**DRUG DOSAGES IN PAEDIATRIC ANAESTHESIA**

**Antibiotics**

Note:

Neonatal dosing to be used till post menstrual age (PMA) of 44 weeks.

PMA is equivalent to gestational age + postnatal age. For example, for a baby born at 28 weeks gestation and is now 21 days old, the PMA would be 31 weeks.

For PMA above 45 weeks, please refer to the dosing indicated for child.

All routes are intravenous (IV) unless otherwise specified

| **Drug** | **Dosing** | | **Remarks** |
| --- | --- | --- | --- |
| Amikacin | **Neonates**  PMA ≤ 29 wk: | | Infuse over 30-60min.  Therapeutic levels:  Target peak: 30-40 μg/ml  Target trough: <10μg/ml  (\*ideal trough: 4-5μg/ml, especially if existing nephrotoxic drugs or poor renal function) |
|  | ≤ 7 days: 18mg/kg q48h  8-28 days: 15 mg/kg q36h  ≥ 29 days: 15 mg/kg q24h |
| PMA 30-34 wk: | |
|  | ≤ 7 days: 18mg/kg q36h  ≥ 8 days: 15 mg/kg q24h |
| PMA 35-44 wk: 15 mg/kg q24h | |
| **Child**: | 15-22.5mg/kg/day q8-12h |
| **Adult:** | 15mg/kg/day q8-12h (max 1.5g/day) |

| **Drug** | **Dosing** | |
| --- | --- | --- |
| Ampicillin | Neonates: | 50 mg/kg/dose, interval depends on PMA |
| PMA ≤ 29 wk: (≤ 28 days: q12h, >28 days: q8h) |
| PMA 30-36wk: (≤ 14 days: q12h, >14 days: q8h) |
| PMA 37-44 wk: (≤ 7 days: q12h, >7 days: q8h) |
| Child: | 25-37.5mg/kg/dose q6h |
| 50 mg/kg for single dose cardiac prophylaxis |
| Augmentin | Neonates: | <7 days: 30 mg/kg q12h (based on Co-amoxiclav)  ≥7 days: 30 mg/kg q8h (based on Co-amoxiclav) |
| Child: | 30 mg/kg/dose q8h (up to 40 mg/kg/dose q8h) |

| **Drug** | **Dosing** | |
| --- | --- | --- |
| Cefazolin | Neonates: | 25mg/kg/dose  < 2kg: (≤7 days q12h; >7 days q12h)  > 2kg: (≤7 days q12h; >7 days q8h) |
| Child: | 25-30mg/kg/dose q6-8h |
| Cardiac Prophylaxis: | 50 mg/kg |
| Ceftazidime | Neonates: | 50 mg/kg/dose, interval depends on PMA |
| PMA ≤ 29 wk: (≤ 28 days: q12h, >28 days: q8h) |
| PMA 30-36wk: (≤ 14 days: q12h, >14 days: q8h) |
| PMA 37-44 wk: (≤ 7 days: q12h, >7 days: q8h) |
| Child: | 30-50 mg/kg/dose q8h for mild-moderate infections  60-100 mg/kg/dose q8h for severe infections/ meningitis |

| **Drug** | **Dosing** | |
| --- | --- | --- |
| Ceftriaxone | Neonates: | <2kg: 50 mg/kg/dose q24h  ≥2kg: (≤7 days) 50 mg/kg/dose q24h  (>7 days) 75 mg/kg/dose q24h |
| Child: | 25-50 mg/kg q12-24h  100mg/kg/day q12-24h for meningitis (max 2g q12h) |
| Ciprofloxacin | Child: | 10-15 mg/kg/dose q12h |
| Clindamycin | Neonates: | 5 mg/kg/dose, interval depends on PMA |
| PMA ≤ 29 wk: (≤ 28 days: q12h, >28 days: q8h) |
| PMA 30-36wk: (≤ 14 days: q12h, >14 days: q8h) |
| PMA 37-44 wk: (≤ 7 days: q12h, >7 days: q8h) |
| Child: | 5mg/kg/dose q6-8h |
| Adult: | 600mg-1.2g/day |

| **Drug** | **Dosing** | | **Remarks** |
| --- | --- | --- | --- |
| Cloxacillin | Neonates: | < 2kg: (≤7 days) 50 mg/kg q12h  (>7 days) 50 mg/kg q8h  > 2kg: (≤7 days) 50 mg/kg q8h  (>7 days) 50 mg/kg q6h |  |
| Child: | 25 mg/kg/dose q6h  50 mg/kg/dose q6h in meningitis |  |
| Erythromycin | Neonates: | 10mg/kg/dose  < 1kg: (≤14 days q12h; 15-28 days q8h)  ≥ 1kg: (≤7 days q12h; 8-28 days q8h) | IV infusion over 30-60min. |
| Child: | 10-12.5mg/kg/day q6h |  |

| **Drug** | **Dosing** | | **Remarks** |
| --- | --- | --- | --- |
| Gentamicin | **Neonates** | | Infuse over 30-60min.  Do not mix with ampicillin.  Therapeutic levels:  Target peak: 8-10 μg/ml  Target trough: <2 μg/ml  (ideal trough: <1 μg/ml, especially if nephrotoxic drugs or poor renal function) |
| PMA ≤ 29 wk: | ≤ 7 days: 5mg/kg q48h  8-28 days: 4 mg/kg q36h  ≥ 29 days: 4 mg/kg q24h |
| PMA 30-34 wk: | ≤ 7 days: 4.5mg/kg q36h  ≥ 8 days: 4 mg/kg q24h |
| PMA 35-44 wk: 4 mg/kg q24h | |
| Child: | 2-2.5mg/kg q8h  5 mg/kg q24h for uncomplicated UTI over 1 month old |

| **Drug** | **Dosing** | | **Remarks** |
| --- | --- | --- | --- |
| Meropenem | Neonate: | 20 mg/kg/dose, interval depends on PMA |  |
| PMA < 32wk: (≤ 14 days: q12h, >14 days: q8h) |
| PMA ≥ 32wk: (≤ 7 days: q12h, >7 days: q8h) |
| Child: | 20 mg/kg q8h  40 mg/kg q8h for meningitis |
| For all ages: | 20mg/kg/dose for sepsis  40mg/kg/dose for meningitis/ pseudomonas sepsis |
| Imipenem | Child: | 15-25 mg/kg q6h (max 4g/day) | May cause convulsions, adjust dose in renal dysfunction |

| **Drug** | **Dosing** | |
| --- | --- | --- |
| Metronidazole | Neonate: | Loading dose 15 mg/kg  Maintenance dose 7.5mg/kg/dose, dosing interval depending on PMA |
| PMA ≤ 29 wk: (≤ 28 days: q48h, >28 days: q24h) |
| PMA 30-36wk: (≤14 days: q24h, >14 days: q12h) |
| PMA 37-44 wk: (≤7 days: q24h, >7 days: q12h) |
| Child: | 7.5-10 mg/kg q6-8h |
| Piperacillin/ Tazobactam  (Tazocin) | Neonates: | 50-100mg (piperacillin) /kg/dose |
| PMA ≤ 29 wk: (≤ 28 days: q12h, >28 days: q8h) |
| PMA 30-36wk: (≤14 days: q12h, >14 days: q8h) |
| PMA 37-44 wk: (≤7 days: q12h, >7 days: q8h) |
| Child: | <2 months: 80mg Piperacillin /kg/dose q8h |
| ≥2 months: 80 mg Piperacillin /kg/dose q6h |

| **Drug** | **Dosing** | | **Remarks** |
| --- | --- | --- | --- |
| Vancomycin | Neonates: | 15mg/kg/dose | Each dose is infused over 60 min. |
| PMA ≤ 29 wk: (≤ 14 days: q18h, >14 days: q12h) |
| PMA 30-36wk: (≤14 days: q12h, >14 days: q8h) |
| PMA 37-44 wk: (≤7 days: q12h, >7 days: q8h) | Therapeutic levels:  Peak: 30-40 μg/ml  Trough: 15-20 μg/ml (complicated infections); 10-15 μg/ml (others) |
| Child: | 15mg/kg/dose q6h |
| Adult: | 2-4g/day q6-12h |

*References:*

1. *KKH Neonatal Drug Dosing Booklet, 3rd edition (2014), available on KKH intranet*
2. *KKH Paediatric Medicine Clinical Guidelines, Appendix - Drugs – Infections (March 2015), available on KKH intranet*