



Children, Safety and Analgesia – a Hospital Wide Approach

Gillian Sneddon RN PhD
Advanced Clinical Practice Consultant
Pain Management



**Government
of South Australia**

SA Health



**Women's
& Children's
Hospital**



Fundamental truths

- > One of the frequently cited reasons for failure to give children adequate pain relief relates to clinician's fears of adverse events or dependence especially if opioids are used.
- > In a culture of safety investigation of adverse events or near misses should not focus on the errors of individual people but on having in place systems which reduce the risks at various stages within a procedure

The Swiss Cheese Model

- > The Swiss cheese model highlights the need to focus less on trying to perfect human behaviour (a futile undertaking) and more on aiming to shrink the holes in the cheese and create multiple overlapping layers of protection to decrease the probability that the holes will ever align and let an error slip through.



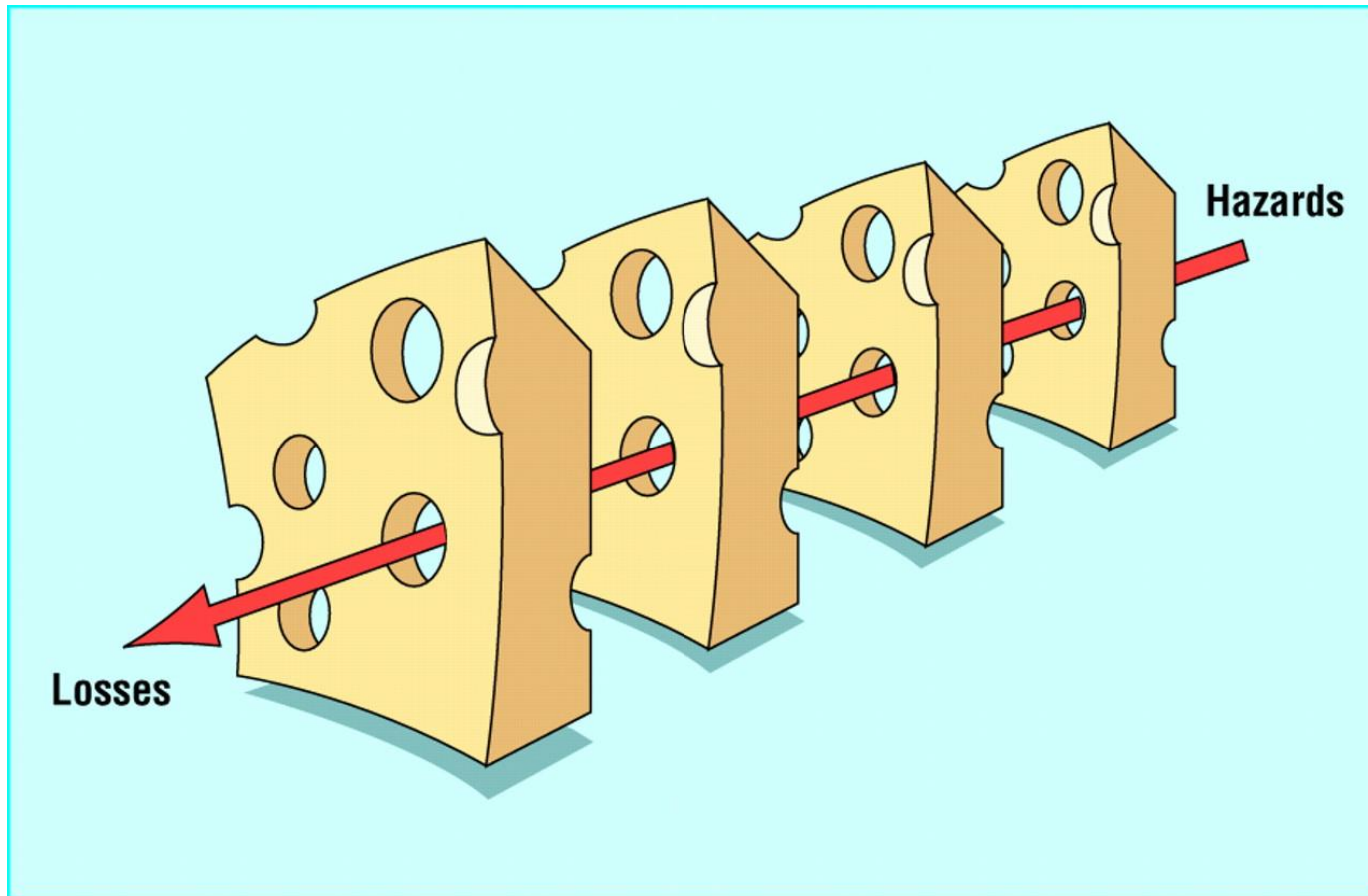
Government
of South Australia

SA Health



Women's
& Children's
Hospital

The Swiss cheese model of how defences, barriers, and safeguards may be penetrated by an accident trajectory.



Reason J BMJ 2000;320:768-770

Choose your Allies



> Clinicians

- Medical staff (start with those that are supportive) the others will join you when they have evidence that it will help their patients or their practice. Accept that compromise might be a away in with the reluctant ones
- Nursing staff
 - Senior clinicians
 - Coalface nurses
- Pharmacists
 - All levels
 - Medication safety officer





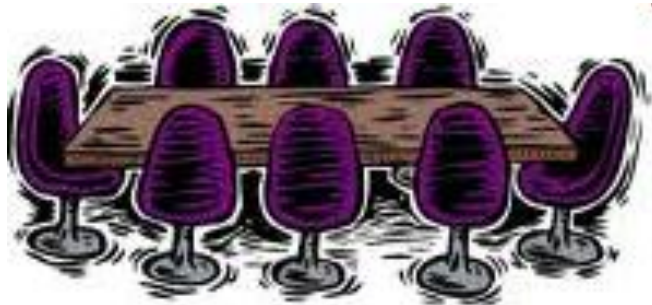
**Are you in control of
your patient's pain
management?**

**Or is it on
autopilot?**



Strategic committee membership

- > Drug and Therapeutic Committee
- > Nursing and Midwifery Standards Working group



Government
of South Australia

SA Health



Women's
& Children's
Hospital

Multimodal Analgesia

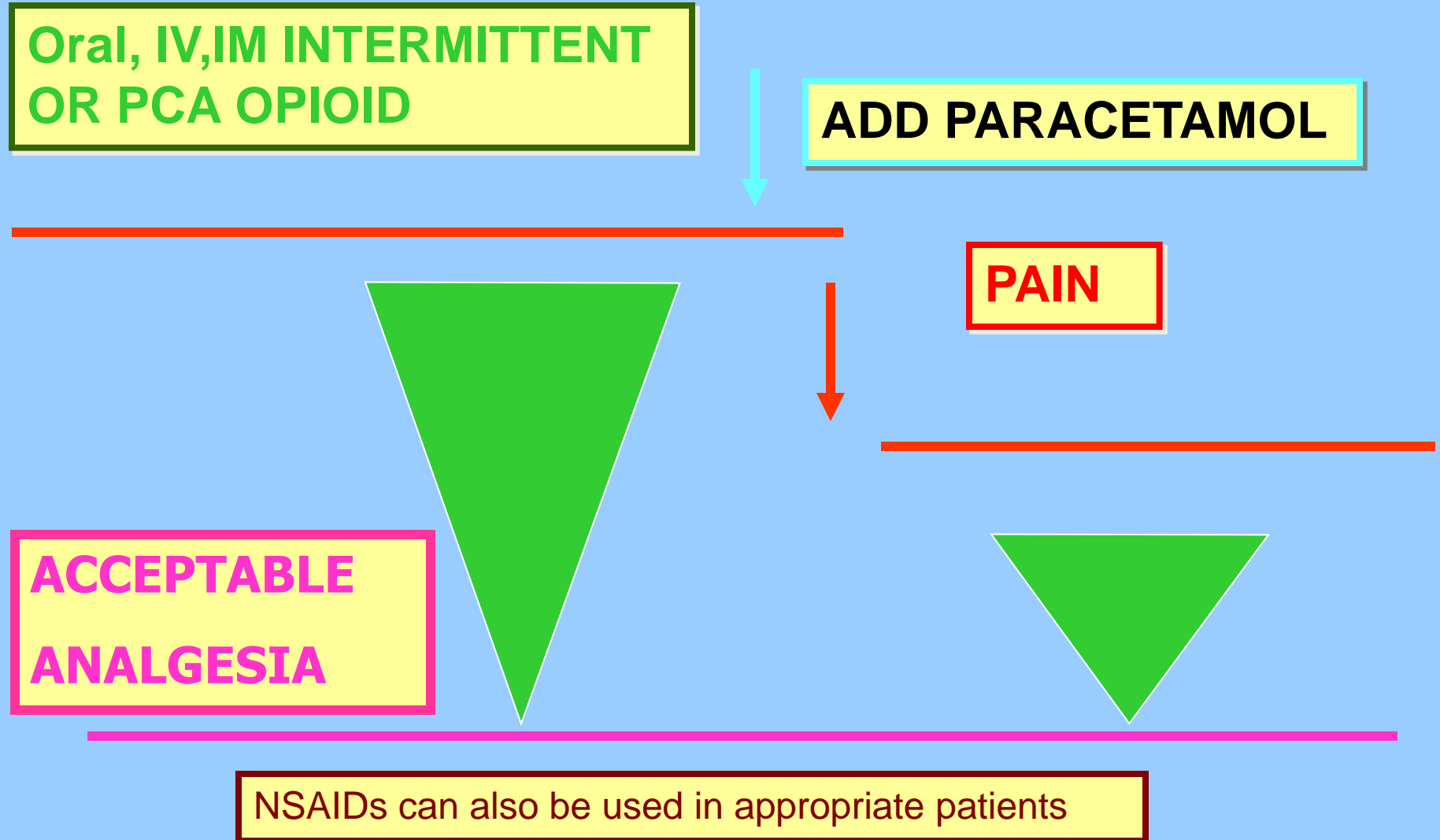
**Oral, IV,IM INTERMITTENT
OR PCA OPIOID**

ADD PARACETAMOL

PAIN

**ACCEPTABLE
ANALGESIA**

NSAIDs can also be used in appropriate patients



NSAIDs - not just for creaking joints



Government
of South Australia

SA Health



Women's
& Children's
Hospital

Reducing medication preparation risks

> Multiple medication strengths available



> Solution






- Reduce the availability of different strengths
- We stock morphine 10mg/ml ampoules only

Reducing medication preparation risks

- > Common medication error
 - Confusion of medications with different names
 - Eg. Oxycontin and oxycodone
- > OxyContin tablets - biphasic absorption pattern with two apparent absorption half-lives of 0.6 and 6.9 hours, which describes the initial release of oxycodone from the tablet followed by a prolonged release.
- > Solution
 - Making MSContin the default slow release opioid
 - Oxycontin not in DDA cupboards
 - Can be prescribed and dispensed on an individual basis (less than 1 patient/year)

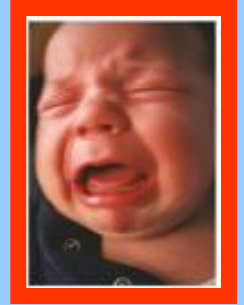


Oral oxycodone administration guidelines

Drug	Indications	Dose	Available as	Time to peak concentration	Duration of effect	Routine observations
Oxycodone	Moderate - severe pain, if the oral route is available	<p>0.1-0.2mg/kg/dose 4hourly PRN.</p> <p>Usual adult dose 10-15mg/dose 4hrly PRN</p> <div style="background-color: #e0ffe0; padding: 5px; margin-top: 10px;">   0.1mg/kg if > 6/12 and <1 year or  concern re respiratory depression. </div>	<p>Syrup (1mg/mL)</p> <p>Capsules (5mg)</p>	60-90 minutes	3-4 hours	<p>Observe 1 hour following administration for analgesic effect & sedation.</p> <div style="background-color: #ffffe0; padding: 5px; margin-top: 10px;">   Special dosing & monitoring precautions for infants < 1 year </div>



BABIES ARE SPECIAL & EX-PREMS EVEN MORE SO THEY NEED



Smaller doses + longer observation

Check doses with Anaesthetic, PED or Neonatal Consultant if <1 year

**Oral, IV or IM opioids require minimum
cardio-respiratory monitoring as below**



**Ex premature infants up to 6/12 corrected age
(older if persisting respiratory issues)**

Monitor for 12 hrs post opioid or since last apnoea/brady



Full term infants: Birth - 2 months Monitor for 8 hours



**Full term infants: 2 months – 1 year Monitor for 4 hours
(O₂ saturation monitoring may be sufficient for this group)**

Women's & Children's Hospital
OPIOID INFUSION/NURSE CONTROLLED ANALGESIA (NCA)
Infants less than 1 year

Date: _____
 Allergies: _____
STANDARD PROTOCOLS
MORPHINE
 • Add 0.5mg/kg of Morphine to the syringe
 • Dilute to a total volume of 50ml with Normal Saline
 • Infuse at 0 to 2ml/hour (0-20micrograms/kg/m)
 • Recommended bolus for pain or painful procedure (10-20micrograms/kg) every 30 minutes
SYRINGE ORDER
 Is this a standard solution? Yes/No
 If no what is the variation from standard solution?
 Add _____ of _____
 Concentration = _____ ml/hour
 Start at _____
 Order checked by other _____
1 SIGNATORY MUST SIGN

INFLUXION	DATE	RUN

PUMP P
 INITIAL P
 Check
 DA

Women's & Children's Hospital

OPIOID INFUSION/NURSE CONTROLLED ANALGESIA (NCA)
Children 1 year and over

Date: _____
 Allergies: _____
 Patient Weight: _____

STANDARD PROTOCOLS

MORPHINE

- Add 0.5mg/kg of Morphine to the syringe
- Dilute to a total volume of 50ml with Normal Saline (10 micrograms/kg/ml)
- Infuse at 0 to 4mls/hour (0-40micrograms/kg/hr)
- Recommended bolus for pain or painful procedure (10-30micrograms/kg) every 30 minutes

SYRINGE ORDER

Women's & Children's Hospital
LOW DOSE KETAMINE INFUSION CHART

Date: _____
 Allergies: _____
 Patient Weight: _____ Kg
 UR Number: _____
 Surname: _____
 Given Names: _____
 D.O.B.: _____
 Sex: _____

STANDARD PROTOCOLS

- Add 5mg/kg to a total volume of 50ml with Normal Saline (max/adult dose 200mg/50ml)
- Infuse at 0 - 2ml/hr
- Bolus doses are not given for infants < 1 year
- Consultant Paediatric Anaesthetist to have direct participation in ketamine infusion orders

SYRINGE ORDER

Is this a standard solution? Yes/No
 If no what is the variation from standard solution?
 Add _____
 Concentration: _____
 Start at _____
 Order checked by other _____

(Please circle)
 Solution: _____ (eg double strength)
 Max mls in 4 hours _____ (Default is 30 mls)
 Print: _____
 Print: _____

SIGNATURE (sign & print)

Documentation is complete
 CHECKED BY

OUT WITH THE OLD AND IN WITH THE NEW
COMING SOON: THE NEW SPRING COLOURS OF ANALGESIC INFUSIONS

Replacing the Analgesic Infusion chart



Government of South Australia
 Children, Youth and Women's Health Service

Opioid Infusion/Nurse Controlled Analgesia (NCA)
Children 1 year and over

PATIENT LABEL

UR Number: _____
 Surname: _____
 Given Names: _____
 D.O.B.: _____



Government of South Australia
 Children, Youth and Women's Health Service

Opioid Infusion/Nurse Controlled Analgesia (NCA)
Infants less than 1 year

PATIENT LABEL

UR Number: _____
 Surname: _____
 Given Names: _____
 D.O.B.: _____



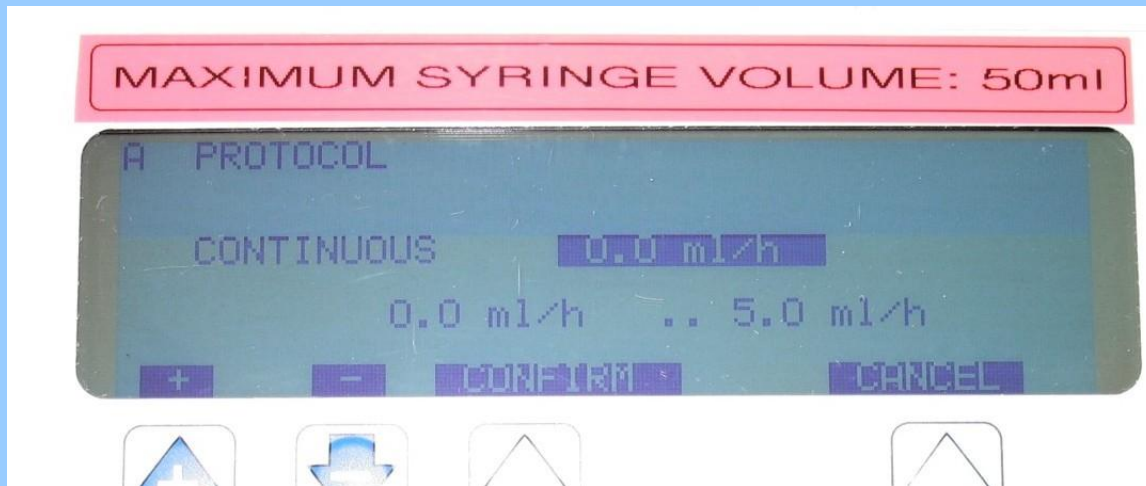
Government of South Australia
 Children, Youth and Women's Health Service

PATIENT LABEL

UR Number: _____
 Surname: _____
 Given Names: _____

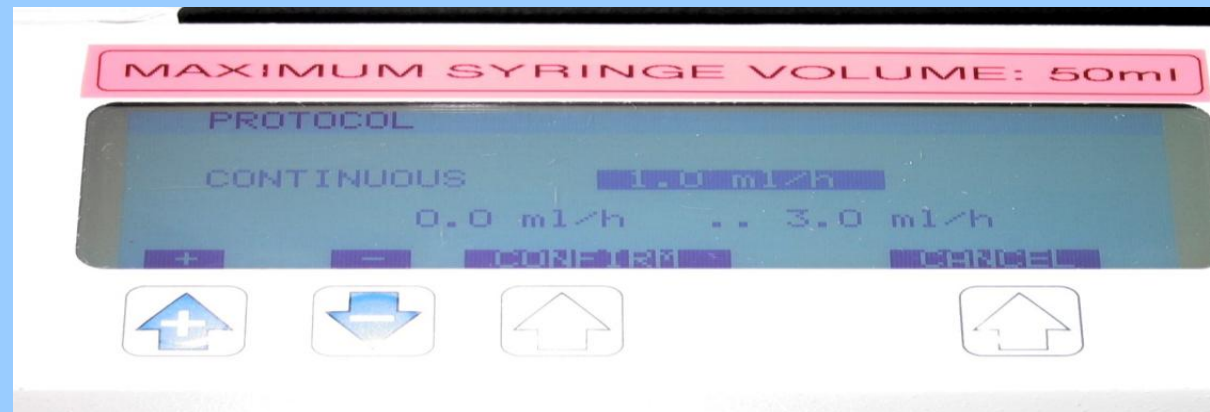
LOW DOSE KETAMINE INFUSION
AD - 88(c)



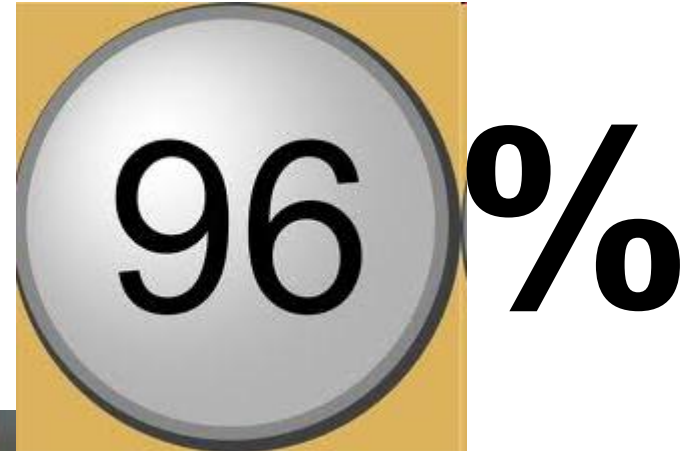


Rate options for
Opioid Infusion

Rate options for
Ketamine infusion



Monitoring oximetry



Government
of South Australia

SA Health



Women's
& Children's
Hospital

Procedural sedation allies

Burns Clinical Practice Coordinator (CPC)

Clinical Governance Unit representatives

Home Enteral Nutrition Service CPC

ENT CPC

Medical Day Unit CSC

Medical Imaging CSC

Medical registrars x 2

Medication Safety Officer

Medical Emergency Team CPCs

Oncology CN

Paediatric Emergency Department x 2

medical consultants

Paediatric Anaesthesia Pain x 2

anaesthetic consultants

Pain service X 2 CPCs

Pharmacy X 2 clinical pharmacists

Respiratory CPC

Surgical ward CPC



