and Gluco-check bed side.
  Take Drug levels if patient is on any anticonvulsants

FIRST LINE MANAGEMENT: Benzodiazepines can be repeated every 5 minutes X 3 times if still seizing

- Give **PR DIAZEPAM ____ mg (0.5 mg/Kg)** Max. total dose is **10 mg**, if IV is not inserted yet ☐☐☐
- Give **IV LORAZEPAM ____ mg (0.1 mg/Kg**) over 2-5 minutes. Max. total dose is **4 mg** ☐☐☐
- Give **IV DIAZEPAM ____ mg (0.15 mg/Kg**) over 2-5 minutes. Max. total dose is **10 mg** ☐☐☐
- Give **IV/IM MIDAZOLAM ____ mg (0.2 mg/Kg)** over 2-5 minutes. Max. total dose is **10 mg** ☐☐☐
- Give **IV D10% ____ ml** (2.5ml/Kg as a bolus) if **HYPOGLYCEMIA** is present. Do Gluco-check in 15 min ☐

TIME: **DOCTOR SIGNATURE:** **NURSE SIGNATURE:**

If patient is still seizing after 5 minute from last dose of Benzodiazepine, consider the second line

SECOND LINE MANAGEMENT: If patient is ≤ 1 year, consider directly the third line of management

- Give **PHENYTOIN ____ mg loading** (20 mg/Kg) over 30 minutes. Max rate is 1mg/Kg/minute ☐

TIME: **DOCTOR SIGNATURE:** **NURSE SIGNATURE:**

If patient is still seizing after 5 – 10 minute from starting phenytoin, consider the third line

THIRD LINE MANAGEMENT:

- Give **PHENOBARBITONE ____ mg loading** (20 mg/Kg) over 20 minutes. ☐

TIME: **DOCTOR SIGNATURE:** **NURSE SIGNATURE:**

If patient is still seizing after 5 – 10 minute from starting phenobarbitone, consider the following

ADVANCE LINE OF MANAGEMENT:

- Start **MIDAZOLAM** Continuous infusion at a rate of **2 microgram/Kg/min** ☐
- **Midazolam PRN ____ mg** IV Q 2 hr (0.1 0.2 mg/kg/dose) ☐
- Consult PICU ☐
- Consult Neurologist ☐
- Consider Intubation ☐
- Consider continuous EEG monitoring ☐

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Nationality: ……..

Consultant in Charge: …….

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF FEBRILE SIZURES

DATE: / / TIME: ALLERGIES: MEDICATIONS:

Weight ____ Kg Temp: ___ °C HR_____ /min RR ____ /min BP___ /___mmHg

Classification of Febrile Seizures	
Simple Febrile Seizures	**Complex Febrile Seizures**
• Duration < 15 minutes	• Duration > 15 minutes
• Generalised seizure.	• Focal features
• Does not recur during the febrile episode	• > 1 seizure during the febrile episode
	• Residual neurological deficit post-ictally, such as Todd's paralysis

Management

• Not all children need hospital admission.

The main reasons are:

- Fear of recurrent seizures.
- To exclude intracranial pathology especially infection.
- To investigate and treat the cause of fever besides meningitis/encephalitis.
- To allay parental anxiety, especially if they are staying far from hospital.

Investigations

• The need for blood counts, blood sugar, lumbar puncture, urinalysis, chest X-ray, blood culture etc, will depend on clinical assessment of the individual case.

Lumbar puncture

Must be done unless contraindicated

- Prior antibiotic therapy.
- Any signs of intracranial infection / Nuchal Rigidity .
- Persistent lethargy and not fully interact tive 6 hours after the seizure.

Strongly recommended if

- Age < 12 months old.
- First complex febrile seizures.
- In district hospital without paediatrician.
- Parents have difficulty bringing in child again if deteriorates at home.

• Serum calcium and electrolytes are rarely necessary.

• EEG is not indicated even if multiple recurrences or complex febrile seizures.

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Control fever

- Avoid excessive clothing
- Use antipyretic e.g. syrup or rectal Paracetamol 15 mg/kg 6 hourly for patient's comfort,
  - Alteranetvely Ibuprofen 10 mg/kg 6-8 hourly .
  - Ahis may not reduce the recurrence of seizures.

For patients who have an ongoing seizure at the time of assessment (i.e., febrile status epilepticus),

- intravenous diazepam (0.2 to 0.5 mg per kg of weight intravenously every 15 minutes for a cumulative dosage of 5 mg in children one month to five years of age) often is effective.
- Lorazepam (0.1 mg per kg up to 4 mg) is another intravenous medication, and it has a longer duration of action compared with diazepam.
- For the pre-hospital treatment of a seizure or for patients in whom intravenous access is limited, rectal diazepam (a single dose of 0.5 mg per kg for children two to five years of age) or diazepam gel is an option.

Patient Education

Parents of children with high risk of recurrent febrile seizures should be supplied with Rectal Diazepam ; They should be advised on how to administer it if the seizures lasts more than 5 minutes.

Parents should also be advised on First Aid Measures during a Seizure.

Parents should be counselled on the benign nature of the condition

Note :

- Anticonvulsants are not recommended for prevention of recurrent febrile seizures because:
  - The risks and potential side effects of medications outweigh the benefits
  - No medication has been shown to prevent the future onset of epilepsy.
  - Febrile seizures have an excellent outcome with no neurological deficit nor any effect on intelligence.

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DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF INCREASED ICP

DATE: / / **TIME:** **ALLERGIES:** **MEDICATIONS:**

Weight ____ Kg **Temp: ___ °C** **HR_____ /min** **RR ____ /min** **BP___ /___mmHg**

1. Assessment:

A. Obtain history regarding trauma, prior shunt or other neurologic surgical or medical condition, vomiting, fever, headache, neck pain, unsteadiness, seizure, vision change, gaze preference, and change in mental status.

- In infants, look for irritability, vomiting, poor feeding, lethargy, and bulging fontanelle.

B. Physical examination:

(1) Evaluate vital signs for Cushing triad (hypertension, bradycardia, irregular respiratory pattern) as a sign of increasing intracranial pressure.

(2) Thorough neurologic examination: Attention to photophobia, pupillary response, papilledema, cranial nerve dysfunction (especially paralysis of upward gaze or abduction), neck stiffness, neurologic deficit, abnormal posturing, altered mental status, or evidence of trauma.

C. Laboratory studies: CBC, electrolytes, glucose, toxicology screen, blood culture. Lumbar puncture (LP) is contraindicated due to herniation risk if cause is obstructive.

2. Management:

- Elevate head of bed 30 degrees.
- Patient should be midline with neck straight to maximize venous drainage from the head.
- Keep life-saving stabilizing devices in place, but be certain cervical collars and medical devices
- Do not obstruct jugular venous drainage By Any Mean .
- Obtain emergent neurosurgical consult and head CT.
- Do not lower BP if elevated ICP is suspected.
- Immobilize C-spine if trauma is suspected.

A. Stable patient

(responsive, stable vital signs, no focal findings):

- Apply cardiorespiratory monitor.

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B. Unstable patient:

(1) Give normal saline or hyperosmolar solutions for maintenance fluids.

(2) For temporary reduction of ICP give 3% NaCl bolus (range, 2 to 5 mL/kg).
- Maintain serum osmolarity goal of <360 mOsm/L.
- Alternatively, can use mannitol 0.25 g/kg with max single dose of 12.5 g. Can increase dose to 1 g/kg, although high dose mannitol can produce significant hypotension due to osmotic diuresis, so consider giving fluid bolus at same time. If using mannitol, remember to place a Foley catheter.

(3) Reserve hyperventilation for acute management; keep partial pressure of carbon dioxide (Paco2) at 30 to 35 mmHg. Provide controlled neuroprotective intubation , and consider advanced neuromonitoring for evaluation of cerebral ischemia.

(4) In traumatic brain injury (TBI), consider controlled moderate hypothermia (32° to 33°C).

C. Do not delay antibiotics if meningitis suspected.

D. In space-occupying lesions (tumors, abscesses), consider dexamethasone to reduce cerebral edema (in consultation with a neurosurgeon). Otherwise, corticosteroids are not recommended for children with TBI.

E. Consider epinephrine or phenylephrine infusion to maintain systemic pressure above ICP.

CEREBRAL PERFUSION PRESSURE (CPP)=MAP−ICP

Goal minimum CPP is 40 mmHg in children with TBI.

F. Prevent hyperthermia: Goal is body temperature <37.5°C.

G. Consider consult for prophylactic seizure control to reduce incidence of early posttraumatic seizures in children with TBI.

H. Avoid hypotension, hypoxia, hypercarbia, and hypovolemia.

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Nationality: ……..

Consultant in Charge: …….

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF NEAR DROWNING

DATE: **TIME:** **ALLERGIES:**

- **Weight _____ HR_____ /min RR ____ /min BP_____mmHg O_2 sat ____ % in** R/A ☐ %

- Admit to the resuscitation room, attach the patient to cardiopulmonary monitor. ☐
- Rapidly assess airway, breathing, circulation and conscious state. ☐
- Insert 2 large bore IV lines.
- If child is in cardiorespiratory arrest start CPR immediately (protect cervical spine if any possibility of injury).
- If sign of shock give NS bolus ___ (20 ml/kg) once shock is reversed fluid restrict to 75% maintenance ____ .
- Consider inotropic support ___ .
- If spontaneously breathing administer 100% oxygen by face mask maintain SpO2 above 94%.
- **Intubate if:**

1. sign of neurological deterioration or inability to protect airway
2. inability to maintain PaO2 >60mmhg or O2 sat >90 despite high flow supplemental o2
3. PaCO2 >50mmhg.

- Remove wet clothes and start rewarming in hypothermic patient (actively till 34C then passively). ☐
- Monitoring and control of intracranial pressure is required.
- Administer penicillin ___ ( ) .
- **Lab Investigation:** CBC, DLC, chemistry, VBG, creatinine, BS, chest X-ray, ECG.
- Monitor for 8 hours then move the patient to the word if stable. ☐

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01DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF COMA

DATE: **TIME:** **ALLERGIES:**

- **Weight _____ HR_____ /min RR ____ /min BP_____mmHg O_2 sat ____ % in** ☐ **R/A** ☐ **%**

- Admit to the resuscitation room.
- ABC (stabilize the spine if trauma is suspected and involve neurosurgery)
- GCS __ /15 intubation if less than 8, BS __, fundoscopy _____.
- Connect to cardiopulmonary monitor and insert 2 IV line. ☐
- If convulsion (follow **convulsion protocol**).
- Give D10% __ (2.5ml/kg) if BS < 45mg/dl.
- **Naloxone** __ 0.1 mg/kg (max. 2 mg) i.v. ± repeat.
- If infection was suspected give ceftriaxone____ , vancomycin_____ and acyvlovir _____.
- For increased ICP give Mannitol __ (0.5-1g/kg).
- If **hyperammonemia** give:
  1- D10 ___.
  2- Na benzoate ____.
  3- Phenylacetate ____ or phenylbutyrate ____.
  4- Arginine ____.
  5- hemodialysis if x 10 the reference ☐
- **Laboratory investigation:**
- 1st: CBC, VBG, chemistry, BUN, creatinine, blood and urine C&S, coagulation screen, LFT, ammonia, cortisol, toxicology screen, LP, urine analysis, urine drug, CXR, CT, EEG
- 2nd: UA, urine ketone and metabolic screen, plasma protines, urine organic acid, plasma free fatty acid, carnitine profile, lactate, pyruvate.
- Admit to the ICU.

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Nationality: ……..

Consultant in Charge: …….

DOCTORS ORDER SHEET FORM FOR MANAGEMENT OF GASTROENTERITIES

DATE: / / TIME: ALLERGIES: MEDICATIONS:

- **Weight ____ Kg HR_____ /min RR ____ /min BP___ /___mmHg O_2 sat ____ % in R/A %**

WHAT CLINICAL SIGNS OF DEHYDRATION ARE PRESENT?

Characteristics	0	1	2
General appearance	Normal	Thirsty, restless or lethargic but irritable when touched	Drowsy, limp, cold, or sweaty, +/– comatose
Eyes	Normal	Slightly sunken	Very sunken
Mucous membranes (tongue)	Moist	Sticky	Dry
Tears	Tears	Decreased tears	Absent tears
Total Score	0	1 to 4	5 to 8
	no dehydration	Mild dehydration	Moderate/severe dehydration.

☐

MILD/ MODERATE DEHYDRATION:

- Admit patient to Observation Unit
- Inert an IV lines
- Laboratory investigations: CBC,Chemistry,VBG.
- Start on **NS IV Fluids** (20 ml\KG) **___ ml over one hour .**
- Then **D5% + 0.45% NS IV Fluids** to run at a rate of **___ ml/hour** (Calculate double maintenance) for 3 h.
- Start oral hydration after NS bolus.
- ORS Based on degree of dehydration : Hydration should be
  mild dehydration _____ ml (50ml/kg) over 4 hours .
  moderate dehydration___ml(100ml/kg) over 4 hours.
  Five ml(one teaspoon) administered every one to two minutes with added 10ml/kg of ORS for each diarrheoa and 2ml/kg for each emesis.
- Ondanesetron (Zofran) : only a single oral dose is needed to reduse vomiting ,facilitate the administration of ORS, and reduce the need for I.V __ mg (0.1mg/kg)maximum dose of 8mg.

TIME: DOCTOR SIGNATURE: NURSE SIGNATURE:

Prepared by: Dr. Basma Alhujaili
Pediatric Emergency consultant

Dr. Ahmad Mahah
Chairman of Emergency Department

May 17, 2015

KINGDOM OF SAUDI ARABIA

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Ministry of Health

MATERNITY AND CHILDREN HOSPITAL
JEDDAH

EMERGENCY DEPARTMENT

File NO.: ☐☐☐☐☐☐☐☐☐☐

Name: ……

Age: ☐☐ Yrs. / Month Sex: ☐ M ☐ F

Nationality: ……..

Consultant in Charge: …….

SEVERE DEHYDRATION: ☐

- Admit patient to Resuscitation/ Step-down
- Connect to a Cardio-Respiratory monitor
- Inert an IV lines
- Laboratory investigations: CBC,Chemistry,VBG.
- Give a 20 mL/kg bolus of normal saline fast push; repeat until stable.
- Admit to PICU

TIME: **DOCTOR SIGNATURE:** **NURSE SIGNATURE:**

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May 17, 2015

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Nationality: ……

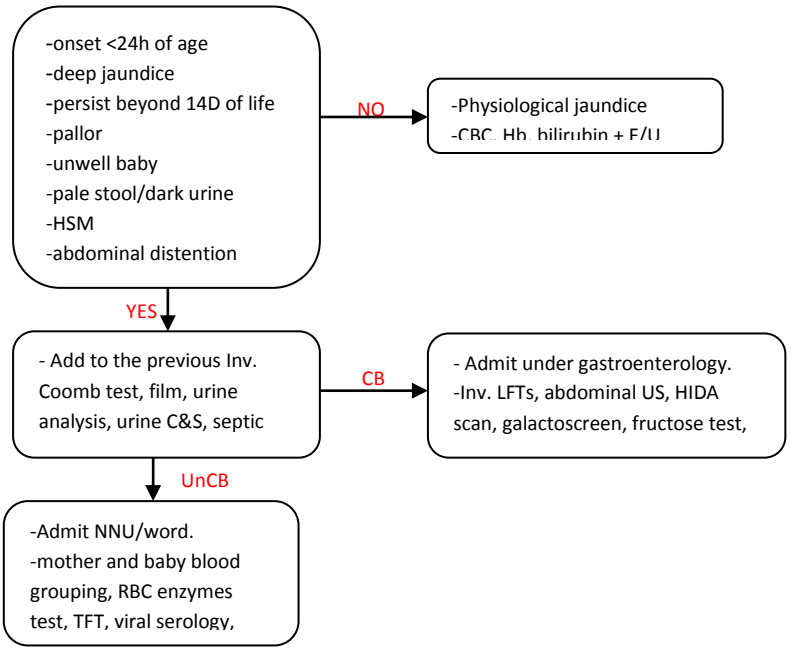
Consultant in Charge: ……

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF NNJ

DATE: **TIME:** **ALLERGIES:**

- **Weight _____ HR_____ /min RR ____ /min BP_____mmHg O_2 sat ____ % in** **R/A** **%**

- Admit to the hospital.
- Insert IV line give deficit + maintaince ____ .
- **Laboratory investigation:** CBC, RC, DLC, chemistry, mother and baby blood group, total Bilirubin and direct/indirect level, comb test, Hb electrophoresis, urine dipstick, urine & stool analysis, blood and urine C&S, blood film, LFT, TFT, serology and septic screen , metabolic screen, abdominal US , HIAD scan.
- Plot the bilirubin level in graph according to the GA ____.
- Add IV KCl __ after chemistry and passing urine.
- **Flowchart :**



DOCTOR SIGNATURE: **NURSE SIGNATURE:**

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May 20, 2015

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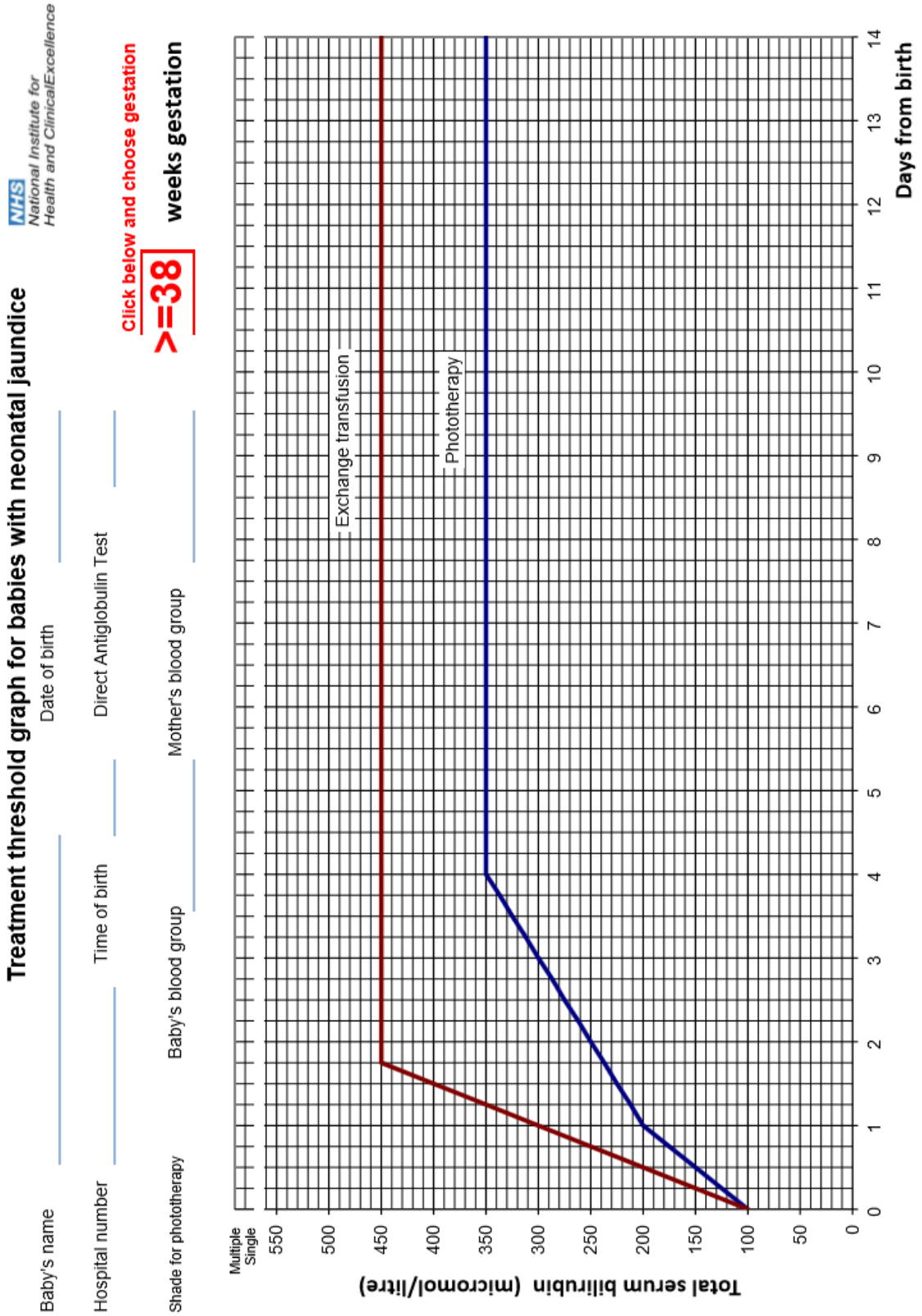

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May 20, 2015

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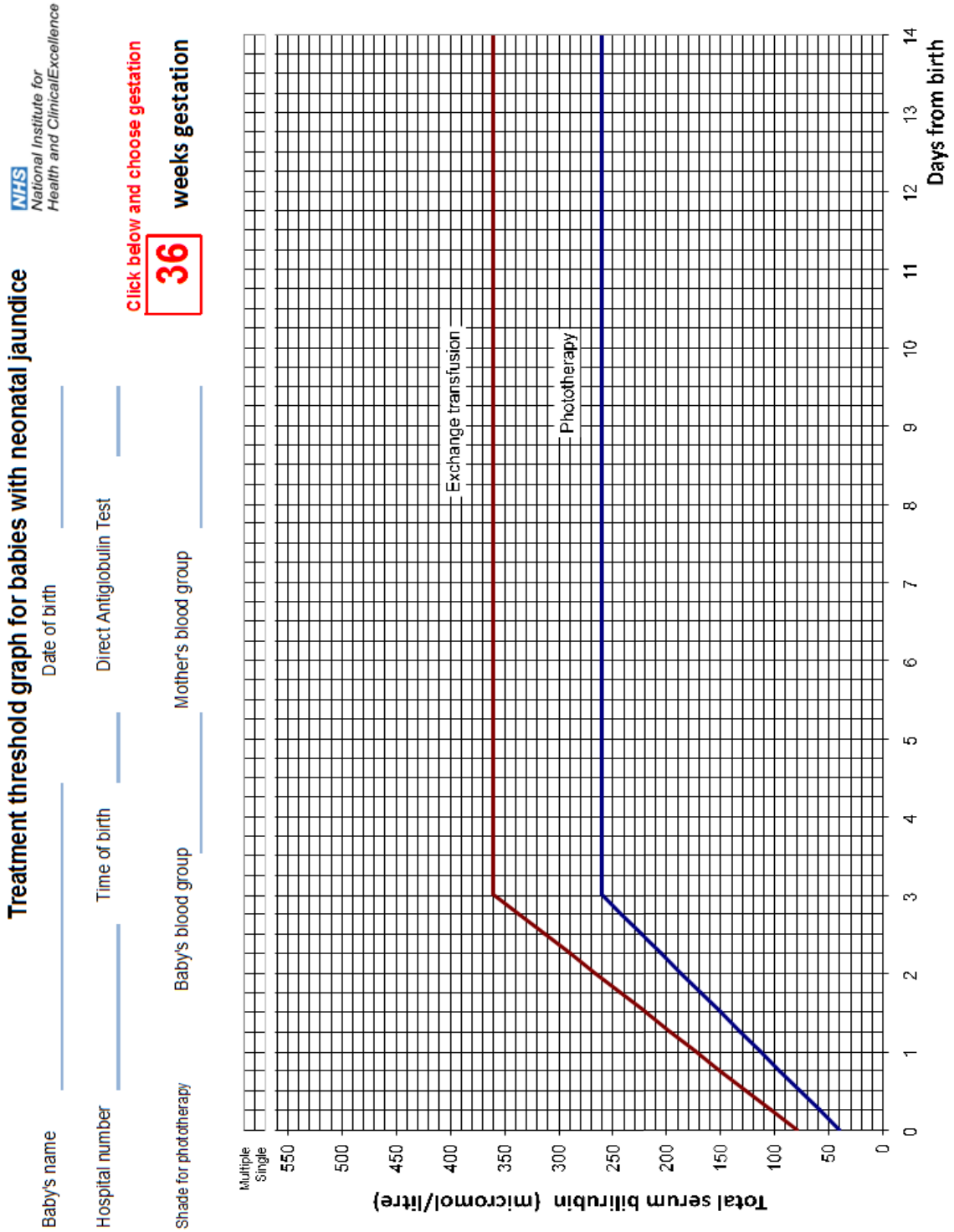
Nationality: ……

Consultant in Charge: ……



Prepared by: Dr.Alyaa A.Mohamed
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May 20, 2015

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Nationality: ……..

Consultant in Charge: …….

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF NEPHROTIC SYNDROME

DATE: **TIME:** **ALLERGIES:**

- **Weight** _____ **HR**_____ **/min RR** ____ **/min BP**_____**mmHg** O_2 **sat** ____ **% in** R/A ☐ %

First presentation of generalized edema, weight gain ,poor urine output

- Admit to hospital
- **Laboratory investigations:**
- Urine studies: Protien, Blood, Albumin: Creatinine ratio ,CBC, Chemistry,S.Albumen,Complement C3,C4,Cholesterol.
- Give **PREDNISOLONE** ____ **mg (60mg/m2 per day)** , PO☐
- Diet with no added salt
- Free fluid intake.
- Daily weight

- Indications for Albumen: anuria ,hypotension, poor skin perfusion with skin mottling or poor capillary return .Give only in consultation with treating consultant .Give 20% albumin 5ml/kg(1g/kg) over 4hr IV Beware of possibility of hypertension and pulmonary edema.
  Frusemide __ **mg (1mg/kg) IV should only** be given if the peripheral perfusion markedly improves following the albumin or there signs of pulmonary edema or hypertension

RELAPSES

- Consult with treating physician.
- **Laboratory investigations:** proteinuria+++ or ++++ for 4 days.
- **Give Prednisolone** ____ **mg (60mg/m2/ day)** until urine protein is 0 ☐
- **Relapses on prednisolone** consider addition of levamisole 2.5mg/kg/alternate days for 6-12 months or use of higher alternate daily prednisolone dose if this is well tolerated.
  If edema recurs also restart penicillin ora __ mg (12.5mglkgldose bd)☐ or the child ill or in sepsis use cefotaxime__ mg (50mg/lkg/dose/) ☐ and aspirin ___ (10mg/kg alternate days)☐

DOCTOR SIGNATURE: **NURSE SIGNATURE:**

Dr. Ahmad Mahah
Chairman of Emergency Department

May 20, 2015

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Nationality: ……..

Consultant in Charge: …….

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF HYPERTENSION

DATE: **TIME:** **ALLERGIES:**

- **Weight _____ HR_____ /min RR ____ /min BP_____mmHg O_2 sat ____ % in** **R/A** **%**

- Systolic and diastolic BP>95th percentile adjusted for age , gender, and height measured on 3 or more occasions.

- **Laboratory investigations:**
- ECG,CXR,CBC, Chemistry,Retics,urine microscopy , **For specific cases** urine toxicology screen,CT head,ECHO.
- **HYPERTENSIVE URGENCY**: No evidence of end-organ damage.
- ABC,IV line,close obs. And monitoring,consider peds nephrologist consult.
- HTN urgency secondary to chronic condition and tolerate oral Give **Hydralazine ____mg(0.25mg/kg/dose)max.single dose 25mg.**
- Give **Isradipine___mg(0.03_0.05mg/kg/dose)pts<2yo , for older pts___mg(0.05_0.1mg/kg/dose) max. single dose =5mg.** °
- **Clonidine**:for older children and oldescent ___**mg(0.05_0.1mg/dose**) can repeated hourly for up to 8hrs max.total dose 0.8mg.
- HTN urgency secondary to acute condition or cannot tolerate PO.
- Give IV bolus of **labetalol___mg(0.2_1mg/kg) or**
- **Hydralazine__mg (0.25mg/kg/dose)**
- **HYPERTENSIVE EMERGENCY : evidence of end organ damage.**
- ABC,IV lines,admit to PICU for obse.,monitoring,consider arterial line, nephrologest consult.
- Give IV bolus **Labetolol _____mg(0.2_1mg/kg) max.dose 40mg .**
- **Hyralzine**___mg **(0.2_0.6mg)**max single dose20mg
- After bolus ,start IV infusion : **labetolol___ (0.25_3mg/kg/hr) OR**
- **Nicardipine** initially-**(0.5_1mcg/kg/min).** titrate infusion rate q 15_30min(max dose 4_5mcg/kg/min).
- Consider adding IV furosemide__(1mg/kg) bolus for pts. Volume overload.
- **The goal is to decrease BP by no more than 25% over the first 8 hrs to avoid irreversible end organ damage. Further Bp reduction should be gradual over 48 hrs.**

DOCTOR SIGNATURE: **NURSE SIGNATURE:**

Dr.Ahmed Mahah

P.ER. consultant
Chairman of Emergency Department

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Age: ☐☐ Yrs. / Month Sex: ☐ M ☐ F

Nationality: ……

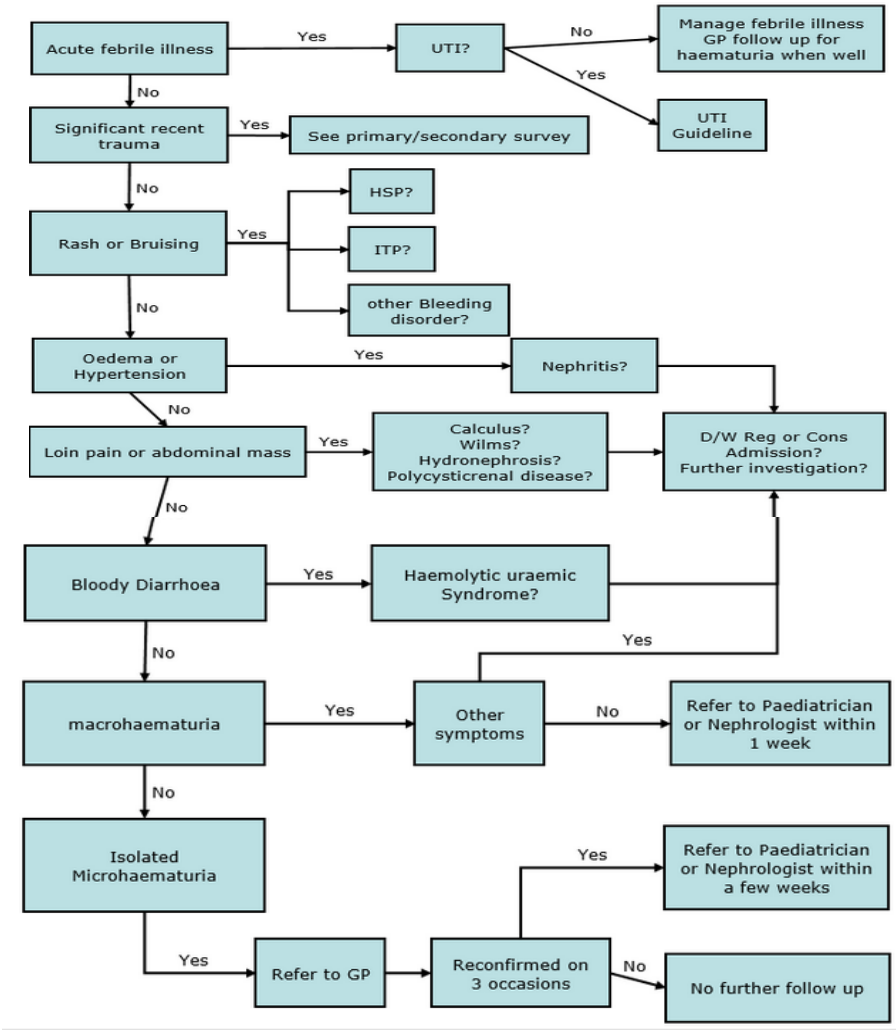
Consultant in Charge: ……

DOCTORS ORDER SHEET FORM FOR MANAGEMENT OF HEMATURIA

DATE: / / TIME: ALLERGIES: MEDICATIONS:

- Weight ____ Kg HR_____ /min RR ____ /min BP___ /___mmHg O2 sat ____ % in **R/A** **%**

- Admit to obsevation area.
- Hx of any food ingestion of red food beets , black berries yes ☐ no ☐.
- Hx of Drug ingested _____.
- Insert IV line.
- Investigation: CBC, RFT , DLC ,chemistry, urine analysis , urine culture , serology , complement, urine dipstick.



TIME: DOCTOR SIGNATURE: NURSE SIGNATURE:

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Pediatric House officer

Dr. Ahmad Mahah
Chairman of Emergency Department

septmber 9, 2015

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Nationality: ……..

Consultant in Charge: …….

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF UTI

DATE: / / **TIME:** **ALLERGIES:** **MEDICATIONS:**

Weight ____ Kg **Temp: ___ °C** **HR_____ /min** **RR ____ /min** **BP___ /___mmHg**

Diagnosis

- The diagnosis is best made with a combination of culture and urinalysis
- The quality of the urine sample is of crucial importance.
- Rapid diagnosis of UTI can be made by examining the fresh urine with urinary dipstick and microscopy. However, where possible, a fresh specimen of urine should be sent for culture and sensitivity.

Urine specimen transport

- If collected urine cannot be cultured within 4 hours; the specimen should be refrigerated at 4 C or a bacteriostatic agent e.g. boric acid (1.8%) added.
- Fill the specimen container pre-filled with boric acid with urine to the required level.

Management

- All infants with febrile UTI should be admitted and intravenous antibiotics started as for acute pyelonephritis.
- In patients with high risk of serious illness, it is preferable that urine sample should be obtained first; however treatment should be started if urine sample is unobtainable.

Antibiotic Treatment for UTI		
Type of Infection	**Preferred Treatment**	**Alternative Treatment**
UTI (Acute cystitis)		
E.coli. *Proteus spp.*	PO Trimethoprim 4mg/kg/dose bd (max 300mg daily) for 1 week	PO Trimethoprim/ Sulphamethazole 4mg/kg/dose (TMP) bd for1 week
• Cephalexin, cefuroxime can also be used especially in children who had prior antibiotics. • Single dose of antibiotic therapy not recommended.		
Upper Tract UTI (Acute pyelonephritis)		
E.coli. *Proteus spp.*	IV Cefotaxime 100mg/kg/day q8h for 10-14 days	IV Cefuroxime 100mg/kg/day q8h *OR* IV Gentamicin 5-7mg/kg/day daily
• Repeat culture within 48hours if poor response. • Antibiotic may need to be changed according to sensitivity. Suggest to continue intravenous antibiotic until child is afebrile for 2-3 days and then switch to appropriate oral therapy after culture results e.g. Cefuroxime, for total of 10-14 days.		
Asymptomatic bacteriuria		
No treatment recommended		

Prepared by : Dr. Yasser Al Dabbagh
House Officer

Reviewed By : Dr. Ahmad Mahah
Chairman of Emergency Department

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Antibiotic prophylaxis

- Antibiotic prophylaxis should not be routinely recommended in infants and children following first time UTI as antimicrobial prophylaxis does not seem to reduce significantly the rates of recurrence of pyelonephritis, regardless of age or degree of reflux. However, antibiotic prophylaxis may be considered in the following:
  - Infants and children with recurrent symptomatic UTI.
  - Infants and children with vesico-ureteric reflux grades of at least grade III.

Antibiotic Prophylaxis for UTI		
Indication	**Preferred Treatment**	**Alternative Treatment**
UTI Prophylaxis	PO Trimethoprim 1-2mg/kg ON	PO Nitrofurantoin 1-2mg/kg ON or PO Cephalexin 5mg/kg ON
• Antibiotic prophylaxis is not be routinely recommended in children with UTI. • Prophylactic antibiotics should be given for 3 days with MCUG done on the second day. • A child develops an infection while on prophylactic medication, treatment should be with a different antibiotic and not a higher dose of the same prophylactic antibiotic.		

Ultrasound Recommended in

- All children less than 3 years of age
- Children above 3 years of age with poor urinary stream, seriously ill with UTI, palpable abdominal masses, raised serum creatinine, non E coli UTI, febrile after 48 hours of antibiotic treatment, or recurrent UTI.

Consult Senior ER Consultant / Pediatric Nephrologist For Furhter Investigation / Management .

TIME: **DOCTOR SIGNATURE:** **NURSE SIGNATURE:**

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DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF DIABETIC KETOACIDOSIS

DATE: **TIME:** **ALLERGIES:**

- **Weight _____ HR_____ /min RR ____ /min BP_____mmHg**
- Admit patient to Resuscitation/Step down unit
- Connect to a cardio-respiratory monitor
- Start Oxygen 40-60% as needed keeping Oxygen saturation between 94%-97%
- Inert two IV lines
- **Laboratory investigations:**
- CBC, VBG, Chemistry, serum osmolarity, Phosphate, calcium, and magnesium, HbA1C, Thyroid Function Test, bed side Gluco-check and urine analysis
- Give **Normal Saline 0.9% bolus** at a rate of _____ ml/hour (10 ml/kg bolus)
- **After one hour bolus is done:**
  - Start **regular Insulin** at a rate of _____ ml/hour (weight by Kg X 1 ml) of:
    - ► Regular Insulin **25 IU in 250 ml** of 0.9% Normal saline **(if child is 30 kg or less)** ☐
    - ► Regular Insulin **50 IU in 500 ml** of 0.9% Normal saline **(if child is more than 30 kg)** ☐
  - **Start 0.9% Normal Saline** at a rate of _____ ml/hour **(calculate maintenance)**
    PLUS
  - **0.9% Normal Saline** at a rate of _____ ml/hour **(calculate 10% deficit over 48 hours)**
  - Calculate both fluids Maintenance + Deficit at one rate of ____ ml/hour
  - All Fluids including Insulin should not exceed _____ ml/hour (maintenance + deficit+ Insulin) **(subtract the Insulin Infusion rate from the total fluid rate)**
- Do Glucose check every one hour
- Do Neuro-vitals every one hour
- Input/output chart hourly
- Do VBG and Chemistry every 2 hours X 2 times, then if stable,
- Do VBG and Chemistry every 4 hours
- If **Blood Glucose** is:
  - Between **250 – 270 mg/dl,** add **D5%** at a rate of _____ml/hour (calculate maintenance and subtract it from total fluid intake)
  - Is **≤ 180 mg/dl OR rapid reduction of ≥ 100mg/dl/hour**, add **D10%** at a rate of _____ml/hour (calculate maintenance and subtract it from total fluid intake)
- **If Blood Potassium** level is:
  - **3.5-5 mEq/L**, add 20 mEq/L Potassium Chloride to the IV fluids ☐
  - **2.5-3.5 mEq/L**, add 40 mEq/L Potassium Chloride to the IV fluids ☐
  - **< 2.5 mEq/L**, Give 1 mEq/ kg Potassium Chloride, a total of ____ mEq over one hour ☐
- Consult Endocrinologist on call

DOCTOR SIGNATURE: **NURSE SIGNATURE:**

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DR. Mona AlFarouqi
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Chairman of Emergency Department
May 14, 2015

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MATERNITY AND CHILDREN HOSPITAL
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Nationality: ……..

Consultant in Charge: …….

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF HYPOGLYCEMIA

DATE: / / **TIME:** **ALLERGIES:** **MEDICATIONS:**

Weight ____ Kg **Temp: ___ °C** **HR_____ /min** **RR ____ /min** **BP___ /___mmHg**

From birth to 4 hours, glucose level of above 25 mg/dL (1.5 mmol/L) is acceptable if the infant is asymptomatic { Hypoglycaemia is defined as < 2.6 mmol/L after first 4 hours of life } .

- Admit patient to Resuscitation unit
- Connect to a Cardio-Respiratory monitor
- Document Initial Blood Suger = …… Mg/dl
- Send CBS Stat and Correlate BSL With Hematocrit .
- Collect Urine For Subsequent analysis if hypoglycemia persist .
- If on IV drip, check that IV infusion of glucose is adequate and running well.
- Examine and document any symptoms.
- Note when the last feeding was given.

Well infants who are at risk:

- Immediate feeding (eg, glucose tablets, glucose gel, table sugar, or fruit juice)
- Supplement feeding until breastfeeding established.

Unwell With Altered Consciousness infants:

- Set up dextrose 10% drip.
- Regular glucometer monitoring:
  - On admission and at 1, 2 and 4 hours after admission.
  - 3 -6 hourly just prior to feeding once stable for 24-48 hours.
- **Blood Sugar Level <1.5mmol/l (25 mg/dl) or if the baby is symptomatic:**
  - GIve IV bolus Dextrose 10% at 2-3 ml/kg.
  - Followed by dextrose 10% drip at 60-90ml/kg/day Maintenance .
  - If baby is already on dextrose 10% drip, consider increasing the rate or the glucose concentration (usually require 6-8 mg/kg/min of glucose delivery).
- **If Blood sugar level (BSL) 1.5 – 2.5 mmol/l (25-45 mg/dl) and asymptomatic:**
  - Give supplementary feed (EBM or formula) as soon as possible.
  - If BSL remains < 2.6 mmol/l and baby refuses feeds, give dextrose 10% drip.
  - If baby is on dextrose 10% drip, consider stepwise increment of glucose infusion rate by 2 mg/kg/min until blood sugar is > 2.6 mmol/L.
- **Glucose monitoring (capillary blood sugar - dextrostix, glucometer):**
  - If blood sugar is < 2.6 mmol/l, re-check glucometer 1/2 hourly.
  - If blood sugar > 2.6 mmol/l for 2 readings: Monitor hourly x 2, Then 2 hourly X 2, Then to 4-6 hourly if blood sugar remains normal.

Start feeding when capillary blood sugar remains stable and increase as tolerated.
Reduce the IV infusion rate one hour after feeding increment.

* Any bolus given must be followed by a continuous infusion of glucose, initially providing 4-8 mg/kg/ min. There is no place for treatment with intermittent glucose boluses alone.

Prepared by : Dr. Yasser Al Dabbagh
House Officer

Reviewed By : Dr. Ahmad Mahah
Chairman of Emergency Department

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MATERNITY AND CHILDREN HOSPITAL
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Persistent Hypoglycaemia

If hypoglycaemia persists despite intravenous dextrose, consult Endocrine specialist / Consultant

- Re-evaluate the infant
- Confirm hypoglycaemia with RBS but treat as such while awaiting RBS result.
- Increase volume by 30ml/kg/day and/or increase dextrose concentration to 12.5% or 15% .
  - ✓ Concentrations >12.5% must be infused through a central line.
- If hypoglycaemia still persists despite glucose delivery >8-10 mg/kg/min
  - consider glucagon 40 mcg/kg stat then 10-50mcg/kg/h.
  - Glucagon is only useful where there is sufficient liver stores,
  - Should not be used for SGA babies or in adrenal insufficiency.
- In others especially SGA, give IV Hydrocortisone 2.5 -5 mg/kg /dose bd.

$$\text{Glucose requirement (mg/kg/min)} = \frac{\text{\% of dextrose x rate (ml/hr)}}{\text{weight (kg) x 6}}$$

Recurrent or resistant hypoglycaemia

- Consider this if
  - ✓ failure to maintain normal blood sugar levels despite a glucose infusion of 15 mg/kg/min, or
  - ✓ When stabilization is not achieved by 7 days of life. High levels of glucose infusion may be needed in the infants to achieve euglycemia.

Investigations

BLOOD

- Intermediary metabolites (glucose, lactate, pyruvate, alanine, free fatty acid, glycerol and ketone bodies)
- Serum electrolytes, liver functions and acid – base status, C reactive protein
- Ammonia
- Amino acids
- Total and free carnitine
- Acylcarnitine profile
- Insulin, C - peptide, growth hormone, IGF1, IGFBP3, cortisol and thyroid hormones
- Galactosemia screen

URINE

- Ketones by dipstick
- Organic acids and aminoacids
- Reducing substances (galactose and fructose)

OTHERS

- Ophthalmic examination
- Cranial ultrasound scan and/ or MRI

Medical treatment

- As per protocol for Management of Persistent Hypoglycaemia.
  - PO Diazoxide 10-25mg/kg/day in three divided doses
    - Reduces insulin secretion, therefore useful in hyperinsulinaemia.
    - Not to be used in SGA infants.
  - SC Octreotide (synthetic somatostatin) 2-10 µg/kg/day bd/tds or as infusion

TIME: **DOCTOR SIGNATURE:** **NURSE SIGNATURE:**

Prepared by : Dr. Yasser Al Dabbagh
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Reviewed By : Dr. Ahmad Mahah
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DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF ADRENAL CRISIS

DATE: **TIME:** **ALLERGIES:**

- **Weight _____ HR_____ /min RR ____ /min BP_____mmHg O_2 sat ____ % in** R/A ☐ %

- History of Vomiting,nausea,weakness,dehydration,hypoglycemia,hypotention,hyperkalamia,hyponatraemia, acidosis and prerenal failure.
- Admit to observation area
- Inert IV lines
- Laboratory investigations:
- Immediate blood glucose,CBC, Chemistry,Blood gas,Cortisol and 17hydroxyprogesterone.
- **INTRAVENOUS FLUIDS:**
- **Shock or severe dehydration ____ ml (20ml/kg) i.v bolus.)** ☐
- Administer remaining deficit plus maintenance fluid volume as normal saline in 5%dextrose over 24hrs
- Check electrolytes and glucose frequently.
- After the first few hours,if serum sodium is greater than 130mmol/l change to half normal saline.
- 10%dextrose may be needed to maintain normoglycemia.
- **Moderate dehydration** NS____ **ml (10ml/kg) i.v bolus.** ☐
- Administer remaining deficit plus maintenance fluid volume as normal saline in 5%dextrose over 24hrs
- **Mild or no dehydration:** No bolus.
- 1.5 times maintenance fluid volume administered over 24 hours.
- **HYDROCORTISONE:**
- **Neonate**: 25mg stat and then10-25mg,6 hourly. ☐
- **1 month_1year** :25mg stat , then 25mg,6hourly. ☐
- **Toddlers (1-3years):** 25-50mg stat then 25-50 mg ,6 hourly. ☐
- **Chidren(4-12 years):** 50-75mg stat,then 50-75mg,6hourly ☐
- **Adolscent and adult:** 100-150mg stat, then100mg,6 hourly. ☐
- **Treat Hyperkalaemia:**
- **K > 6 mmol/l perfom ECG and apply cardiac monitor.** ☐
- **K>7mmol/l with hyperkalamic ECG changes.(peaked T waves, wide QRS complex)give 10% calcium gluconate__(0.5ml/kg) i.v.over 3-5 mins.**Commence infusion of **insulin__(0.1unit/kg/hr) i.v** together with infusion of 50% dextrose 2ml/kg/hr. ☐
- **K>7mmol/l with normal ECG: sodium bicarbonate___mmol(1-2mmol/kg)** i.v over 20mins, with infusion of **10% dextrose** at___(**5ml/kg/hr**). ☐
- **Treat hypoglycemia:**
- **Dextrose 10% bolus___ m l (2ml/kg)** in neonate or infant ☐
- **Dextrose 10% bolus____ml (5ml/kg).**in older children and adolescent. ☐
  Maintenance fluids should contain 5-10%dextrose.

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EMERGENCY DEPARTMENT

File NO.: ☐☐☐☐☐☐☐☐☐☐

Name: ……

Age: ☐☐ **Yrs. / Month** **Sex:** ☐ **M** ☐ **F**

Nationality: ……..

Consultant in Charge: …….

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF PROPIONIC ACIDEMIA

DATE: **TIME:** **ALLERGIES:**

- **Weight _____ HR_____ /min RR ____ /min BP_____mmHg O_2 sat ____ % in** **R/A** ☐ **%**
- Patients easily and frequently decompensate with minor infections and poor oral intake or vomiting.
- The following instructions need to be performed upon arrival to ER:
  - Admit to observation area
  - Inert IV line
  - **Laboratory investigations:**
  - Check Glucose ,CBG ,VBG ,or ABG,CBC, Chemistry ,Ammonia in addition to other investigations if needed.
  - Start one and half to double maintenance I.V.F as **10% Dextrose**_____
  - **IF HCO3 is<19-16meq** give a bolus of full correction NaHCO3 over 30 min and repeat level after 30m ☐
  - **IF HCO3 is 15-11 meg** give a bolus of NaHCO3 and start NaHCo3 infusion as 0.5meq/kg/h. ☐
  - **IF HCO3 is <10meq** give bolus of Nahco3 and start Nahco3 as 1meq/kg/h. ☐
  - **Repeat HCO3 frequently (2_4H) to adjust the dose until stabilized.**
  - **IF Ammonia is >250** give Ammonia 250mg/kg IV loading dose over 90min in D10, and then150q6hrs or continues infusion 600mg/kg/day. If between 25-100 repeat it after 4-6hours.
  - **Increase Carnitine dose to 150-200mg/kg/day divided 6-8hours IV, orally or NGT.**
  - Continue same Biotin Dose.
  - For constipation give glycerin suppositories, Dulcolax ,and metronidazole by NGT .(Avoid using Lactulose.)
  - Encourage special diet oral intake if possible.
  - Insure enough caloric intake > 100kcal/kg/d to shut down protein breakage.
  - Antibiotics can start according to clinical evaluation.
  - Granisertron 10-40 mcg /kg po or infused over 3 to 5 minutes to manage vomiting.

DOCTOR SIGNATURE: **NURSE SIGNATURE:**

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May 20, 2015

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DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF UREA CYCLE DISEASES

DATE: **TIME:** **ALLERGIES:**

- **Weight _____ HR_____ /min RR ____ /min BP_____mmHg O_2 sat ____ % in** **R/A** **%**
  - Admit to observation area
  - Insert IV lines
  - **Laboratory investigations:**
  - CBC, Chemistry, Blood gases ,Ammonia, Blood culture ,Liver transaminase, Ca, alkaline phosphatase ,total protein ,albumin ,bilirubins ,plasma amino acids, urine aminoacids and urine for organic acid.
  - High caloric intake is the main stay of therapy.
  - **D10 ½NS_____(1 ½ to double maintenance)** ☐
  - Start **insulin**_____(**0.01-0.05unit/kg/hour**) if develop hyperglycemia.
  - Potassium supplement through Iv line according to the K level:
  - >5.5= No kcl will be added
  - 3.5-5.5=kcl 20 meq/l. if he is on ammonia: kcl 30 meq/l.
  - <3.5=40meq/l.
  - <2.8=0.5meq/kg kcl as a bolus in prediluted solution 15meq/30ml D5 w over one hour
  - **Start intralipid 20%___-g(2-3g/kg/day)**
  - Give loading dose of ammonia as I.V infusion over 90minutes followed by the same maintenance dose divided over 24 hours.
  - Do not decrease Dextrose Rate or amount and Do not stop caloric delivery in the acute stage for any reason as this can precipitate hypoglycemia and catabolism.
  - Antibiotics according to clinical evaluation
  - Do Not Stop other oral chronic medications.
  - Start dialysis if above measure failed to reduce ammonia within 4 hours or if initial ammonia is >500mmol/l.

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DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF HYPERKALEMIA

DATE: **TIME:** **ALLERGIES:**

- **Weight _____ HR_____ /min RR ____ /min BP_____mmHg O_2 sat ____ % in** **R/A** **%**

CLINICAL FEATURES:
Serum potassium 5 to 7 meq /l: Generally asymptomatic.
Serum potassium greater than 7 meq /l :Muscle weakness ,paralysis ,
and cardiac changes on ECG and arrhythmias. Sudden arrest may occur.

- Admit to observation area and connect to cardiac monitor.
- Insert IV lines
- **Laboratory investigations:**
- Blood urea nitrogen (BUN), Blood glucose, Serum electrolytes.
- ECG changes (Not Tall T wave only), Widening QRS complex, loss of P waves ,Severe arrhythmias.
- True K + level >7meg/l:
- **Calcium gluconate 10% IV _____ ml (0.5ml/kg)** over 5 min max 20 ml.) ☐
- **Regular insulin_____ ___unit(0.1U/kg)max 10unit + Dextrose ____g (0.5g/kg)** over 30 min(D10% 5mll /kg < 5 years and D25% 2ml/kg.5 years) ☐
- **Sodium bicarbonate 8.4% IV ____ (1ml/kg= 1mmol/kg**) over 10-15 min.max single dose 50 mmol. For infant <6months use 4.2NaHCO3 2ml/kg ☐
- **Hemodialysis.**
- NO Cardiac Changes
- **Nebulized Salbutamol Q 20 min**.
- **Sodium polystyrene sulfonate_____ g (1g/kg) max 30 g, by NGT or retention enema. May repeat dose 4-6 hours.** ☐
- **Furosemide (lasix) _____ mg (1mg/kg) max single dose 40 mg.** ☐

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DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF HYPOKALEMIA

DATE: / / **TIME:** **ALLERGIES:** **MEDICATIONS:**

Weight ____ Kg **Temp: ___ °C** **HR_____ /min** **RR ____ /min** **BP___ /___mmHg**

Hypokalemia is defined as serum K+ > 3.4 mmol/l
(Treat if < 3.0mmol/l or Clinically Symptomatic < 3.4 mmol/l)

ECG changes of Hypokalemia

- ✓ These occur when K+ < 2.5mmol/l
  - ❖ Prominent U wave
  - ❖ ST segment depression Flat
  - ❖ low or diphasic T waves
  - ❖ Prolonged PR interval (severe hypoK+)
  - ❖ Sinoatrial block (severe hypoK+)

Treatment

- Identify and treat the underlying condition.
- Unless symptomatic, a potassium level of 3.0 and 3.4 mmol/l is generally not supplemented but rather monitored in the first instance.
- The treatment of hypokalaemia does not lend itself to be incorporated into a protocol and as a result each patient will need to be treated individually.

Oral Supplementation

- Oral Potassium Chloride (KCL), to a maximum of 2 mmol/kg/day in divided doses is common but more may be required in practice.

Intravenous Supplementation (1gram KCL = 13.3 mmol KCL)

- Potassium chloride is always given by IV infusion, NEVER by bolus injection.
- Maximum concentration via a peripheral vein is 40 mmol/l
  - ✓ (concentrations of up to 60 mmol/l can be used after discussion with senior).
- Maximum infusion rate is 0.2mmol/kg/hr (in non-intensive care setting).

Intravenous Correction (1gram KCL = 13.3 mmol KCL)

- K+ < 2.5 mmol/L may be associated with significant cardiovascular compromise.

In the emergency situation, an IV infusion KCL may be given

- Dose: initially 0.4 mmol/kg/hr into a central vein, until K+ level is restored.
- Ideally this should occur in an intensive care setting.

TIME: **DOCTOR SIGNATURE:** **NURSE SIGNATURE:**

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DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF HYPERNATREMIA

DATE: / / TIME: ALLERGIES: MEDICATIONS:

Weight ____ Kg Temp: ___ °C HR_____ /min RR ____ /min BP___ /___mmHg

- **Hypernatremia is defined as serum Na+ > 150mmol/l**
  Moderate hypernatremia is when serum Na+ is 150-160mmol/l
  Severe hypernatremia is when serum Na+ > 160mmol/l

Clinical signs of Hypernatremic dehydration
Irritability
Skin feels "doughy"
Ataxia, tremor, hyperreflexia
Seizure
Reduced awareness, coma

Management

This will depend on the cause of hypernatremia.

For hypernatremic dehydration with Na+> 150mmol/l

- **If the patient is in shock, give volume resuscitation with 0.9% Normal saline as required with bolus/es.**
- **Avoid rapid correction as this may cause cerebral oedema, convulsion and death.**
- **Aim for correction of deficit over 48-72 hours and a fall of serum sodium concentration not more than 0.5mmol/l/hour.**
- **Give 0.9% saline to ensure the drop in sodium is not too rapid.**
- **Remember to also give maintenance and replace ongoing losses following the recommendation above.**
- **Repeat blood urea and electrolytes every 6 hours until stable.**

Special considerations

- **A slower rate will be required for children with chronic hypernatremia (present for more than 5 days).**
- **Calcium and glucose need to be checked as hypernatremia can be associated with hypocalcaemia and hyperglycemia, these conditions need to be corrected concurrently.**

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DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF HYPONATREMIA

DATE: / / TIME: ALLERGIES: MEDICATIONS:

Weight ____ Kg Temp: ___ °C HR_____ /min RR ____ /min BP___ /___mmHg

- **Hyponatremia is defined when serum Na+ < 135mmol/l.**
- **Hyponatremic encephalopathy is a medical emergency that requires rapid recognition and treatment to prevent poor outcome.**

- **As part of the general resuscitative measures, bolus of 4ml/kg of 3% sodium chloride should be administered over 30 minutes.**
  - **This will raised the serum sodium by 3mmol/l and will usually help stop hyponatremic seizures.**

- **Gradual serum sodium correction should not be more than 8mmol/day to prevent osmotic demyelination syndrome.**

Calculating sodium correction in acute hyponatremia	
mmol of sodium required	= (135-present Na level)× 0.6 × weight(kg)
The calculated requirements can then be given from the following available solutions dependent on the availability and hydration status:	
0.9% sodium chloride contains 154 mmol/l	
3% sodium chloride contains 513mmol/l	

- **Children with asymptomatic hyponatremia do not require 3% sodium chloride treatment and if dehydrated may be managed with oral fluids or intravenous rehydration with 0.9% sodium chloride.**

- **Children who are hyponatremic and have a normal or raised volume status should be managed with fluid restriction.**

- **For Hyponatremia secondary to diabetic ketoacidosis; refer DKA protocol.**

TIME: DOCTOR SIGNATURE: NURSE SIGNATURE:

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DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF HYPOCALCEMIA

DATE: / / TIME: ALLERGIES: MEDICATIONS:

Weight ____ Kg Temp: ___ °C HR_____ /min RR ____ /min BP___ /___mmHg

CORRECTED Ca < 2 mmol/l = { CA – ALBUMIN / 40 } + 1

10% Ca Gluconate (100mg/ml) Contain 9.8 mg/ml elemental Ca

- **Admit to the hospital**

Laboratory Investigation

- **Total Ca , Ionized Ca , Mg , Phosphate , RFT , Albumin , ALP , PTH , 25 OH VITAMIN D , URINE CA/ Creatinine Ration**
  ECG = Prolonged QT Interval (>0.45) Second

- **Asymptomatic**
  Oral Ca …… Mg (50-150 mg/kg/day) Elemental Ca Devided In 4-6 Hourly

- **Symptomatic**
  (Sezure , Laryngiospasm , Cardiac Dysrythmia , Muscle Spasm / Cramp , Tetany)
  10 % Ca Glucunate IV (Bolus) …….. Ml (1-2 ml/kg) diluted to 2 % solution by mixing each 10 ml of 10 % gluconate in 40 ml ns over 5-10 min
  Max dose 20 ml 10% ca gluconate /dose

- **Connect the patient to cardiac monitor**

- **Regimen 1**
  - **1-2 ml/kg/dose 10% ca gluconate over 1 hour x q4-6 hours , diluted to 2 % solution , Max dose 20 ml 10% ca gluconate /dose**
    - **If heart rate < 70 b/min persistently STOP CA gluconate infusion and assess you patient**
    - **Check ca level 6 hourly**

- **Regimen 2**
  - **Ca gluconate 10 % ……. Ml (5-8 ml /kg/24 hours) , diluted to 2 % solution , Max dose 20 ml 10% ca gluconate /dose**
    - **If heart rate < 70 b/min persistently STOP CA gluconate infusion and assess you patient**
    - **Check ca level 6 hourly**

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- Correct Hypomagnesemia Mg < 0.6 mmol/l if persist
  - Give mg sulfate 50% IV / IM …… Ml (0.2 ml /kg/dose slowely) Max 2 ml/dose of (50% mg sulfate) = 1 gm / dose
  - Hypocalcemia may not be corrected unless ypu correct Mg level
  - Consider Starting Vit D One Alpha Drops 0.05 mcg/kg/day (1 drop = 0.1 mcg)

TIME: **DOCTOR SIGNATURE:** **NURSE SIGNATURE:**

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DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF SICKLE CELL ANEMIA

Patients with Vaso - occlusive crises

DATE: **TIME:** **ALLERGIES:**

- **Weight _____ HR_____ /min RR ____ /min BP _____mmHg O_2 sat ____ % in** **R/A** ☐ **%**

  - Admit to observation area
  - Inert IV lines
  - **Laboratory investigations:**
  - CBC, Chemistry, cross matching ☐
  - Give **PARACETAMOL ____ mg (15 mg/Kg/dose)** , PO,PR q 4˚ ☐
  - Give **IBOBRUFEN ____ mg (5 mg/Kg/dose)** PO, q 8˚ ☐
  - Start **D5% 0.45% Normal Saline** at a rate of _____ ml/hour **(calculate maintenance)**
    PLUS
  - **D5% 0.45% Normal Saline** at a rate of _____ ml/hour **(calculate 2.5% deficit over 24 hours)**
  - Calculate both fluids Maintenance + Deficit at one rate of ____ ml/hour

DOCTOR SIGNATURE: **NURSE SIGNATURE:**

  - If still in severe pain:
  - Give **MORPHINE ____ mg (0.1 mg/Kg/ dose)** IV prn ☐
  - Admit to the hospital ward

DOCTOR SIGNATURE: **NURSE SIGNATURE:**

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Consultant in Charge: …….

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF SICKLE CELL ANEMIA

Patients with Acute Chest Syndrome

DATE: **TIME:** **ALLERGIES:**

- **Weight _____ HR_____ /min RR ____ /min BP _____mmHg O_2 sat ____ % in** **R/A** ☐ **%**

▪ Admit to hospital	☐
▪ Inert IV lines	☐
▪ **Laboratory investigations:**	
▪ CBC, Chemistry, blood culture, VBG, Chest X ray, Cross matching	☐
▪ Start **D5% 0.45% Normal Saline** at a rate of _____ ml/hour **(calculate maintenance)**	☐
▪ Give **PARACETAMOL ____ mg (15 mg/Kg/dose)** PO,PR, PRN	☐
▪ Start **Ceftriaxone ____ mg (100 mg / kg / day) IV q 12 Hr.**	☐
▪ Start **Clarithromycin ____ mg (15 mg / kg / day) IV q 12 Hr.** (Only in patients more than 5 years of age)	☐
▪ Monitor vitals	
▪ Monitor oxygen Saturation, keep O2 saturation ≥ 95%	
▪ IF patient is still having O2 desaturation , or still having respiratory distress	
▪ Consult hematologist on call	☐
▪ Consider blood transfusion or exchange transfusion	

DOCTOR SIGNATURE: **NURSE SIGNATURE:**

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Nationality: ……..

Consultant in Charge: …….

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF SICKLE CELL ANEMIA

Patients with FEVER ≥ 38.4 ˚ C

DATE: **TIME:** **ALLERGIES:**

Weight _____ HR_____ /min RR ____ /min BP _____mmHg O_2 sat ____ % in **R/A** **%**

- Admit to hospital ☐
- Inert IV lines ☐
- **Laboratory investigations:**
- CBC+ differential, Chemistry, blood culture, urine culture, Chest X ray.ESR. ☐
- Start **D5% 0.45% Normal Saline** at a rate of _____ ml/hour **(calculate maintenance)** ☐
- Give **PARACETAMOL ____ mg (15 mg/Kg/dose)** PO,PR, PRN ☐
- Start **Ceftriaxone ____ mg (100 mg / kg / day) IV q 12 Hr.** ☐
- Start **Vancomycin ____ mg (40 mg / kg / day) IV q 6 Hr.** (in ill patients) ☐

DOCTOR SIGNATURE: **NURSE SIGNATURE:**

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DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF SICKLE CELL ANEMIA

Patients with Splenic crises

DATE: **TIME:** **ALLERGIES:**

Weight _____ HR_____ /min RR ____ /min BP _____mmHg O_2 sat ____ % in ☐ **R/A** ☐ **%**

- Admit to hospital ☐
- Inert IV lines ☐
- **Laboratory investigations:**
- CBC+ differential, Chemistry, Retics, cross matching, LFT. ☐
- Start **D5% 0.45% Normal Saline** at a rate of _____ ml/hour **(calculate maintenance)** ☐
- Give **PARACETAMOL ____ mg (15 mg/Kg/dose)** PO,PR, PRN ☐
- Give **PRBC,s ____ ml , If hemoglobin is ≤ 6** ☐

(To raise hemoglobin to patients steady state)

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Nationality: ……..

Consultant in Charge: ……..

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF FEBRILE CHILD UNDER 3 YEARS

DATE: **TIME:** **ALLERGIES:**

- **Weight _____ HR_____ /min RR ____ /min BP_____mmHg**

- Any febrile child under 3 years who appears unwell should be investigated and admitted ,irrespective of the degree of fever.
- **< 1 month** : Rectal temp.>38C, Full sepsis work-up (CBC with differential, Blood culture,urine analysis and culture ,CRP ,CSF analysis and culture,chemistry), admission, empirical antibiotics(Ampicillin ____ mg (150mg/kg/dose) IV every 12 hours and gentamicin ____ mg(4mg/kg/day) IV or Ampicillin and cefotaxime.
- **1-3 months :**Rectal temp.>38C**,** Full sepsis workup + CXR(if respiratory symptoms or signs + LP.
- **If child previously healthy, looks well,wbc(5,000-15,000),urine microscopy,CXR clear,and negative CSF__ discharge home. And review within 24 hours.**
- **If child unwell or are above criteria are not all satisfied admit to hospital for embric i.v antibiotics**
- **3 month-3 years: temp. > 38.9c and clear focus of infection child looks well can treat as clinically indicated**
- **Child looks unwell investigate as appropriate for clinical focus and admit for treatment after discuss with registrar or consultant.**
- Child with temp.>38.9C and no focus of infection ,looks well , Urine analysis and culture and discharge home on symptomatic treatment.
- **Temp>38.9C , no focus ,looks miserable but is still relatively alert, interactive and responsive discuss with registrar or consultant prior to any investigations.**

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GUIDELINES FOR THE MANAGEMENT OF SNAKE BITE

PATIENT WITH SUSPECTED SNAKE BITE

Snake brought and positively identified as poisinous or fang marks were clear

Did you notice any Clinical manifestation? — Yes

No

Give anti-telanic serum and tetanus toxoid. Observed for 24 hours. Did you notice any clinical manifestation? — Yes

No

Discharge

Snake was brought and positively identified as none-poisinous, or no fang marks, no severe local pain, none of the expected local and systemic manifestations were detected. observe for 4-8 hours to exclude misidentification. Give anti-telanic serum and tetanus toxoid.

Did yu notice any Clinical manifestation? — Yes

No

Discharge

DETERMINE IF SNAKE IS HAEMOTOXIC OR NEUROTOXIC

HAEMOTOXIC

Laboratory Procedure and Expected Results If Snake Is Haemotoxic

Lab Test	Expected Changes
PT & APPT	PT & APPT ↑
Fibrin Degradation Prod.	FDP ↑
Fibrinogen	Fibrinogen ↓
CBC	Leukocyte ↑
	RBC ↓
	Haematocrite ↓
	Platelet (rare) ↓
	Hb ↓

* These parameters are not significantly change in the case of B. arietans bites, however blood platelets are significantly reduced.

Horned Viper *Cerastes cerastes*

Carpet Viper *Echis coloratus*

Saw-Scaled Viper *Echis carinatus*

Puff Adder *Bitis arietans*

Expected local and systemic manifestation if snake is Haemotoxic:

- Spontaneous systemic bleeding
- Local swelling involving more than half the bitten limb
- Extensive blistering or bruising
- Marked thombocytopenia (>50 000/mm³)
- Hypotension and shock, abnormal ECG, etc.
- Prolonged clotting time
- Haematuria

Give Polyvalent Snake Antivenom

10 ml (5 x 10 ml ampoules) to be diluted in 250 ml normal saline infused i.v. over 30-60 minutes. Same dose can be repeated every 4-6 hours until definite improvement take place. CHILDREN MUST BE GIVEN THE SAME DOSE AS ADULTS.

Please note that the Antivenom dose is based mainly on fixation of the symptoms until clinical manifestation disappears.

NEUROTOXIC

If Snake is positively identified as Arabian Cobra or Walterinnesia aegyptia

Assist Respiration

For patients who show severe neurotoxic symptom, application of Tension test (Edrophonium) is necessary (refer to Tension test procedure) and manage according to the results.

Is Bivalent antivenom available at your hospital?

Yes — Give Bivalent Antivenom

No — Double the Dose of Polyvalent Antivenom and give as in Bivalent Antivenom

Arabian Cobra *Naja haje arabica*

Black desert Cobra *Walterinnesia aegyptia*

Mole Viper *Atractaspis*

Mole Viper *Atractaspis*

Mainly Cardiotoxic causing coronary vasoconstriction and AV block

Expected local and systemic manifestation if snake is Neurotoxic:

- Ptosis, external opthalmoplegia
- Progressive paralysis of face, palate, jaws, tongue, vocal chords, neck muscles and muscles of deglutition
- Impaired conciousness
- Progressive respiratory failure

Give Bivalent Snake Antivenom

10 ml (5 x 10 ml ampoules) to be diluted in 250 ml normal saline infused i.v. over 30-60 minutes. More antivenom should be given if severe signs persist after 1-2 hour. Dose can be repeated every 4-6 hours until definite improvement take place. CHILDREN MUST BE GIVEN THE SAME DOSE AS ADULTS.

Please note that the Antivenom dose is based mainly on fixation of the symptoms until clinical manifestation disappears.

GUIDELINES FOR THE MANAGEMENT OF SCORPION STING

CONFIRMED SCORPION STING

ADULTS

CHILDREN

Did you notice any systemic manifestation? — No → **Observe for 8 hours. Did you notice any systemic manifestation?**

Yes

Yes — No → **Discharge**

At the onset of the systemic manifestation proceed as follows:

GIVE SCORPION ANTIVENOM

A. crassicauda — L. quinquestriata

The two most dangerous scorpions in Saudi Arabia and two of the most toxic in the world.

Polyvalent Scorpion Antivenom

5 x 1 ml ampoules polyvalent scorpion antivenom diluted in a 50-50 ml half normal saline, given I.v. over a period of 20 minutes. If systemic manifestation still exists, the same dose, is to be repeated every 2 hours up to 4 doses, then keep under observation for at least 24 hr, after recovery.

Please note that the Antivenom dose is based mainly on titration of the symptoms until clinical manifestation disappears.

Laboratory Procedure and Expected Results

Some or all of these changes can be seen in the victims

WBC ↑	Na+ & Ca ↓
Blood glucose ↑	K ↑
CPK ↑	Blood gases (acidosis)
LDH ↑	ECG changes
Amylase ↑	X ray changes

Cause of death: cardiac failure, circulatory collapse, or respiratory failure

Adjunctive Therapy to Support Vital Fuctions

Severe pain
0.5 ml (max.) of 1% xylocaine, infiltrated at the site of the sting

Vomiting
Chloropromazine 0.5-1 mg/kg i.m. repeated if necessary.

Convulsion
Diazepam I.v. slowly

Pulmonary Oedema
O_2, furosemide and fluid restriction ,

Dyspnea
IPPV

Hyperthermia
Acetamenophen suppository

Hypertension
Hydralazine or Nifedipin.

Acidosis
Correct blood gases and electrolytes

Shock
c.v.p. line with 0.5 N saline to keep value at 8-12 cm H_2O and maintain blood pressure at a level to perfuse vital organs. (Systolic B.P. between 60-70 mm Hg in children).

Contraindicated Drugs (don't use!)

Barbiturates, Morphine or pithidine, Beta Blockers

Address:
National Antivenom & Vaccine Production Center (NAVPC)
King A. Aziz medical City, NGHA
P.O. Box 22490 - Riyadh 11426, MC # 3108
Tel: +9661 1 252-0088 Ext. 45626/45655
Fax: +9661 1 252-0158
Email: navpc@ngha.med.sa OR navpc@hotmail.com

Prepared by:
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Dr. Mohammed Atef Abd Elsalam, Bsc pharm Sci, Phd (252-0088 ext. 45571, pager 6333)

Reviewed by:
Prof. Mohammed Ismail Hamed, Bsc pharm, Sci, Drug Anal, D. Chem Pathol D. Phd

KINGDOM OF SAUDI ARABIA

وزارة الصحة
Ministry of Health

MATERNITY AND CHILDREN HOSPITAL
JEDDAH

EMERGENCY DEPARTMENT

File NO.: ☐☐☐☐☐☐☐☐☐☐

Name: ……

Age: ☐☐ **Yrs. / Month** **Sex:** ☐ **M** ☐ **F**

Nationality: ……..

Consultant in Charge: …….

DOCTORS ORDER SHEET FORM FOR MANAGEMENT OF PARACETAMOL POISONING

DATE: / / **TIME:** **ALLERGIES:** **MEDICATIONS:**

- **Weight ____ Kg HR_____ /min RR ____ /min BP___ /___mmHg O_2 sat ____ % in R/A ☐ %**

- Admit the patient to the hospital.
- Asses type of ingestion _____, time _____, Amount _____, Wt _____.
- ABC, insert IV line, connects to cardiopulmonary monitor.
- Give activated charcoal _____ (1g/kg) within the 1st hour, Treatment given at _____.
- Special management for ingestion of > 200 mg/kg, unknown quantity, repeated supratherapeutic ingestion of > 100mg/kg/day.
- Laboratory investigation serum paracetamol level (after 4h of ingestion)
- If Present < 8h wait for serum paracetamol level. ☐
- If Present > 8h + RUQ pain, Nausea and vomiting give NAC continue or stop it after the serum paracetamol level.
- **Potential toxicity:**
  >200 mg/kg (or 10g) ingested over a 24 hour period
  >150 mg/kg/day (or 6 g) ingested over a 48 hour period
  > 100 mg/kg/day ingested over a 72 hour period
- **NAC** is diluted in D5 or 0.9NS, administration in 3 stages infusion giving a total ____ (300 mg/kg)
  1. ____ (150 mg/kg) over the 1st hour.
  2. ____ (50 mg/kg) over the next 4 hours
  3. ____ (100mg/kg) over the next 16 hours
- The volume and choice of fluid for each stage of the infusion for **adolescent / adult:**
  1. 1st in 250 or 500 ml over 1 hour
  2. 2nd in 500 ml over 4 hours
  3. 3rd in 1000 ml over 16 hours
- For **smaller children** the approach is:
  1. 1st in 250 ml bag over 1 hour (250ml/hr).
  2. 2nd in 250 ml over 4 hour (65 ml/hr).
  3. 3rd in 250 ml over 15 hours (15 ml/hr).
- IV fluid maintenance ____ .
- check for **Anaphylactic reactions** to NAC (wheeze, rash) ☐
- Stop the infusion for 30 minutes, give promethazine then recommence the infusion at half the previous rate, slowly increase the rate until the desired rate is again reached.
- Stop the infusion after 21 hours if started <8 hour No need for further investigation.
- If >8 hours , toxicity sign, Repeated supratherapeutic ingestion need: LFT monitoring to determine the duration of NAC therapy, If ALT is elevated at the completion of the 21 hour infusion, NAC should be continued at the current rate and specialist advice sought.

TIME: **DOCTOR SIGNATURE:** **NURSE SIGNATURE:**

Prepared by: **Dr. Asma Saif**
Pediatric House officer

Dr. Ahmad Mahah
Chairman of Emergency Department

September 10, 2015

Rapid Sequence Intubation (7Ps)

Preoxygenation (5 min before intubation):
-Admission O2 at highest concentration available
-If spontaneously breathing, use non-rebreathing mask for at least 3 min.
- If apnic or desaturating , use bag-mask ventilation +/- Cricoid pressure.

Preparation (AMPLE):
-identify conditions that will affect choice of medications.
-identify condition that will predict difficult intubation or bag-mask ventilation.
- assemble equipment and check function.
-develop contingency plan for failed intubation.
-if cardiac arrest or deeply comatose child, sedation & paralytic agents are unnecessary prior to intubation.

(AMPLE)
A= Allergy
M=Medications
P=past medical
L=Last meal
E=Event

Pretreatment:
-Atropine IV 0.02mg/kg (min 0.1mg – max 0.5mg)

- All infant < 1Yr
- From 1-5Yr receiving succinylcholine, and >5Yr with 2nd dose succinylcholine.

-lidocaine IV optional for increase ICP, 2-3min before intubation

- 1.5mg/kg (max dose 100 mg)

Sedation

-Hx of asthma, BS, ↓ BP or septic shock:

- Ketamine (>3m)
- IV 1-2mg/kg
- IM 3-7mg/kg

- ↑ ICP or head injury (if stable or ↓ BP):

- Etomidate
- IV 0.3mg/kg

-status epileptics (stable BP):

- Midazolam
- IV 0.2-0.3mg/kg (max 2mg)

- If ↓ BP:

- Etomidate
- IV 0.3mg/kg

-Uncomplicated child:

- Etomidate
- IV 0.3mg/kg

-**Paralytic**:
- succinylcholine:

- IV for infant and younger children 2mg/kg, older children 1-1.5mg/kg
- IM 2-5mg/kg.
- AVOID in neuromuscular disease, organophosphate poisoning 48-72h after burn, crush or denervation injury, malignant hyperthermia, preexisting ↑ K.

-Rocuronium (if succinylcholine contraindicated) dose IV 1mg/kg.

Protection & positioning:
-sniffing position.
-Criciod pressure

→ Placement and confirmation →

Post-intubation:
CXR, infusion midazolam, infusion fentanyl (1mic/kg/h)

Dr. Ali Omar Moftah
Pediatric House officer

Dr. Alyaa AbuBaker Mohamed
Pediatric House officer

Dr. Ahmad Mahah
Chairman of Emergency Department

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JEDDAH

EMERGENCY DEPARTMENT

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Name: ……

Age: ☐☐ Yrs. / Month Sex: ☐ M ☐ F

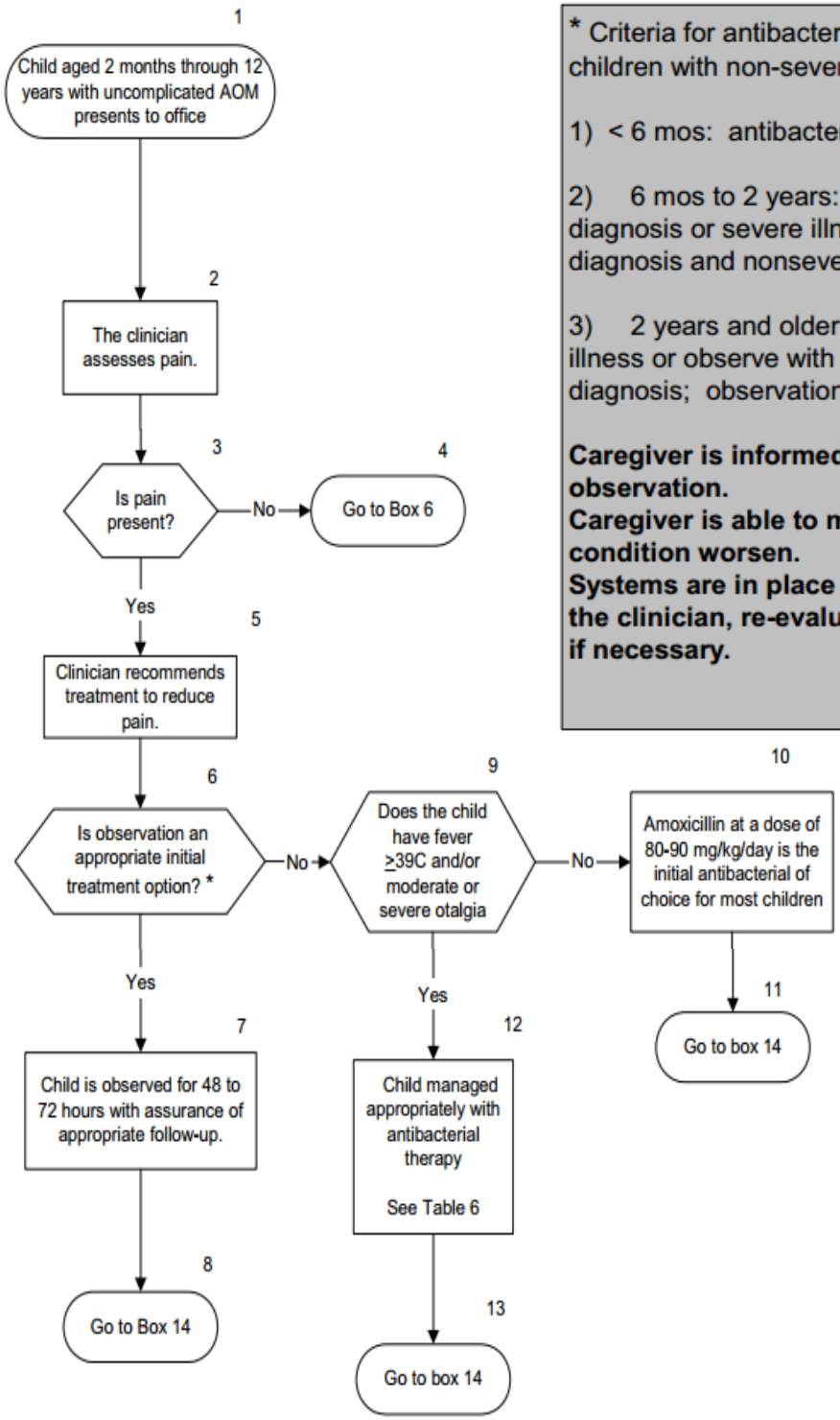
Nationality: ……..

Consultant in Charge: …….

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF ACUTE OTITIS MEDIA

DATE: / / TIME: ALLERGIES: MEDICATIONS:

Weight ____ Kg Temp: ___ °C HR_____ /min RR ____ /min BP___ /___mmHg



* Criteria for antibacterial treatment or observation in children with non-severe illness:†

1) < 6 mos: antibacterial treatment

2) 6 mos to 2 years: antibacterial treatment with certain diagnosis or severe illness or observation with uncertain diagnosis and nonsevere illness.

3) 2 years and older: antibacterial treatment if severe illness or observe with nonsevere illness with certain diagnosis; observation for uncertain diagnosis.

Caregiver is informed and agrees to the option of observation.
Caregiver is able to monitor child and return should condition worsen.
Systems are in place for ready communication with the clinician, re-evaluation, and obtaining medication if necessary.

A diagnosis of acute otitis media requires:

1) history of acute onset of signs and symptoms;

2) the presence of middle ear effusion;

3) signs and symptoms of middle ear inflammation.

Prepared by : Dr. Yasser Al Dabbagh
House Officer

Reviewed By : Dr. Ahmad Mahah
Chairman of Emergency Department

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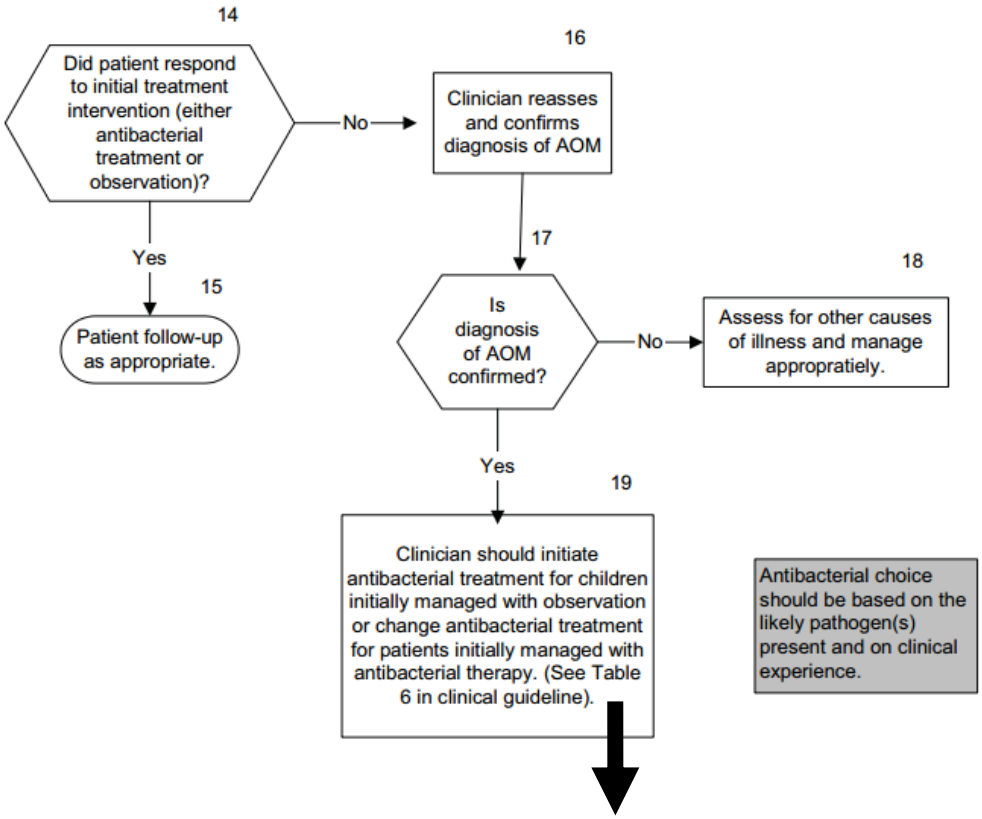

Temperature ≥39°C and/or Severe Otalgia	At Diagnosis for Patients Being Treated Initially With Antibacterial Agents		Clinically Defined Treatment Failure at 48–72 Hours After Initial Management With Observation Option		Clinically Defined Treatment Failure at 48–72 Hours After Initial Management With Antibacterial Agents	
	Recommended	Alternative for Penicillin Allergy	Recommended	Alternative for Penicillin Allergy	Recommended	Alternative for Penicillin Allergy
No	Amoxicillin 80–90 mg/kg per day	Non-type I: cefdinir, cefuroxime, cefpodoxime; type I: azithromycin, clarithromycin	Amoxicillin 80–90 mg/kg per day	Non-type I: cefdinir, cefuroxime, cefpodoxime; type I: azithromycin, clarithromycin	Amoxicillin-clavulanate (90 mg/kg per day of amoxicillin component, with 6.4 mg/kg per day of clavulanate)	Non-type I: ceftriaxone, 3 days; type I: clindamycin
Yes	Amoxicillin-clavulanate (90 mg/kg per day of amoxicillin with 6.4 mg/kg per day of clavulanate	Ceftriaxone, 1 or 3 days	Amoxicillin-clavulanate (90 mg/kg per day of amoxicillin with 6.4 mg/kg per day of clavulanate)	Ceftriaxone, 1 or 3 days	Ceftriaxone, 3 days	Tympanocentesis, clindamycin

TIME: **DOCTOR SIGNATURE:** **NURSE SIGNATURE:**

Prepared by : Dr. Yasser Al Dabbagh
House Officer

Reviewed By : Dr. Ahmad Mahah
Chairman of Emergency Department

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Name: ……

Age: ☐☐ Yrs. / Month Sex: ☐ M ☐ F

Nationality: ……..

Consultant in Charge: ……..

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF APPENDICITIS

DATE: **TIME:** **ALLERGIES:**

- **Weight _____ HR_____ /min RR ____ /min BP_____mmHg O_2 sat ____ % in** R/A ☐ %

Present with Anorexia , Right lower quadrant pain , Vomiting and Low- grade fever

- Admit patient to Step-down
- Involve surgeons early
- Fluid resuscitation may be required (initial bolus 20ml/kg normal saline)
- Establish and maintain intravenous access in sick children.
- Measure electrolytes and blood sugar if the patient appears dehydrated
- Keep patients fasting if surgical cause suspected
- Provide adequate analgesia – iv morphine may be required or intranasal fentanyl as initial analgesia
- Consider a nasogastric tube if bowel obstruction suspected
- Consider IV antibiotics in surgical causes (discuss with surgeon first)
- Other investigations and management will be guided by clinical findings

- **Note**: When transferring infants or children with possible surgical conditions, ensure analgesia, venous access and intravenous fluids as third space losses can be large and lead to haemodyanamic collapse

- **Laboratory investigation:**
  - White blood cell count (WBC)
  - Differential with calculation of the absolute neutrophil count (ANC)
  - C-reactive protein (CRP)
  - Urinalysis
- **Imaging:**
  - Ultrasonography (US) or computed tomography (CT)

DOCTOR SIGNATURE: **NURSE SIGNATURE:**

Prepared by: Dr. Morad Mahmood Al Junaid
Pediatric house officer

Dr. Ahmad Mahah
Chairman of Emergency Department
May 20, 2015

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EMERGENCY DEPARTMENT

File NO.: ☐☐☐☐☐☐☐☐☐☐

Name: ……

Age: ☐☐ Yrs. / Month Sex: ☐ M ☐ F

Nationality: ……..

Consultant in Charge: ……..

DOCTORS ORDERSHEET FORM FOR MANAGEMENT OF INTUSSUSCEPTION

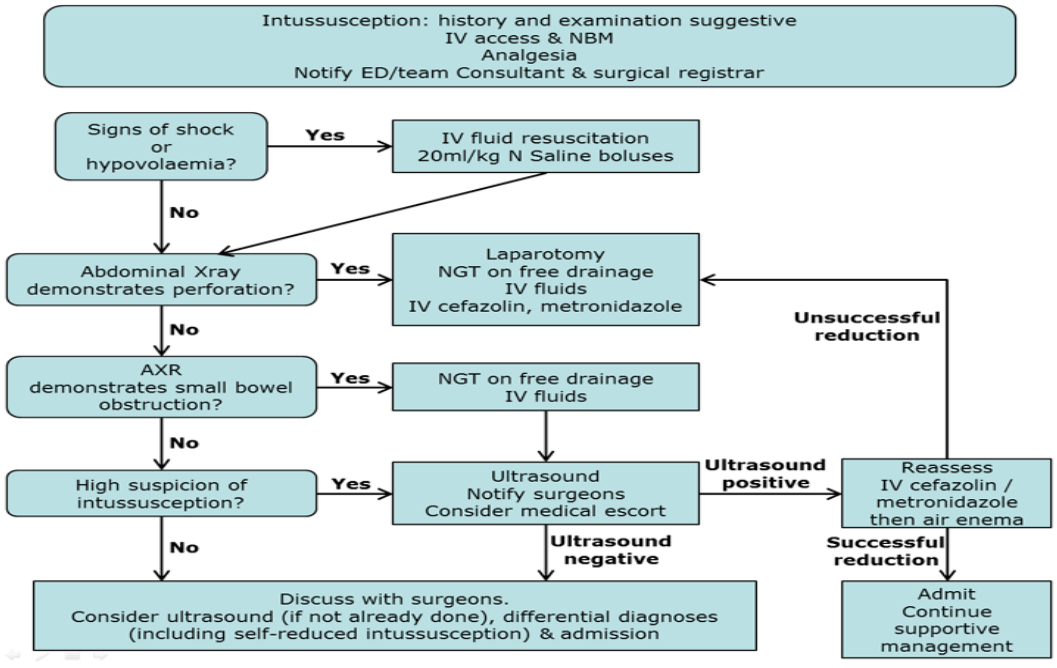
DATE: **TIME:** **ALLERGIES:**

- **Weight _____ HR_____ /min RR ____ /min BP_____mmHg O_2 sat ____ % in** R/A ☐ %

Present with abdominal pain, a palpable sausage-shaped abdominal mass, and currant-jelly stool

- Admit patient to Step-down
- Involve surgeons early
  - fluid resuscitation with normal saline 20mls/kg IV
  - Keep nil orally
  - Pass nasogastric tube if bowel obstruction on AXR

Flowchart:



- **Laboratory investigation:**
- Plain abdominal Xray
- Ultrasound scan
- contrast enema
- Blood glucose ,Blood group ,FBE and U&E's may be useful if child looks unwell

DOCTOR SIGNATURE: **NURSE SIGNATURE:**

Prepared by: Dr. Alyaa AbuBaker Mohamed
Pediatric house officer

Dr. Ahmad Mahah
Chairman of Emergency Department

May 20, 2015

Pediatric And Neonatal Doses

of Oral Antibiotics

Drug	Neonatal dose	Pediatric dose
Isoniazid (INH)	**Congenital tuberculosis:** 10 mg/kg OD.	**TB infection:** 10-15 mg/kg/day OD (max. dose: 300 mg/day). **(LTBI):** 10-20 mg/kg/day OD (max dose: 300 mg/day) or 20-40 mg/kg/dose (maximum dose: 900 mg) twice weekly; treatment duration: 9 months, **Primary prophylaxis for TB in HIV-exposed/positive patients:** 10-15 mg/kg/day OD (max. dose: 300 mg/day) or 20-30 mg/kg/dose (max. dose: 900 mg) twice weekly; treatment duration: 9 months.
Metronidazole	**General dosing:** Loading dose: 15 mg/kg. **Maintenance dose:** 7.5 mg/kg/dose Q12h.	**General dosing:** 30 to 50 mg/kg/day Q8h ; max. daily dose: 2250 mg/day. **Amebiasis:** 35 to 50 mg/kg/day Q8h for 7 to 10 days; max. single dose: 750 ***Clostridium difficile diarrhea:*** 30 mg/kg/day Q6h for 7 to 14 days; max. daily dose: 2000 mg/day . **Giardiasis:** 15 mg/kg/day Q8h, for 5 to 7 days; max. dose: 250 mg/dose. ***Helicobactor pylori infection:*** 20 mg/kg/day Q12h for 10 to 14 days in combination with amoxicillin and proton pump inhibitor with or without clarithromycin; max. daily dose: 1000 mg/day
Nitrofurantoin	Infants >1 month and Children, Usual: 5-7 mg/kg/day Q6h; max. dose: 400 mg/day. Prophylaxis of UTI: 1-2 mg/kg/day as a single daily dose; max. dose: 100 mg/day	
Oseltamavir	**Treatment of H1N1 Influenza:** Premature neonates: GA: 24 to 37 weeks: Oral: 1 mg/kg/dose Q12h .Full-term neonates: PNA 0 to 13 days: 3 mg/kg/dose OD for 5 days. PNA 14 to 28 days: 3 mg/kg/dose Q12h for 5 days	**Treatment of H1N1 Influenza A virus (swine flu) infecion:** <3 months: 12mg PO Q12H for 5 days, 3-5 months: 20mg PO Q12H for 5 days, 6-11 months: 25mg PO Q12H for 5 days. **Prophylaxis of children younger than 1 year:** <3months: not recommended, 3-5 months: 20mg PO Q24H for 10 days, 6-11 months: 25mg PO Q24H for 10 days. **Treatment or prophylaxis > 12 months:**

	Treatment (for 5 days)	prophylaxis (for 10 days)
<15 kg	30 mg PO Q12H	30 mg PO Q24H
16-23 kg	45 mg PO Q12H	45 mg PO Q24H
24-40 kg	60 mg PO Q12H	60 mg PO Q24H
> 40 kg	75 mg PO Q12H	75 mg PO Q24H

Ciprofloxacin	**Severe infection (eg, sepsis); usually multidrug resistant:** IV: 10 mg/kg/dose Q12H .A Higher daily dose divided into shorter intervals may be required to treat Staphylococcus aureus or Pseudomonas aeruginosa. Reported range: 10 to 60 mg/kg/day.	**General dosing:** 20-30 mg/kg/day Q12H Maximum dose: 1.5g/day. **Cystic fibrosis:** 40 mg/kg/day Q12h; Max. dose: 2g/day, **Complicated UTI or pyelonephritis:** 20 to 40 mg/kg/day Q12H for 10 to 21 days; max dose: 1.5 g /day.
Clarithromycin	7.5 mg/kg Q12h.	**General dosing:** 15 mg/kg/day Q12h; max. single dose: 500 mg; duration dependent on infection site and severity; usually 7 to 14 days. **Endocarditis, prophylaxis; dental procedures in patients allergic to penicillins:** 15 mg/kg; max. single dose: 500 mg; administer 30 to 60 minutes before procedure, **Helicobacter pylori eradication:** 20 mg/kg/day Q12h ; max. single dose: 500 mg; , 7 to 14 days; as part of triple or quadruple combination regimens with amoxicillin and proton pump inhibitor with or without metronidazole. **Streptococcal tonsillopharyngitis, (AOM) and CAP:** 15 mg/kg/day Q12h for 10 days; max. single dose: 500 mg.
Cloxacillin	**Usual dosage range:** Children ≤20 kg: 25-50 mg/kg/day Q6h, Children >20 kg: 250-500 mg Q6h (max.daily dose: 2 g)	
CO- Trimoxazole *(Dosage recommendations are based on the (TMP) component)*		**General dosing:** 8-12 mg TMP/kg/day Q12h ; max. single dose: 160 mg TMP. **Pneumocystis prophylaxis:** 5 mg TMP/kg/day Q12h or OD for 3 days of every week. **Toxoplasmosis, prophylaxis:** 150 mg TMP/m2/day Q12h or OD for 3 days of every week. **Urinary tract infection:** ***Treatment:*** Infants and Children 2-24 months: 6-12 mg TMP/kg/day Q12h for 7-14 days, Children >24 months : 8 mg TMP/kg/day Q12h for 3 days, max single dose: 160 mg TMP, ***Prophylaxis:*** 2 mg TMP/kg/dose once daily.
ERYTHROMYCIN	12.5 mg/kg every 6 hours	**General dosing:** 30-50 mg/kg/day Q6h. for severe infection may double dose; max. daily dose: Mild to moderate infection: 2000 mg/day; severe infection: 4000 mg/day. **(CAP):** 10 mg/kg/dose Q6h; maximum daily dose: 2000 mg/day. **Pertussis:** Infants 1-5 months: 10 mg/kg/dose Q6h for 14 days ; Infants >6 months and Children: 10mg/kg/doseQ6hfor 7-14 days; max.daily dose :2000 mg/day. **Impetigo:** 10 mg/kg/dose Q6h max. 500 mg

Drug information center; Yahia A.alzahrani Pharm.D ,MSc, head of department. Aish Qasem Pharm .D. For more info: beeber; 0104

Drug	Neonatal dose	Pediatric dose
Amoxicillin	**General dosing:** 20 to 30 mg/kg/day Q12h. **(AOM):** 30 to 40 mg/kg/day Q8h. **UTI, Prophylaxis:** 10 to 15 mg/kg OD (max. 62.5 mg). Dose doubled in severe infection.	**Mild to moderate infection:** 25 to 50 mg/kg/day Q8h. **(AOM):** 90 mg/kg/day Q12h. **UTI, prophylaxis:** 10 to 15 mg/kg OD. **Max. daily dose:** 4000 mg/day
Amoxicillin and clavulanate *(Dosage based on amoxicillin component)*	**General dosing:** 30 mg /kg/day Q12h .	**Mild to moderate infection:**<40 kg : 25 mg /kg/day Q 12 h max single dose: 875 mg , ≥40 kg 500 mg Q8h, **Severe infection:** <40 kg : 45 mg /kg/day Q12h ***OR*** 40 mg /kg/day Q8h (max. single dose: 500 mg) , >40 kg ; 500 mg every 12 hours ***OR*** 250 mg Q8h .**(AOM):** 90 mg/kg/day Q12h . **UTI:** < 2 years: 20-40mg/kg/day Q8h MAX single dose 500mg. **Rhinosinusitis, acute bacterial:** 90 mg /kg/day Q12h.
Azithromycin	10-20 mg/kg OD	**Otitis media: 5-day regimen:** 10mg/kg DAY1 (maximum: 500mg), followed by 5mg/kg/day OD (maximum: 250 mg) on DAYS 2-5, **3-day regimen:** (10mg/kg/day OD for 3 days (maximum: 500mg/day). **Community-acquired pneumonia:** use the 5-day regimen above. **Pharyngitis/tonsillitis** (> 2 yr.): 12 mg/kg/day OD for 5 days (max: 500 mg/day). **Rhinosinusitis, bacterial:** 10 mg/kg OD for 3 days.
Cefuroxime	**General dosing:** IM, IV: Body weight < 1 kg: PNA ≤14 days: 50 mg/kg/dose Q12h , PNA 15 to 28 days: 50 mg/kg/dose Q8h .Body weight 1 to 2 kg, PNA <7 days: 50 mg/kg/dose Q12h ,PNA 8 to 28 days: 50 mg/kg/dose Q8h to Q12h .Body weight >2 kg: PNA <7 days: 50 mg/kg/dose Q12h, PNA 8 to 28 days: 50 mg/kg/dose Q8h.	**Mild to moderate infection:** 20-30 mg/kg/day O12h MAX. 1000mg/day. **Acute Otitis media:** 15mg/kg/dose Q12h for 10 days MAX 500 mg/ dose. **Pharyngitis/ tonsillitis:** 20mg/kg/day Q12h for 10 days, MAX single dose 250 mg. **Sinusitis:** 30mg/kg/day Q12hr MAX single dose 500mg, UTI: 10-15mg/kg/dose Q12hr for 7-10 days.
Cephalexin		**Mild to moderate infection** children: 25-50 mg/kg/day Q6h. **Severe infections:** 50-100 mg/kg/day Q6h ; maximum dose: 4 g/day . **AOM:** 75-100 mg/kg/day Q6h. **Streptococcal pharyngitis, skin and skin structure infactions:** 25-50 mg/kg/day Q12h. **Endocarditis prophylaxis:** 50 mg/kg 1 hours prior to procedure (maximum: 2g)

Drug information center; Yahia A.alzahrani Pharm.D ,MSc, head of department. Aish Qasem Pharm .D. For more info: beeber; 0104

Penicillin V Potassium	**General dosing:** Children<12 years: 25 - 50mg/kg/day Q6h hours. Max. dose: 2g/day. **Tonsillopharyngitis; Group A streptococcal infection, treatment and primary prevention of rheumatic fever:** <27 kg: 250 mg 2-3 times daily for 10 days >27 kg: 500 mg 2-3 times daily for 10 days. **Recurrent rheumatic fever, prophylaxis:** 250 mg Q12h **Pneumococcal Infection prophylaxis for anatomic or functional asplenia [eg, SCD]:** <3 years : 125 mg Q12h >3 years: 250 mg Q12h. **Pneumonia, community-acquired; Group A** ***Streptococcus:*** 50-75 mg/kg/day Q6h ; max. daily dose: 2000 mg/day	
Rifampicin	**Influenzae prophylaxis:** 10 mg/kg/day once daily for 4 days. **Meningococcal prophylaxis:** 10 mg/kg/day in divided doses every 12 hours for 2 days. **Staphylococcus aureus, synergy for infections:** 5-20 mg/kg/day in Q12h.	**Tuberculosis:** 10-20 mg/kg/day (max. dose: 600 mg). **(LTBI) treatment (as an alternative to isoniazid):** 10-20 mg/kgday OD for 4 months (max. dose: 600 mg/day) **H. influenzae prophylaxis:** 20 mg/kg/day OD for 4 days, not to exceed 600 mg/dose. **Meningococcal prophylaxis:** 20 mg/kg/day in divided doses every 12 hours for 2 days, not to exceed 600 mg/dose **Prophylaxis for N. meningitis:** 0 - 1 month: 10 mg/kg/day every 12 hours for 2 days, not to exceed 600 mg/dose , > 1 month: 20 mg/kg/day Q12h for 2 days, not to exceed 600 mg/dose **Prophylaxis for H. influenzae:** 0 - 1 month: 10 mg/kg/day once daily for 4 days > 1 month: 20 mg/kg/day up to max. 600 mg/day once daily for 4 days.

Abbreciations: AOM; acute otitis media , UTI; urinary tract infection, CAP; Community-acquired pneumonia, TB; tuberculosis , LTBI; latent tuberculosis infection; SCD; sickle cell disease.

References:

1- *The Lexicomp Pediatric & Neonatal Dosage Handbook, 21st edition 2015*
2- *Ped. Pharmacotherapy Vol. 11, No. 4: April 2012*
3- *The Harriet Lane Handbook 17th ed Mosby - Year Book Inc; 2014.*
4- *Neofax 2011: A Monual of Drugs Used in Neonatal Care, ed. 20, Montvale, New Jersey: Thompson Healthcare, USA, 2007*
5- *BNF for Children 2014-2015 (British National Formulary for Children) by Paediatric Formulary Committ.*

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STANDARDIZED DOSING FOR PEDIATRIC ORAL ANTIBIOTICS

Maternity and Children Hospital

Wight (KG) / medication	5-9	9.1-15	15.1-20	20.1-30	30.1-40	>40
AMOXICILLIN (25-60mg/kg/day)	100mg Q8h (125mg/5ml) 4ml	150mg Q8h (250mg/5ml) 3ml	250mg Q8h (250mg/5ml) 5ml	350mg Q8h (250mg/5ml) 7ml	500mg Q8h Cap.500mg	
AUGMANTIN (20-45mg/kg/day)(amoxil)	75mg Q8h (156mg/5ml) 3ml	125mg Q8h (156mg/5ml) 5ml	200mg Q8h (312mg/5ml) 4ml	250mg Q8h (312mg/5ml) 6ml	375mg Q8h (312mg/5ml) 7-5ml	625mg Q8h Tab.625mg
AZITHROMYCIN (200mg/5ml)15ml bottle	**10mg/kg/dose** on day one then **5mg/kg/day** once daily for3-5 days (mild to moderate infections)					
CEFPROZZIL (15-33mg/kg/day)	75mg Q8h (250mg/5ml) 1.5ml	125mg Q12h (256mg/5ml) 2.5 ml	250mg Q8h (350mg/5ml) 5ml	300mg Q12h (250mg/5ml) 6ml	300mg Q12h (250mg/5ml) 10ml	500mg Q12h Tab.500mg Cefuroxime tab
CEPHALEXIN (50-110mg/kg/day)	250mg Q8h (125mg/5ml) 6ml	300mg Q8h (256mg/5ml) 6ml	500mg Q8h (250mg/5ml) 10ml	500mg Q8h (250mg/5ml) 10ml	500mg Q8h cap 500 mg	
CLRITHROMYCIN (125mg/5ml)60mlbottle	**15mg/kg/day** divided every 12 h					
CLINDAMYCIN (10-30mg/kg/day)	45mg Q8h (15mg/5ml) 3ml	90mg Q8h (15mg/ml) 6ml	150mg Q8ml (15mg/ml) 10ml	195mg Q8ml (25mg/ml) 13ml	300mg Q8h (cap.150mg)	450mg Q8h (cap.150mg)
CLOXACILLIN (50-110mg/kg/day)	125mg Q8h (125mg/5ml) 5ml	250mg Q6h (125mg/5ml) 10ml	375mg Q8h (125mg/5ml) 15ml	500mg Q6ml (125mg/5ml) 20ml	500mg Q6h (cap. 250 mg)	
METRONIDAZOLE (15-33mg/kg/day)	50mg Q8h (125mg/5ml) 2ml	100mg Q8h (125mg/5ml) 4ml	150mg Q8h (125mg/5ml) 6ml	200mg Q8ml (125mg/5ml) 8ml	250mg Q8h tab.250mg	500mgQ8h tab.250mg
PENICILLIN V (25-60mg/kg/day)	50mg Q8h (125mg/5ml) 2ml	150mg Q8h (250mg/5ml) 3ml	250mg Q8h (250mg/5ml) 5ml	325mg Q8ml (250mg/5ml) 0.6ml	500mg Q8 h (tab.250mg)	
SULFAMETHOXAZOLE/TRIMETHOPRIM (6-13mg/kg/day)	32mg Q12h (40mg/5ml) 4ml	60mg Q12h (40mg/5ml) 7.5ml	80mg Q12h (40mg/5ml) 10ml	100mg Q12h (40mg/5ml) 12.5ml	160mg Q12h (tab Ds 160mg (TMP)	

This standardized dosing only applies to children who have: mild to moderate infection and with normal kidney and liver function

STANDARDIZED DOSING FOR PEDIATRIC ORAL ANTIBIOTICS

Maternity and Children Hospital

Weight(kg) / medication	5-7	7.1-10	10.1-15	15.1-20	20.1-30	30.1- 40	>40 Adult dose
CEFAZOLIN (50-100) Mg/kg/day	150 mg Q8 h	200 mg Q 8 h	300 mg Q 8 h	500 mg Q8 h	600 mg Q 8 h	1000 mg Q 8h	1000mg Q8 h
CEFTRIAXONE (50-100) Mg/kg/day	500 mg Q 24h	750 mg Q24 H	1000mg Q24 h				
CEFUROXIME (75-150) Mg/kg/day	250 mg Q8 h	350mg Q 8 H	500 mg Q 8h	750 mg Q8 h			
CLIDAMYCIN (25-40) Mg/kg/day	75 mg Q 8 h	100 mg Q 8 h	125mg Q8 h	200 mg Q8 h	250 mg Q8 h	400mg Q 8 h	500 mg Q 8 h
METRONIDAZOLE (20-30) Mg/kg/day	50 mg Q8 h	75 mg Q 8 h	100 mg Q 8 h	150 mg Q 8 h	200 mg Q 8 h	300 mg Q8 h	500 mg Q 12 h

This standardized dosing only applies to children who have: mild to moderate infection and with normal kidney and liver function

Pediatrics doses for Alleraic Rhinitis, Couah and Cold medications

Drug	Neonatal dose	Pediatric dose
Acetaminophen	**Pain (mild to moderate) or fever: Oral** GA 28 to 32 weeks: 10 to 12 mg/kg/dose Q8h ; max. daily dose: 40 mg/kg/day .GA 3 3 to 37 weeks or term neonates <10 days: 10 to 15 mg/kg/dose Q6h; max. daily dose: 60 mg/kg/day. Term neonates > 10 days: 10 to 15 mg/kg/dose Q4h or Q6h. max. daily dose: 75 mg/kg/day. **Rectal** GA 28 to 32 weeks: 20 mg/kg/dose Q12h; max. daily dose: 40 mg/kg/day. GA 33 to 37 weeks or term neonates <10 days: Loading dose: 30 mg/kg; then 15 mg/kg/dose Q8h ; max.daily dose: 60 mg/kg/day . Term infants >10 days: Loading dose: 30 mg/kg; then 20 mg/kg/dose Q6h or Q8h max. daily dose: 75 mg/kg/day	**Pain (mild to moderate) or fever: Oral:** 10 to 15 mg/kg/dose Q4h or Q6h PRN. Do not exceed 5 doses in 24 hours; max. daily dose: 75 mg/kg/day not to exceed 4,000 mg/day Rectal: 10 to 20 mg/kg/dose Q4h or Q6h PRN. Do not exceed 5 doses in 24 hours max. daily dose: 75 mg/kg/day.
Chlorpheniramine	**Allergic symptoms, allergic rhinitis:** Children 2 to <6 years: 1 mg Q4h or Q6h ; max. daily dose: 6 mg/day . Children 6 to 11 years: 2 mg Q4h or Q6h; max. daily dose: 12 mg/day	
Dextromethorphan	4 years to <6 years: 5 mg TID PRN, 6 years to <12 years: 10 mg TID PRN.	
Diphenhydramine	**Allergies; hay fever, Urticaria:** 5 mg/kg/day TID or QID ; **Rhinitis, sneezing due to common cold:** Children 6 to <12 years: 25 mg QID. **Motion sickness:** ***prophylaxis:*** fitst dose should be administered 30 minutes before travel: 5 mg/kg/day TID or QID, ***treatment:*** 5 mg/kg/day TID or QID. Age-related maximum daily doses may also be considered: <6 years: 37.5 mg/day; 6-11 years: 150 mg/day; >12 years: 300 mg/day	
Fenistil ® Dimetindene maleate	**Allergic symptoms** Infants 1 month to one year : 3-10 drops TID. Children 1 to 3 years: 10-15 drops TID. Children aged 3 to 12 years: 15-20 drops TID.	
Ibuprofen	**Analgesic, antipyratic:** ***weight-directed dosing:*** Infants and Children : 5 to 10 mg/kg/dose QID or TID, max. single dose: 400 mg; maximum daily dose: 40 mg/kg/day. ***Fixed dosing:*** Child 1-3 months 5 mg/kg QID or TID. Child 3 - 6 months 50 mg TID. Child 6 months- 1 year 50 mg QID or TID. Child 1-4 years 100 mg TID. Child 4 - 7 years 150 mg TID.	
Loratadine	**Allergic symptoms/rhinitis:** Children 2 to <6 years: 5 mg OD . Children >6 years: 10 mg OD. **Chronic idiopathic urticaria:** Children 2 to 12 years: 5 mg OD	
Loratadine and Pseudoephedrine	Safety & efficacy not established	

Emergency Drugs

Drug	Indications/Dosages	Max. dose
Adenosine	**SVT** • 0.1 mg/kg IV/IO (1st dose) rapid push, 2nd dose 0.2 mg/kg IV/IO rapid push	1st dose 6 mg 2nd dose 12 mg
Albumin	**Shock, Trauma, burns** • 0.5 – 1 g/kg (10-20 mL/kg of 5% solution) IV/IO rapid infusion	
Albuterol	**Asthma, Anaphylaxis (bronchospasm), hyperkalemia** • MDI: 4-8 puffs via inhalation q 20 min PRN with spacer (or ET if intubated) • Neb: 2.5 mg/dose (wt <20 kg) or 5 mg/dose (wt >20 kg) via inhalation q 20 min PRN • Continuous Neb: 0.5 mg/kg/hr via inhalation	Max 20 mg/hr
Amiodarone	**SVT, VT (with pulse)** • 5 mg/kg IV/IO load over 20-60 min **Pulseless arrest (ie, VF/pulseless VT)** • 5 mg/kg bolus	*Single dose: 300 mg *Daily boluses max. 15 mg/kg (2.2g in adult)
Atropine sulfate	**Bradycardia (symptomatic)** • 0.02 mg/kg IV/IO (min dose 0.1 mg) • May repeat the dose once • 0.04 – 0.06 mg/kg ET	*Single dose 0.5 mg (child) 1 mg (adult) *total dose (if repeated) 1 mg (child) 3 mg (adult)
Calcium chloride 10%	**Hypocalcaemia, Hyperkalemia, Hypermagnesemia** **Calcium channel blocker overdose** • 20 mg/kg (0.2 mL/kg) IV/IO slow push during arrest, repeat PRN	
Dexamethasone	**Croup** • 0.6 mg/kg PO/IV/IM	10 mg
Dextrose (glucose)	**Hypoglycemia** • 0.5 – 1 g/kg IV/IO ($D_{25}W$ 2 - 4 mL/kg; $D_{10}W$ 5 -10 mL/kg)	
Diphenhydramine	**Anaphylactic shock** • 1 – 2 mg/kg IV/IO/IM q 4 to 6 hours	Single dose 50 mg
Dobutamine	**Congestive heart failure, cardiogenic shock** • 2 to 20 mcg/kg/min IV/IO infusion; titrate to desired effect	
Dopamine	**Cardiogenic shock, distributive shock** • 2 to 20 mcg/kg/min IV/IO infusion; titrate to desired effect	
Epinephrine	**Pulseless arrest, bradycardia (symptomatic)** • IV/IO: 0.01 mg/kg (0.1 mL/kg of 1:10 000) q 3 - 5 min. • ET: 0.1 mg/kg (0.1 mL/kg of 1:1000) q 3 - 5 min **Hypotensive shock** • 0.1 – 1 mcg/kg/min IV/IO infusion (consider higher doses if needed) **Anaphylaxis** • IM autoinjector 0.3 mg (wt ≥30 kg) or IM junior autoinjector 0.15 mg (wt 10 – 30kg) • IM: 0.01 mg/kg (0.01 mL/kg of 1:1000) q 15 min PRN • IV/IO: 0.01 mg/kg (0.1 mL/kg of 1:10 000) q 3 – 5 min (max single dose 1 mg) if hypotensive **Asthma** • SC: 0.01 mg/kg (0.01 mL/kg of 1:1000) subcutaneously q 15 minutes **Croup** • 0.25 to 0.5 mg racemic solution(2.25%) mixed in 3 mL NS via inhalation • 3 mL of 1:1000 sol. Mixed with 3 mL NS via inhalation	Single dose IV/IO 1 mg Single IM dose 0.3 mg SC: 0.3mg or 0.3 mL

Emergency Drugs *(continued)*

Drug	Indications/Dosages	Max. dose
Etomidate	**RSI** • 0.2 – 0.4 mg/kg IV/IO infused over 30 -60 seconds will produce rapid sedation that lasts for 10 to 15 min	20 mg
Hydrocortisone	**Adrenal insufficiency** • 2 mg/kg IV bolus	100 mg
Ipratropium bromide	**Asthma** • 250 – 500 mcg via inhalation q 20 min PRN x 3 doses	
Lidocaine	**VF/pulseless VT, wide-complex tachycardia (with pulses)** • 1 mg/kg IV/IO bolus • Maintenance: 20 – 50 mg/kg/min IV/IO infusion (repeat bolus dose if infusion initiated >15 min after initial bolus) • ET: 2 – 3 mg/kg	
Magnesium sulfate	**Asthma (refractory status asthmaticus), Torsades de pointes, hypomagnesemia** • 25 – 50 mg/kg IV/IO bolus (pulseless VT), or over 10 – 20 min (VT with pulses) or slow infusion over 15-30 min (status asthmaticus)	2 g
Methylprednisolone	**Asthma (status asthmaticus), anaphylactic shock** • Load: 2 mg/kg IV/IO/IM; only use acetate salt IM • Maintenance: 0.5 - 1 mg/kg IV/IO q 6 hours	60 mg / day (Max in adult 125 mg / day)
Milirnone	**Myocardial dysfunction and increased SVR/PVR** • Loading: 50 mcg/kg IV/IO over 10 – 60 min followed by 0.25 – 0.75 mcg/kg/min IV/IO infusion	
Naloxone	**Narcotic (opiate) reversal** • Total reversal required (for narcotic toxicity secondary to overdose): 0.1 mg/kg IV/IO/IM/SC bolus q 2 min PRN • Total reversal not required (eg, for respiratory depression associated with therapeutic narcotic use): 1-5 mcg/kg IV/IO/IM/SC; titrate to desired effect • Maintain reversal: 0.002 – 0.16 mg/kg/hr IV/IO infusion	2 mg (bolus)
Nitroglycerin	**Congestive heart failure, cardiogenic shock** • Initiate at 0.25 – 0.5 mcg/kg/min IV/IO infusion; titrate by 1 mcg/kg/min q 15-20 min as tolerated. Typical dose range 1- 5 mcg/kg/min	10 mcg/kg/min
Nitroprusside	**Cardiogenic shock (ie, associated with high SVR), severe hypertension** • 0.3-1 mcg/kg/min IV/IO initial dose; then titrate up to 8mcg/kg/min as needed	
Norepinephrine	**Hypotensive (usually distributive) shock (ie, low SVR and fluid refractory)** • 0.1-2 mcg/kg/min IV/IO infusion; titrate to desire effect	
procainamide	**SVT, atrial flutter, VT (with pulses)** • 15 mg/kg IV/IO load over 30-60 min (Do not use routinely with amiodarone)	
Prostaglandine E_1 (PGE_1)	**Ductal-dependent congenital heart disease (all forms)** • 0.05 – 0.1 mcg/kg/min IV/IO infusion initially, then 0.01 to 0.05 mcg/kg/min IV/IO	
Sodium bicarbonate	**Metabolic acidosis (severe), hyperkalemia** • **1 mEq/kg IV/IO slow bolus**	
Vasopressin	**Cardiac arrest** • 0.4 to 1 unit/kg bolus **Catecholamine-resistant hypotension** • 0.0002 to 0.002 unit/kg/min (0.2 to 2 milliunits/kg/min)	40 units (bolus)

- American Academy Of Pediatrics
- American Academy Of Family Physician
- Pediatric Advanced Life Support – PLAS 2010
- Canadian Pediatric Triage And Acuity Scale (CTAS).
- The National Institute for Health and Care Excellence GUIDELINES (NICE)
- Fleisher & Ludwig s Textbook Of Pediatric Emergency
- National Guard Hospital Emergency Guidelines
- Pediatric Protocols For Malaysian Hospitals
- Nelson Essentials Of Pediatrics
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- PEM Practice
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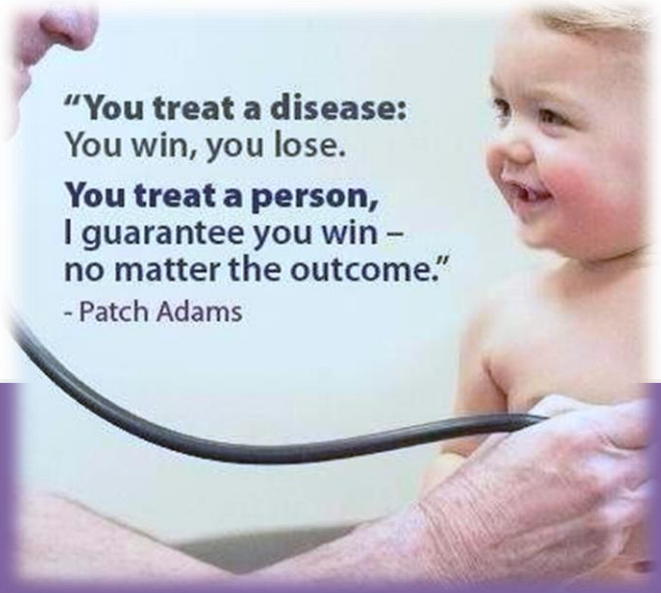

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