ADULT SHEET

Sliding Scale Insulin

- Insulin: 50units of Actapid insulin in 50mls N saline
- Measure BMs ev hour
- >10 use Saline, <10 use 5% dextrose

<6	0
6-10	1
10-14	2
14-20	4
>20	6 &doc

DKA

<4	0
4-10	1-2
>10	6

K

Max 20-40mmol/hr

GTN/Nitrocine Infusions

- 50mg in 50mls 5% dex. 0-12ml/hr OR 25mg in 250ml 5% dex (3-12ml/hr)

Heparin Infusions

↳ CP=6/HF=12

- 5000 unit bolus
- then infusion: 20,000 units in 20mls; (neat); conc:1000unit/ml; rate: 1ml/hr
- check PT in 6hrs and adjust accoring to protocol

Amiodarone

- 24hr load: 300mg in 250mg 5% dex over 1hr; 900mg in 500ml 5% dex over 23 hr. then 200mg oral tds for 1/52.

Anaphylaxis

Adrenaline: 1:1,000=1mg/mL=0.1% ; 1:10,000=0.1mg/mL=0.01%

- Adrenaline: 300-500microg IM
- IV adrenaline 1ml/min (1 mcg/min) (1mg in 1litre, titrate up in 1mls every 2min]
- Promethazine 25-50mg IV
- Ranitidine 300mg PO (or IV 50mg diluted to 20ml/5min)
- Hydrocortisone 200mg IV
- IVF stat
- (Glucagon IV 2mg bolus titrate up to 10mg – BBlockers ⇒ +/-hypertension & no improvement)

Rapid Tranquilising

- Lorazepam 0.5-2.5mg O/IM (non-psychotic & 1st line psychotic)
- Haloperidol 5-10mg O/IM (adjunct psychotic)
- ↳caution >65, need procyclidine IM if dystonic reaction
- olanzapine (in acute mania/schizophrenia, not >65yrs) IM/oral 5-10mg
- Risperidone 2mg od adult; 500mcg bd (elderly)

SAH - CSF fluid after 12hrs (also need current LFTs & BSL)!!:

- Tube 2 ⇒ micro: cell count, gram stain & culture
- Tube 1&3 ⇒ biochem: protein, Gluc, Xanthocromia, Bilirubin

Taps - 3 sterile bottles:

Pleural

- biochem:
  - white tube: cell count; protein; amylase; glucose; LDH
  - ABG syringe: pH
- Pathology: Gram stain; MC&S; AFB; Cytology

Ascitic

(in non Ca can take 5L fluid then x1 albumin for ev 3L)

- Biochem: Cell count; Protein; LDH; Albumin; Cytology
- Microbiology; Gram stain; C&S

Haematology

- platelets – give over 30mins unless life threatening
- tranexamic acid 15mg/kg qds (max 1g qds)
- FFP 5ml/kg (each unit ~250mls) over 30mins to 1hr

Ionotropes (rate (ml/hr) = 60 x rate (mcg/kg/MIN) x kg / conc (mcg/ml)

[D&D: 3mg x kg in 500ml: ml/hr = mcg/kg/min]

- **Dobutamine** (P): 250mg in 100ml N saline (2500mcg/ml). Infuse 2.5-20mcg/kg/min. IAR 0-10ml/hr
- **Dopamine** (C): 200mg in 100ml N saline (2000mcg/ml). Infuse 2-10mcg/kg/min. IAR 0-20ml/hr

[A&NA: 6mg in 100mls dextrose: mls/hr=mcg/min]

- **Adren** (P) & **Norad** (C): 6mg in 100mls 5% dex (2-20mcg/min); IAR 5mls/hr (15mls/hr if sick+) up to 100mls/hr

(**or** 10mg in 100mls. IAR at 0-20ml/hr)

- **Isoprenaline** (P): Bolus: 200mch amp in 20mls saline then give 1ml bolus Infusion: 1mg in 50mls saline (20mcg/ml). Infuse 0-20mcg/min. IAR 0-60ml/hr
- **Phenylephrine**: 10mg in 100ml N saline (0.1mg/ml); IAR 0-20mls/hr
  ↳ 50mcg bolus: put 10mg in 10mls water (1mg/ml);take 1ml out and dilute into10mls saline (100mcg/ml) ⇒ then give 0.5ml boluses
- **Metaraminol**: 0.5-2mg boluses. 10mg/20mls saline
- **Milrinone** 10mg in 50mls 5% glucose run at 5 or 10mls/hr
- **Ephedrine** (safe pregnancy; a&b action): 3-6mg rpt doses; 30mg in 10ml saline 1ml increments
- **Vasopressin:** 20units / 20mls N saline. Run 1-5mls/hr

RSI

- Thiopental 2-5mg/kg
- Propofol Induction: 1-2.5mg/kg as bolus; Infusion: 5-10mg/kg/hr. 10,000 mcg/ml undiluted (1%). IAR 20-60ml/hr
- Etomidate: Induction 0.3mg/kg bolus
- Sux 1-1.5mg/kg
- Vecuronium: Induction or bolus: 80-100mcg/kg (lasts 30min – further bolus 20mcg/kg as req'ed) Infusion: 2 mg/ml undiluted. Infuse 50-80mcg/kg/hr. IAR 1.5-3ml/hr
- Rocuronium; induction: 0.6-1mg/kg. infusion: 0.3-0.6mg/kg/hr
- Atracurium: induction: 0.3-0.6mg/kg. infusion; 5-9mcg/kg/min (200mg in 20mls run (IAR 1-5ml/hr)
- Neostigmine 50-70mcg/kg (max 5mg) with atropine 10-20mcg/kg or glycopyrroium 10-15mcg/kg (better in IHD as avoids tachycardia)

Alcohol mmol/L ⇒ mg/dL: /10 then x46

Palliative PRNs

- oromorph 2.5mg
- Secretions ⇒ buscapan 20mg s/c
- Distress/SOB ⇒ midazolam 2.5mg s/c
- Anti-emetic/Confusion/Hallucination⇒ haloperidol 1.5mg s/c PRN

Analgesia

- Clonidine 150mcg max; 30mcg every 15mins if systolic >90
- Ketamine 0.3mg/kg over 10mins thn 50mg in 50ml N saline (run 0-20ml/hr)
- PCA – ketamine 1mg/ml with opiate. Droperidol 2.5mg in 100mls of PCA
- Fentanyl infusion 500mcg/50ml. run 0-15ml/hr

ABG vs VBG

- pH: VBG 0.03 lower
- CO2:VBG~6mmHg higher; >45mmHg≈hypercarbia (spec 57%,sens 100%

Digoxin Loading

- Loading: 500 microgram x2 6hrs apart
- Maintenance 125microgram od (adjust dose as per creat clearance)

Liver Screen

- Biochem: LFTs, IgGs, Iron/Transferrin/TIBC, Haematinics, alpha1 antitrypsin, AFP
- Micro: EBV, CMV, Hep ABC
- Haem: Retics
- Other: ANA, AMA, ANCA, Anti DNA

Pneumonia Screen

- Cultures ⇒ gram stain, AFB, C&S
- Blood ⇒ mycoplasma IgM, legionella antibodies

N Acetylcysteine

Bag 1: 150mg/kg over 15mins
Bag 2: 50mg/Kg over 4hours
Bag 3&4: 50mg/kg over 8hrs each

Vasculitis Screen

- ESR, RF, ANA, ANCA, Anti GBM

HTN

- Metoprolol – oral then ?IV
- IV labetalol
- Cilazapril 1mg od PO
- Captopril 6.25-12.5mg bd PO
- Doxazosin 1mg od PO
- GTN infusion

Hyperkalaemia

- 10ml 10% calcium gluconate over ~2mins
- 10 u of actrapid in 50ml 50% dex/30min
- salbutamol nebs 5mg PRN
- calcium resonium 15g 3-4xdaily

Status Epilepticus

- uptirate in 2mg amounts of diazomols (max 10mg) (0.2mg/kg diazepam)
- 4mg IV lorazepam (0.1mg/kg)
- Midazolam 0.2mg/kg then 0.05-2mg/kg/hr
- phenytoin 1g in 100mls saline/20mins with ECG [=15-18mg/kg load]
- Sodium valproate 20mg/kg IV slow push

Magnesium

- VT, tosades, AF, dig toxicity: 2g (=4ml (8mmol)) of 50% magnesium sulphate in 100mls N saline over 10-20min
- Shock refractory VF ⇒ bolus 2g

Sodium Bicarbonate

- TCA OD prophylactic: 500ml 5% dex with 75ml 8.4% NaHCO3/2hrs
  ↳give over 30mins if prolonged QTC
- ALS: ↑K+ or TCA overdose c ECG changes: 50ml 8.4% Na bicarb push

Aminophyline - COPD

- [Load - if not on oral] (5mg/kg) 250mg in 100mls N saline / 30mins
- [maintenance]: (0.5mg/kg/hr) 500mg in 500mls N saline / 24hrs
  ↳half rate if elderly/heart failure/cirrhosis/erythro/cipro

Gynae

- STI: (Gonr: ceftriaxone 250mg IM or Cipro 500mg); (Chlamy: Azithromycin 2g or doxy 100mg bd 7/7); (BV: Metronidazole 2g)
- PV emerg bleed: oxytocin 5-10units slow IV injection

Fluids

- In sepsis: 50ml/kg bolus then ionotropes: norad (C); adrenaline (P)
- Maintenance: 0.8ml/kg/hr

Drugs

- Pethidine for shivering 12.5-25mg IV
- Aciclovir: 10mg/kg IV over 1hr tds
- Albumin 100mls of 20% or 4% 500mls
- Chlorvescent x1 bd
- Labetalol - Bolus: 5mg increments up to 100mg. dur 2-4hr. a (mild) & b antag - infusion: 300mg in 60ml (undiluted). Run 20-160mg/hr
- Glucagon in BBOD: 10mg over 5min then 5mg/hr
- Conc salt (Na 23.4%) – 20ml boluses over 30min
- Furosemide infusion 20mg/hr = 250mg in 25mls saline. IAR 2ml/hr
- Salbutamol IV: 250mcg bolus. Infusion 5mg in 50ml NSL 0-10ml/hr
- Intralipid: 20% solution: 1.5ml/kg bolus; infuse 0.25ml/kg/min for 30min. Rpt 1-2 times if no improvement. If ↓bp: double speed
- M&M sedation: 1mg/ml of each in 50ml syringe. 1-5ml bolus then 2-5ml/hr

Procedural Sedation

ADULT

- Propofol – 1-2mg/kg IV 20mg/20sec
- Ketafol:1-2mg/kg ketamine & propofol
  ↳ titrate in 0.5mg/kg boluses

CHILD

- Ketamine 3-5mg/kg IM; 1-2.5mg IV (then top up 0.5mg/kg up to max 5mg/kg)

Paeds Sheet

BLS
- 2 rescue breaths slow: 1-1.5 seconds
- check signs circulation <10secs.
- 15:2: 100/min compressions. Vent at 10-12/min once tubed

APLS
- Weight age <1yr = (0.5 x age in months) +4
  age 1-10 = (age +4) x 2
- Energy (J) = 4 x weight (>8yrs all AEDs as normal)
- Tracheal tube (>1yr) (mm) : (age/4)+4.5 (uncuffed)
  (1yr) infant 3-3.5; preterm 2.5mm
- Fluid = 20ml/kg bolus
- Adrenaline =
  - 10microg/kg (0.1ml of :10,000) IV
  - via ETT 100microg/kg (1ml of 1:10,000 or 0.1ml of 1:1000)
- Amiodarone = 5mg/kg rapid bolus
- Glucose = 2ml/kg of 10%
- [refractory vent arrhythmia ⇒lignocaine (IV) = 1mg/kg (1% = 0.1ml/kg)]
- [↑K, ↓Ca or CCB OD ⇒ 0.5mls/kg 10% calcium gluconate (max 20ml)]

Hypoglycaemia
- if unknown cause: send bloods to lab prior to Rx for metabolic screen
- 10% dextrose: bolus: 2ml/kg of 10%
  follow on infusion: 5ml/kg/hr of 10% gluc & 0.45% saline

Bradycardia
- Adrenaline [bolus] 10microg/kg IV
  [infusion] 0.05-2 microg/kg/min
- Atropine 20mcg/kg IV (min 0.1mg, max 1mg in child & 2mg adolescent)

Tachycardia
- Adenosine: 100microg/kg THEN 200mcg/kg THEN 300mcg/kg
- Sync shocks 1J/Kg THEN 2J/kg thereafter
- MgSo4 50mg/kg (0.1ml/kg of 50%) slow IV push
- Amiodarone 5mg/kg over 1-4hrs [quicker if malignant rhythm eg VT]
- Flecanide 0.5-2mg/kg over 10-20min
- Sodium bicarbonate 1ml/kg of 8.4% solution [VT 2nd to TCA overdose]
  ↳aiming for pH 7.45-7.5

↑ICP
- intubate and ventilate : pCo_2 4-4.5kPa (30-35mmHg)
- 20deg head up nursing
- IV conc salt (3%) 3ml/kg over 20min
- mannitol 0.5-1gmg/kg ie 2.5-5ml/kg of 20% IV over 20-30mins
  ↳give 4hrly provided serum osmolality <325
- dexamethasone 0.5mg/kg (max 25mg) bd [for oedema surrounding SOL]

Seizures – Status Epilepticus
- IV: loraz 0.1mg/kg or midaz 0.15mg/kg **or**
- IM: midaz 0.2mg/kg or BUCCAL/intranasal 0.5mg/kg THEN rpt @5mins
- THEN⇒ phenytoin 20mg/kg (max1g) in 0.9% NaCl (max conc 10mg/ml)over 20min ↳use phenobarbitone in neonates
- THEN⇒phenobarbitone 20mg/kg IV over 20mins or valproate 30mg/kg IV over 10min
- THEN ⇒ RSI
- [rescue paraldehyde if no access: 0.3ml/kg PR; 50:50 with 0.9% saline]
- [M&M infusion: morp 1mg/kg, midaz 3mg/kg made up to 50mls. IAR 2-5ml/hr]

DKA
- Fluid bolus 10ml/kg (rather than 20mls/kg)
- Insulin starting rate 0.05-0.1units/kg/hr
- KCL 40mmol in every litre then titrate to K+

Fluids (80ml/kg = intravascular volume)
- Shock resus bolus of 20ml/kg (>40ml/kg given then consider early ETT)
- Trauma: use 10-20ml/kg bolus. If had >40ml/kg use blood in 10ml/kg alloquots

Dehydration
- boluses 20ml/kg if shocked
- calculate rehydration fluids = % dehydrated x 10 x weight in kgs
  ↳start with 0.9% saline (plasmalyte is better)with 5% glucose

Heart Failure
- Furosemide 0.51mg/kg IV
  ↳then 1-2mg/kg/day in 2-3 divided doses

Duct Dependant Heart Disease
- Alprostadil (PGE1) = 0.05microg/kg/min (watch for apnoea, may need fluid)

Anaemia
- transfuse to >50g/L

Urine
- 1ml/kg in children
- 2ml/kg in infant

Hypothermia
- Only active rewarm if <33 then only rewarm to 34deg

Croup
- Neb Adrenaline 0.5ml/kg of 1:1000 (to max of 5ml)
- Dexamethasone 0.15, 0.3, 0.6mg/kg od (max 12mg)
  ↳ OR budesonide 2mg neb & can rpt 3-60mins later if needed

Cellulitis - Flucloxacillin 50mg/kg max 2g qds

Metabolic Errors
- Impt to stop accumulation of toxin
- 10% dex infusion
- Send NK4, CK, ketones, VBG

Congen Adrenal insufficiency
- Usually present 7-14days with vomit, unwell, (fem) ambiguous genitalia; (mal subtle hyperpigmentation
- Rx: hydrocort 25mg IV stat, fluid rehydration

Epiglottis
- IV cefotaxime 80mg/kg get help

Anaphlayxis
- IM adrenaline 10 microg/kg (ie 0.1ml of 1:10,000 or 0.01ml of 1:1000)
- Hydrocortisone 4mg/kg IV bolus THEN 2-4mg/kg qds after
- Salbutamol as asthma doses
- Promethazine 0.5mg/kg (max 25mg) IV qds
- Ranitidine 1mg/kg (max 50mg) IV slow push or ORAL (1-6mnth 1mg/kg tds) (6mnth-3yr 2-4mg/kg bd) (3-12yrs 2-5mg/kg bd max 150mg bd)
- [Chlorphenamine: >12 = 10-20mg; 1-5 =2.5-5mg; 6-12= 5-10mg; 1yr - 1mnth = 250microg/kg]
- [tryptase samples: 1st 30min to 3hrs, 3-5hrs, 16-24hrs]

Asthma
- Neb: MDI Multidose
  salbutamol 2.5mg <5yrs; 5mg > 5yrs <5yrs 6puff ev 20mins
  ↳can rpt continuously >5yrs 12puff ev 20mins
  Atrovent – 250microg <5; 500microg >5yrs
  ↳every 20-30mins
- prednisolone 2mg/kg PO or IV hydrocortisone 4mg/kg
- salbutamol infusion IF >2yrs =
  loading dose 15 microg/kg over 10mins
  then 5-10mcg/kg/min for 1hr
  then 1-2mcg/kg/min
  ↳need ECG and monitor K
- Magnesium sulphate 25-50mg/kg (0.05-0.1ml/kg of 50% MgSO4) over 20mins (can upto 100mg/kg) (↳50% MgSO4 = 2mmol/ml; 500mg/ml)
- aminophyline infusion =
  loading 5mg/kg over 20mins
  then 1mg/kg/hr
- Adrenaline – end stage
  - IM – use anaphylaxis dose % down as per adult
  - IV end stage: 1mg in 1000mls Saline 1ml/min

K Replacement
- 0.3mmol/kg/hr for 4 hrs
(max periph conc 0.05mmol/ml)

Burns (use a burn chart for everyone)
- Parkland formula = %burn x kg x 4
  ↳half given over first 8 hrs, rest over 16hrs ⇒ aim UO 2ml/kg/hr
- Carbon monoxide poision. >5% = use high flow O2. >20% consider ETT

Pain
- Morphine 0.2 mg/kg made into 10mls with NSL. give 1-2ml bolus IV
- fentanyl 0.25-0.5mcg/kg
  ↳in head injury use half doses of opiates
- Intranasal Fentanyl (if no access) 1.5 microg/kg; rpt @ 0.5mcg/kg in 10mins
- Codeine 1-1.5mg/kg; tramadol 0.5-1mg/k oral/IV. Oral morphine 0.15mg/kg
- Paracetamol [load] 20mg/kg; maintenance 15mg/kg
- Ibruprofen [load 15mg/kg]; maintenance 10mg/kg tds

Meningitis
- > 2months: cefotaxime 50mg/kg (max 2g) iv 6H & dex 0.15mg/kg IV 6hr
- 4wk-2mnth: cefotaxime 50mg/kg (max 2g) iv 6H, benpen 60mg/kg IV 12H, gent & dex
- <4weeks: as above but NO steroids
- benzylpenicillin 25-50mg/kg IV/IM
- ceftriaxone 100mg/kg IM if IV unobtainable (max 2g)
- Dexamethasone 0.15mg/kg IV 6hr AND wait 15mins before Abx

Opiate OD
- Naloxone 10-100 microg/kg

Malaria
- quinine 20mg/kg in 5% glucose over 4hrs

Transfers
- O2 cylinders:
  D 340L
  E=680L
  F=1360L
- Flow rate (volume/min) x est journey time x 2

Normal Values

age	RR	bp	HR
<1	30-40	70-90	110-160
1-2	25-35	80-95	100-150
2-5	25-30	80-100	95-140
5-12	20-25	90-110	80-120
>12	15-20	100-120	60-100

Systolic bp = 80 + (age x2)

Fluids
- Rate: 1st 10 kg = 4 ml/hr
  2nd 20kg = 2 ml/hr
  thereafter = 1 ml/hr
- Use plasmalyte (ignore paeds Dr's!) with 10mmol K in 500ml bags

Drug OD
- Charcoal 0.5 – 1g/kg