### PAEDRIATIC DRUG DOSAGE

Doses for overweight children, base dose calculation on median weight for age or height

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adrenaline</td>
<td>Give 0.1ml/kg IV in resuscitation</td>
</tr>
<tr>
<td></td>
<td>To make this strength dilute 1ml of 1 in 1000 adrenaline</td>
</tr>
<tr>
<td></td>
<td>In 9 ml water for injection to make 10 ml</td>
</tr>
<tr>
<td>Adrenaline</td>
<td>Severe viral croup 2ml of 1:1,000 nebulized.</td>
</tr>
<tr>
<td></td>
<td>If effective, repeat with careful monitoring</td>
</tr>
<tr>
<td>Albendazole</td>
<td>Age &lt; 2yrs, 200mg PO stat</td>
</tr>
<tr>
<td></td>
<td>Age &gt; 2yrs, 400mg PO stat</td>
</tr>
<tr>
<td>Amikacin</td>
<td>15mg/kg once daily. Slow IV over 3-5 min</td>
</tr>
<tr>
<td>Aminophylline</td>
<td>Newborn: loading dose 6mg/kg IV over 1 hour or rectal,</td>
</tr>
<tr>
<td></td>
<td>Maintainance (IV or oral) Age 0-6 days: 2.5mg/kg 12 hrly,</td>
</tr>
<tr>
<td></td>
<td>age 7-28 days: 4mg/kg 12 hrly</td>
</tr>
<tr>
<td>Amoxicillin</td>
<td>Use 25mg/kg/dose for simple infections and 40-45mg/kg for pneumonia</td>
</tr>
<tr>
<td>Ampicillin</td>
<td>Neonate: 50mg/kg/dose 12 hrly IV or IM if aged &lt; 7 days and 8 hrly if aged 8-28 days</td>
</tr>
<tr>
<td>Azithromycin</td>
<td>10mg/kg max 500mg PO daily for 3 days</td>
</tr>
<tr>
<td>Budenoside</td>
<td>pMDI with a spacer 200μg daily (low dose)</td>
</tr>
<tr>
<td>Benzyl Penicillin</td>
<td>Age &lt; 6 days: 50,000 iu/kg/dose 12 hrly IV or IM</td>
</tr>
<tr>
<td></td>
<td>Age &gt; 7 days: 50,000 iu/kg/dose 6 hrly IV/IM</td>
</tr>
<tr>
<td>Caffeine citrate</td>
<td>Loading dose: oral 20mg/kg (or IV over 30 min), maintenance dose: 5mg/kg daily oral (or IV over 30 min)</td>
</tr>
<tr>
<td>Calcium</td>
<td>Symptomatic hypocalcaemia (tetany/convulsions)</td>
</tr>
<tr>
<td></td>
<td>IV bolus of 10% calcium gluconate 0.5ml/kg (0.11 mmol/kg) to a max of 20ml/kg over 5-10 min then continuous IV infusion over 24 hours of 1.0 mmol/kg (maximum 8.8 mmol)</td>
</tr>
<tr>
<td></td>
<td>Mild hypocalcaemia</td>
</tr>
<tr>
<td></td>
<td>50mg/kg/day of elemental calcium PO in 4 divided doses</td>
</tr>
<tr>
<td>Carbamazepine</td>
<td>Age 1m-12 yrs: initially 5mg/kg at night, increased as necessary by 2.5-5mg/kg every 3-7 days, usual maintenance dose 5mg/kg 2-3 times daily</td>
</tr>
<tr>
<td>Cefotaxime</td>
<td>Preferred to ceftriaxone for treatment of neonatal meningitis if aged &lt; 7 days</td>
</tr>
<tr>
<td></td>
<td>Pre-term: 50mg/kg 12 hourly</td>
</tr>
<tr>
<td></td>
<td>Term aged &lt; 7 days: 50ml/kg 8 hrly</td>
</tr>
<tr>
<td>Drug</td>
<td>Dosage</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Ceftazidime</strong></td>
<td>Age &lt; 7 days or weight &lt; 1200g: 50mg/kg IM/IV 12 hrly</td>
</tr>
<tr>
<td></td>
<td>Age &gt; 7 days or weight &gt; 1200g: 50mg/kg IM/IV 8 hrly</td>
</tr>
<tr>
<td></td>
<td>1 month-12 yrs: 30-50mg/kg IM/IV 8 hrly (max 6g/day) (for pseudomonal inf)</td>
</tr>
<tr>
<td><strong>Ceftriaxone</strong></td>
<td>1 month-11 yrs: 50-80mg/kg once daily</td>
</tr>
<tr>
<td><strong>Co-trimoxazole</strong> (4mg/kg trimethoprim &amp; 20mg/kg sulphamethoxazole)</td>
<td>Weight</td>
</tr>
<tr>
<td>2-3 kg</td>
<td>2.5 ml</td>
</tr>
<tr>
<td>4-10 kg</td>
<td>5 ml</td>
</tr>
<tr>
<td>11-15 kg</td>
<td>7.5 ml</td>
</tr>
<tr>
<td>165-20 kg</td>
<td>10 ml</td>
</tr>
<tr>
<td><strong>Dexamethasone</strong></td>
<td>IV and IM 0.6mg/kg stat for severe viral croup</td>
</tr>
<tr>
<td><strong>Dextrose/glucose</strong></td>
<td>5ml/kg 10% dextrose IV over 3-5 min</td>
</tr>
<tr>
<td></td>
<td>Neonate: 2ml/kg</td>
</tr>
<tr>
<td><strong>Diazepam (IV)</strong></td>
<td>0.3mg/kg</td>
</tr>
<tr>
<td><strong>Diazepam (rectal)</strong></td>
<td>0.5mg/kg</td>
</tr>
<tr>
<td><strong>Digoxin (oral)</strong></td>
<td>Age 2-5 yrs: initially 35 μg/kg in 3 divided doses for 24 hrs, then 10 μg/kg daily in 1-2 doses</td>
</tr>
<tr>
<td></td>
<td>Age 5-10 yrs: initially 25 μg/kg (max 750 μg) in 3 divided doses for 24 hrs, then 6 μg/kg daily (max 250 μg daily) 1-2 doses</td>
</tr>
<tr>
<td></td>
<td>Age 10-12 yrs: initially 0.75-1.5mg in 3 divided doses for 24 hrs, then 62.5-250 μg daily in 1-2 doses</td>
</tr>
<tr>
<td><strong>Erythromycin</strong></td>
<td>30-50mg/kg/day in 3-4 divided doses, max 2g/day</td>
</tr>
<tr>
<td><strong>Flucloxacillin</strong></td>
<td>50mg/kg/dose 8 hourly</td>
</tr>
<tr>
<td><strong>Gentamycin</strong></td>
<td>7.5mg/kg/24hr IM or slow IV</td>
</tr>
<tr>
<td><strong>Ibuprofen</strong></td>
<td>5-10 mg/kg 8 hrly</td>
</tr>
<tr>
<td><strong>Iron (Fe)</strong></td>
<td>Iron defeciancy anemia</td>
</tr>
<tr>
<td></td>
<td>Preterm: 2-4mg elemental iron/kg/day, max dose:15 mg elemental Fe/kg/day</td>
</tr>
<tr>
<td></td>
<td>Child: 3-6mg elemental Fe/kg/day</td>
</tr>
</tbody>
</table>
### PAEDRIATIC DRUG DOSAGE (continued)

Doses for overweight children, base dose calculation on median weight for age or height

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dosage Details</th>
</tr>
</thead>
</table>
| Lactulose          | **Hepatic encephalopathy**  
Infants: 1.7-6.7g/day (2.5-10ml) orally daily divided in 3-4 doses. Adjust dosage to produce 2-3 soft stools per day  
Children: 25-60g/day (40-90ml) orally divided in 3-4 doses. Adjust dosage to produce 2-3 stools/day  
**Chronic constipation**  
Children: 0.7-2g/kg/day (1-3ml/kg/day) orally in divided doses daily; μg/kg |
| Metronidazole      | Anaerobic infection: 7.5mg/kg every 8 hrs (max per dose 400mg)                 |
| Morphine           | PO 0.05-0.2 mg/kg/dose every 4-6 hrs as needed.  
IM/IV/SC 0.1-0.2 mg/kg/dose every 2-4 hours as needed (max 15mg/dose) |
| Nystatin           | 1ml (100,000 U) to each side of the mouth 6 hourly                             |
| Paracetamol        | 10-15mg/kg 6-8 hrly                                                            |
| Pethidine          | 0.5-1 mg/kg every 4-6 hours                                                    |
| Phenobarbitone     | Loading with 15mg/kg followed by 2.5-5mg/kg daily                              |
| Phenytoin          | 15-20mg/kg over 20 min, maintenance dose of 2.5-5mg/kg twice daily             |
| Prednisolone       | Asthma: 2mg/kg PO daily (usually for 3-5 days)                                  |
| Sodium valproate   | Initially 10-15mg/kg (max 600mg) daily in 1-2 divided doses. Maintenance 25-30mg/kg daily in 2 divided doses PO |
| Vitamin K          | For liver disease: 0.3mg/kg stat, max 10mg  
Newborn: 1mg stat IM (less than 1500g: 0.5mg IM)                                 |
| Zinc sulphate      | (for diarrhea)  
Age < 6 months: 10mg daily for 10-14 days  
Age > 6 months: 20mg daily for 10-14 days                                         |
HAND WASH TECHNIQUE

0. Wet hands with water
1. Apply enough soap to cover all hand surfaces.
2. Rub hands palm to palm.
3. Right palm over left dorsum with interlaced fingers and vice versa.
4. Palm to palm with fingers interlaced.
5. Backs of fingers to opposing palms with fingers interlocked.
6. Rotational rubbing of left thumb clasped in right palm and vice versa.
7. Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa.
8. Rinse hands with water.
9. Dry thoroughly with a single use towel.
10. Use towel to turn off faucet.
11. ...and your hands are safe.
HAND RUB TECHNIQUE

1a. Apply a palmful of the product in a cupped hand, covering all surfaces;

1b. Rub hands palm to palm;

2. Backs of fingers to opposing palms with fingers interlocked;

3. Right palm over left dorsum with interlaced fingers and vice versa;

4. Palm to palm with fingers interlaced;

5. Rotational rubbing of left thumb clasped in right palm and vice versa;

6. Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;

7. Once dry, your hands are safe.
INFANT/CHILD BASIC LIFE SUPPORT

Ensure safety, Stimulate, Shout for HELP! Rapidly move child to emergency area

1. Assess and clear airway
2. Position head/neck to open airway

Assess breathing – look, listen, feel for 5 sec

No breathing

Give 5 rescue breaths with bag and mask – if chest doesn’t rise, check if airway is open & mask position

Ensure at least 2 good breaths

Check the pulse for 10 seconds

No pulse or weak, slow pulse

Give 15 chest compressions, then continue giving 15 chest compressions for each 2 breaths for 1 minute

Re-assess ABC

No change

- Continue 15 chest compressions for every 2 breaths for 2 minutes
- Re-assess ABC

Adequate breathing

-support airway
-continuous oxygen

Pulse palpable and > 60/min

improvement

1. Continue ventilation (rate 20 breaths per min, give O2)
2. Look for signs of dehydration or poor circulation and give emergency fluids as necessary
3. Consider treating hypoglycaemia
4. Continue full examination to establish cause of illness and treat appropriately

No change

improvement

Re-assess ABC

No change

1. Consider IV 0.1 ml/kg 1:10,000 adrenaline if 3 people in team
2. Consider fluid bolus (if shock likely) and treatment of hypoglycaemia
3. Continue CPR in cycles of 2-3 minutes
4. Reassess every 2-3 minutes
Treatment of convulsions

Convulsions in the first 1 month of life should be treated with Phenobarbitone 20mg/kg stat, a further 5-10mg/kg can be given within 24 hours of the loading dose with maintenance doses of 5mg/kg daily.

Age > 1 month.

**If children have up to 2 fits lasting < 5 mins, they **DO NOT** require emergency drug treatment**

- Child convulsing for more than 5 minutes
  - Yes
  - Check ABC, observe and investigate cause
  - No
  - Child having 3rd convolution lasting < 5 mins in < 2 hrs *
    - No
    - Check ABC, observe and investigate cause
    - Yes
    - Convulsion stops by 10 minutes?
      - Yes
      - Check ABC, observe and investigate cause
      - No
      - Convulsion stops by 15 minutes?
        - Yes
        - Check ABC, observe and investigate cause
        - No
        - Treatment:
          5) Give IV diazepam 0.3 mg/kg slowly over 1 minute, OR rectal diazepam 0.5 mg/kg
          6) Continue oxygen
          7) Check airway is clear when fit stops

**DO NOT** give a phenobarbitone loading dose to an epileptic on maintenance phenobarbitone
FLUID RESSUSCITATION IN GASTRO-ENTERITIS

History of diarrhoea/vomiting, age > 1 month

Hypovolaemic shock from diarrhoea/ dehydration
All 4 of the following:
- weak/absent pulse
- cold hands + temp gradient
- capillary refill > 3 secs
- AVPU < A
PLUS sunken eyes and slow skin pinch
Note: if Hb < 5 g/dl, transfuse urgently

Bolus 20 ml/kg of NS or RL.
A 2nd bolus may be given if required
Then proceed to IV step 2 (below).
Treat hypoglycemia

IV Step 1: 30 ml/kg RL or NS
- over 30 min if age > 12 months
- over 60 min if age < 12 months

IV Step 2: 70 ml/kg of RL or NS
- over 2.5 hrs if age > 12 months
- over 5 hrs if age < 12 months
- Start ORS at 5 ml/kg/hr once able to drink

Severe dehydration
Unable to drink or AVPU < A and
- sunken eyes
- return of skin punch > 2 secs

- ORS orally at 75 ml/kg over 4 hrs
- continue breast feeding as tolerated
Reassess at 4 hrs and treat according to classification

Some dehydration
Able to drink adequately but 2 or more of the followings:
- sunken eyes
- return of skin punch 1-2 sec
- restlessness/irritability

- 10 ml/kg ORS after each loose stool
- continue breast feeding
- encourage feeding if > 6 months

No dehydration
Diarrhoea with fewer than 2 of the above signs of dehydration

Re-assess at least hourly and after 3-6 hrs, re-classify as: ‘severe dehydration’, ‘some dehydration’ or ‘no dehydration’ and treat accordingly

AVPU

- ALERT: Not necessarily orientated to time and place or neurologically normal.
- VERBAL: Not fully awake. Only responds to verbal stimuli.
- PAIN: Difficult to rouse and only responds to painful stimuli.
- UNRESPONSIVE: Completely unconscious with no response.
## MANAGEMENT OF WHEEZING

### ASSESSMENT

<table>
<thead>
<tr>
<th>Mild/moderate</th>
<th>Severe</th>
<th>Life threatening</th>
</tr>
</thead>
</table>
| - Normal vital signs  
- Mild wheeze  
- Speaking in complete sentences or feeding  
- SpO2 > 92% in air  
- PEF > 50% in those aged > 5yrs | - too breathless to talk/feed  
- SpO2 < 92% in air  
- use of accessory muscle  
- peak flow < 50% predicted | - cyanosis/pallor  
- silent chest  
- poor respiratory effort  
- altered consciousness  
- SpO2 < 92% in air  
- irritable/exhausted  
- PEF < 33% in those aged < 5yrs |
| - Salbutamol MDI 2-10 puffs (200-1000 μg) Via Spacer Device  
- oxygen if SpO2 < 94% in air  
- once daily oral prednisolone (1mg/kg)  
Age <2 yrs: max 10mg once daily  
Age 2-5 yrs: max 20mg once daily  
Age > 5 yrs: max 30mg once daily |  |

#### Discharge criteria met

- SpO2 > 94% in air  
- peak flow > 75% predicted  
- stable on 4-hrly inhaled treatment

<table>
<thead>
<tr>
<th>age</th>
<th>Resp rate</th>
<th>Heart rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 5 yrs</td>
<td>&lt; 40/min</td>
<td>&lt; 140/min</td>
</tr>
<tr>
<td>5-12 yrs</td>
<td>&lt; 30/min</td>
<td>&lt; 125/min</td>
</tr>
<tr>
<td>12-18 yr</td>
<td>&lt; 25/min</td>
<td>&lt; 110/min</td>
</tr>
</tbody>
</table>

#### Discharge home

- continue oral prednisolone x 3 days  
- salbutamol MDI 2 puffs 4 hourly  
- review for long term control

---

### Medicare

#### Discharge home

- continue oral prednisolone x 3 days  
- salbutamol MDI 2 puffs 4 hourly  
- review for long term control

#### Admit ICU

- consider intubation/ventilation  
- CONTINUOUS salbutamol nebulization  
- ipratropium Bromide nebulization every 20-30 min  
- hydrocortisone IV  
- if signs of shock, give NS bolus 20ml/kg

#### Reassess symptoms

- CXR  
- ABG

#### Aminophylline

- Response?

- YES  
- NO

#### Magnesium sulphate bolus (2-17 yrs)

- Response?

- YES  
- NO

#### Salbutamol infusion

- Response?

- YES  
- NO

---

### Aminophylline

- Loading dose: 5 – 7mg/kg over 20 min.  
Followed by 0.5 – 0.9mg/kg/hour.  
Continuous cardiac monitoring: stop infusion if arrhythmias occur

### Magnesium sulphate

- Magnesium sulphate IV injection over 20 min:  
40mg/kg single dose (max 2g)  
Use 50% injection and dilute to a 10% concentration by diluting required volume with 4x volume of NS  
Monitor BP every 5 min

### IV salbutamol

- Using 1mg/ml solution for IV infusion, dilute to a concentration of 200 μg/ml with NS (take 10 ml of 1mg/ml of salbutamol and dilute till 50ml with NS)  
Infuse at 60-300 μg/kg/hr (0.3 – 1.5 ml/kg/hr)
MANAGEMENT OF NEPHROTIC SYNDROME

First episode of Nephrotic Syndrome
Absence of hypertension, hematuria, azotemia

Prednisolone 2mg/kg daily for 6 weeks, followed by 1.5mg/kg on alternate days for 6 weeks

Infrequent relapses

Prednisolone 2mg/kg daily until remission, then 1.5mg/kg on alternate days for 4 weeks

Frequent relapses
Steroid dependence

-Refer for evaluation
-Alternate day prednisolone to maintain remission
-Assess steroid threshold

Steroid resistance

-Refer for evaluation
-therapy based on renal biopsy findings

Threshold < 0.5-0.7mg/kg on alternate days

Alternate day prednisolone for 9-18 months

Threshold > 0.7mg/kg on alternate days or Steroid toxicity

Cyclosporine or Tacrolimus

Remission
Urine albumin nil or trace (or proteinuria <4 mg/m2/h) for 3 consecutive days

Relapse
Urine albumin 3+ or 4+ (or proteinuria >40 mg/m2/h) for 3 consecutive days, having been in remission previously

Frequent relapses
Two or more relapses in six months of initial response, or more than three relapses in any twelve months

Steroid dependence
Two consecutive relapses when on alternate day steroids or within 14 days of its discontinuation

Steroid resistance
Absence of remission despite therapy with 4 weeks of daily prednisolone in a dose of 2 mg/kg per day
# Management of Meningitis

<table>
<thead>
<tr>
<th>Signs and Symptoms of Meningitis</th>
<th>Older child</th>
<th>Infant</th>
</tr>
</thead>
<tbody>
<tr>
<td>- fever</td>
<td>- hypothermia</td>
<td></td>
</tr>
<tr>
<td>- nausea</td>
<td>- poor feeding</td>
<td></td>
</tr>
<tr>
<td>- vomiting</td>
<td>- lethargy</td>
<td></td>
</tr>
<tr>
<td>- photophobia</td>
<td>- irritability</td>
<td></td>
</tr>
<tr>
<td>- headache</td>
<td>- apnea</td>
<td></td>
</tr>
<tr>
<td>- convulsion</td>
<td>- bulging fontanelle</td>
<td></td>
</tr>
<tr>
<td>- kernig’s +ve</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Brudzinski +ve</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- focal neurology</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Check:**
- airway
- breathing
- circulation
- GCS

**Vascular access**

**Blood tests**
- blood culture
- FBC
- U&E, LFT, CRP
- blood gas
- meningococcal and Pneumococcal PCR

**Lumbar puncture**
within 1 hour arrival in hospital

**Dexamethasone**
0.15mg/kg (max 10mg)
6 hourly x 4 days

**Antibiotics**
Within 1 hour of arrival in hospital

**Contraindications to LP:**
- GCS < 9
- shock
- respiratory insufficiency
- continuous seizures
- focal neurological signs
- infection at LP site
- coagulopathy or platelets < 40
- papilloedema (do not delay LP if fundi cannot be seen)

**Perform LP as soon as possible when contraindications no longer exist**

**Steroids if < 12 hrs from 1st antibiotics and LP shows**
- frankly purulent CSF
- CSF WBC count > 1000/μL
- raised CSF WBC + Protein > 1g/L
- Bacteria on Gram stain

**Antibiotics**
- ceftriaxone (meningitic Dose)
- change antibiotics based on CSF results
**MANAGEMENT OF DIABETIC KETOACIDOSIS**

### Immediate assessment

<table>
<thead>
<tr>
<th>Clinical history</th>
<th>Clinical signs</th>
<th>Investigations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyuria, polydipsia, Nocturia, enuresis, Weight loss, Nausea, vomiting, Abdominal pain, Weakness, fatigue, Confusion, altered Level of consciousness</td>
<td>Dehydration, Deep sighing respiration (kussmaul) Smell of ketones Lethargy/drowsiness</td>
<td>- Ketones in urine - Increase blood glucose - Academia (pH&lt; 7.3, HCO3 &lt;15) - Urea, electrolytes - Other investigations as indicated</td>
</tr>
</tbody>
</table>

### Diagnosis of Diabetic Ketoacidosis confirmed

- Shock (reduced peripheral pulse, altered consciousness)
- Dehydration > 5%, not in shock, acidic (hyperventilating), vomiting
- Minimal dehydration Tolerating oral fluid

### Resuscitation

- Airway + NG tube
- Breathing (100% O2)
- Circulation (NS 10-20 ml/kg over 1-2 hrs & repeat until circulation is restored

### IV Therapy

- NS 10ml/kg over 1 hr, may repeat
- Calculate fluid requirements
- Correct fluid deficit over 24-48 hours
- ECG for abnormal T-waves
- Add KCl 40 mmol per L of fluid

### Therapy

- Start with SC Insulin
- Continue oral hydration
- No improvement

### Continuous insulin infusion at 0.05 – 0.1 unit/kg/hour, starting 1 hour after fluids initiated

#### Critical observations:
- hourly RBS prick, hourly fluid input & output, hourly neurological status, electrolytes 2 hourly after starting IV fluid therapy, monitor ECG for T-wave changes

#### Acidosis not improving

- Re-evaluate
  - IV fluid calculation
  - Insulin dose & delivery
  - Consider sepsis

#### Blood glucose < 17mmol/L or Blood glucose falls >5mmol/L/hour

- IV therapy
  - Change to 0.45 or 0.9% saline. Add glucose to fluid (5% - 12.5%) to prevent hypoglycaemia
  - Adjust sodium infusion to promote an increase in measured serum Na

#### Improved

- Clinically well, ketoacidosis resolved, tolerating oral fluids

#### Transition to SC insulin

- Start SC insulin, then stop IV insulin after an appropriate interval

#### Neurological deterioration

**WARNING SIGNS**

Severe or progressive headache, slowing heart rate, irritability, confusion, decreased consciousness, incontinence, specific neurological signs.

**Is it cerebral edema?** (Exclude Hypoglycaemia)

**Management of cerebral edema**

- Give IV mannitol 0.5-1g/kg
- Adjust IV fluids to maintain normal BP, but avoid overhydration

### Additional guidelines:

- Unless absolutely necessary, avoid placing a central venous catheter because of high risk of thrombosis.
- Give antibiotics to febrile patients after obtaining appropriate cultures of body fluids.
- Bladder catheterization usually is not necessary. But if child is unconscious or unable to void on demand, bladder should be catheterized.
## IMMUNIZATION FOR BOYS

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BCG</strong></td>
<td>0-3 months</td>
</tr>
<tr>
<td>Rotavirus vaccine 1</td>
<td></td>
</tr>
<tr>
<td>Hexavalent 1</td>
<td>6 weeks</td>
</tr>
<tr>
<td>PCV 1</td>
<td></td>
</tr>
<tr>
<td>Rotavirus vaccine 2</td>
<td>10 weeks</td>
</tr>
<tr>
<td>HEXAVALENT 2</td>
<td></td>
</tr>
<tr>
<td>HEXAVALENT 3</td>
<td>14 weeks</td>
</tr>
<tr>
<td>PCV 2</td>
<td></td>
</tr>
<tr>
<td>PCV 3</td>
<td>9 months</td>
</tr>
<tr>
<td>MMR</td>
<td></td>
</tr>
<tr>
<td>MMR Booster</td>
<td>17 months</td>
</tr>
<tr>
<td>Booster HEXAVALENT</td>
<td>18 months</td>
</tr>
<tr>
<td>Booster DT/OPV</td>
<td></td>
</tr>
<tr>
<td>Booster MMR</td>
<td>School Entry (5 years)</td>
</tr>
<tr>
<td>Tetanus Toxoid</td>
<td>11-12 years</td>
</tr>
</tbody>
</table>

## IMMUNIZATION FOR GIRLS

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BCG</strong></td>
<td>0-3 months</td>
</tr>
<tr>
<td>Rotavirus vaccine 1</td>
<td></td>
</tr>
<tr>
<td>Hexavalent 1</td>
<td>6 weeks</td>
</tr>
<tr>
<td>PCV 1</td>
<td></td>
</tr>
<tr>
<td>Rotavirus vaccine 2</td>
<td>10 weeks</td>
</tr>
<tr>
<td>HEXAVALENT 2</td>
<td></td>
</tr>
<tr>
<td>HEXAVALENT 3</td>
<td>14 weeks</td>
</tr>
<tr>
<td>PCV 2</td>
<td></td>
</tr>
<tr>
<td>PCV 3</td>
<td>9 months</td>
</tr>
<tr>
<td>MMR</td>
<td></td>
</tr>
<tr>
<td>MMR Booster</td>
<td>17 months</td>
</tr>
<tr>
<td>Booster HEXAVALENT</td>
<td>18 months</td>
</tr>
<tr>
<td>Booster DT/OPV</td>
<td></td>
</tr>
<tr>
<td>Booster MMR</td>
<td>School Entry (5 years)</td>
</tr>
<tr>
<td>HPV Vaccine 1</td>
<td>9 years</td>
</tr>
<tr>
<td>HPV Vaccine 2 (after 6 months)</td>
<td></td>
</tr>
<tr>
<td>Tetanus Toxoid</td>
<td>11-12 years</td>
</tr>
</tbody>
</table>

**Hexavalent**: diphtheria, Pertussis, Tetanus, Haemophilus Influenza Type B, Polio (inactivated), Hepatitis B  
**MMR**: Measles, Mumps, Rubella  
**PCV**: Pneumococcal Conjugate Vaccine  
**DT**: Diphtheria, Tetanus  
**OPV**: Oral Polio Vaccine  
**HPV**: Human Papilloma Virus