



## Paediatric Intensive Care Unit.

### Guidelines for the Commencement of Enteral Feeding.

This enteral feeding guideline is intended to provide general advice and recommendations for nasogastric (NG) and nasojejunal (NJ) feeding. It should be used in conjunction with the practitioner's knowledge and skills. There will be occasions where deviation from the guideline will be necessary. On these occasions it is essential that the reason is clearly documented in the patient's notes

1. Unless contraindicated, enteral feeding should be commenced within 2 hours of the child's admission to PICU.

#### **Contraindications include, but are not limited to:**

- Total gastrointestinal failure
- Gastrointestinal tract surgery with anastomosis formation
- Unstable respiratory status in a non-intubated patient
- Awaiting extubation

If a child is nil by mouth then Ranitidine should be commenced.

2. Food allergy or intolerance should be checked with parent/carer. If no problems exist then the feed of choice should be as follows, unless otherwise requested by the dietician.

<b>Age/weight</b>	<b>Standard Feed</b>	<b>Description</b>
<b>Birth to 18 months (or &lt; 8 Kg)</b>	Infatrini Similac high Energy	1 calorie/ml Whole protein, contains lactose
<b>1 – 10 years (or 8 – 30 Kg)</b>	Paediasure Fibre	1 calorie/ml Whole protein, lactose free, contains fibre
<b>&gt;10 years &gt;(30Kg)</b>	Jevity 1.0	1 calorie/ml, Whole protein, lactose free, contains fibre

3. The usual feeding period for enteral nutrition on PICU is 24 hours  
Once full enteral feeding is established, the child can be changed to 2-4 hourly bolus feeds or their normal feeding regime, providing their clinical condition allows this.
4. When commencing enteral feeds, follow the flow diagram for timing of aspiration. The majority of aspirates can and should be replaced as they contain important stomach acids.

#### Types of Aspirate

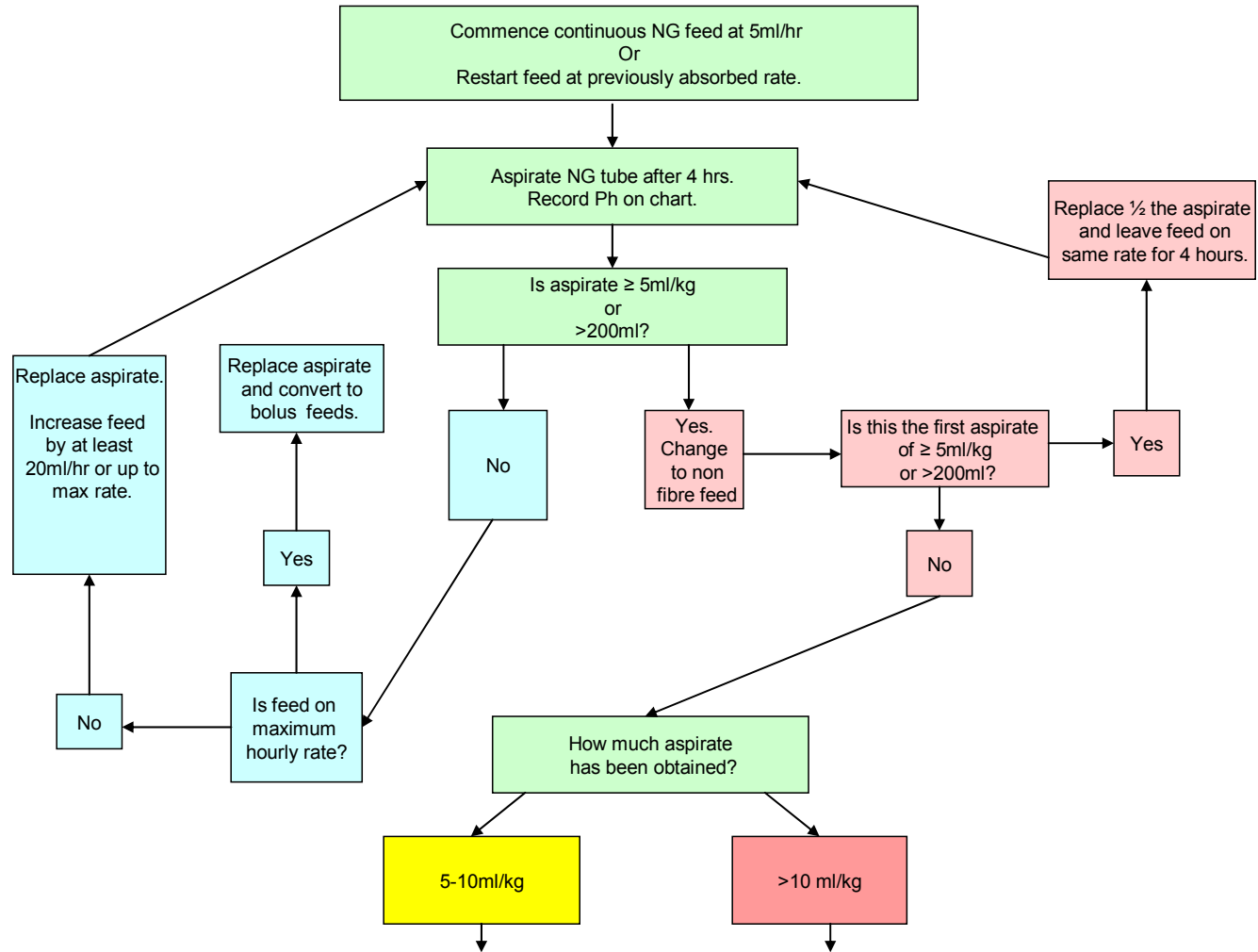
<b>To Be Replaced</b>	<b>To Be Discarded</b>
Milky or partially digested feed	Frank Blood
Bile stained	Frank Bile (not bile staining)
Altered blood	Faecal matter

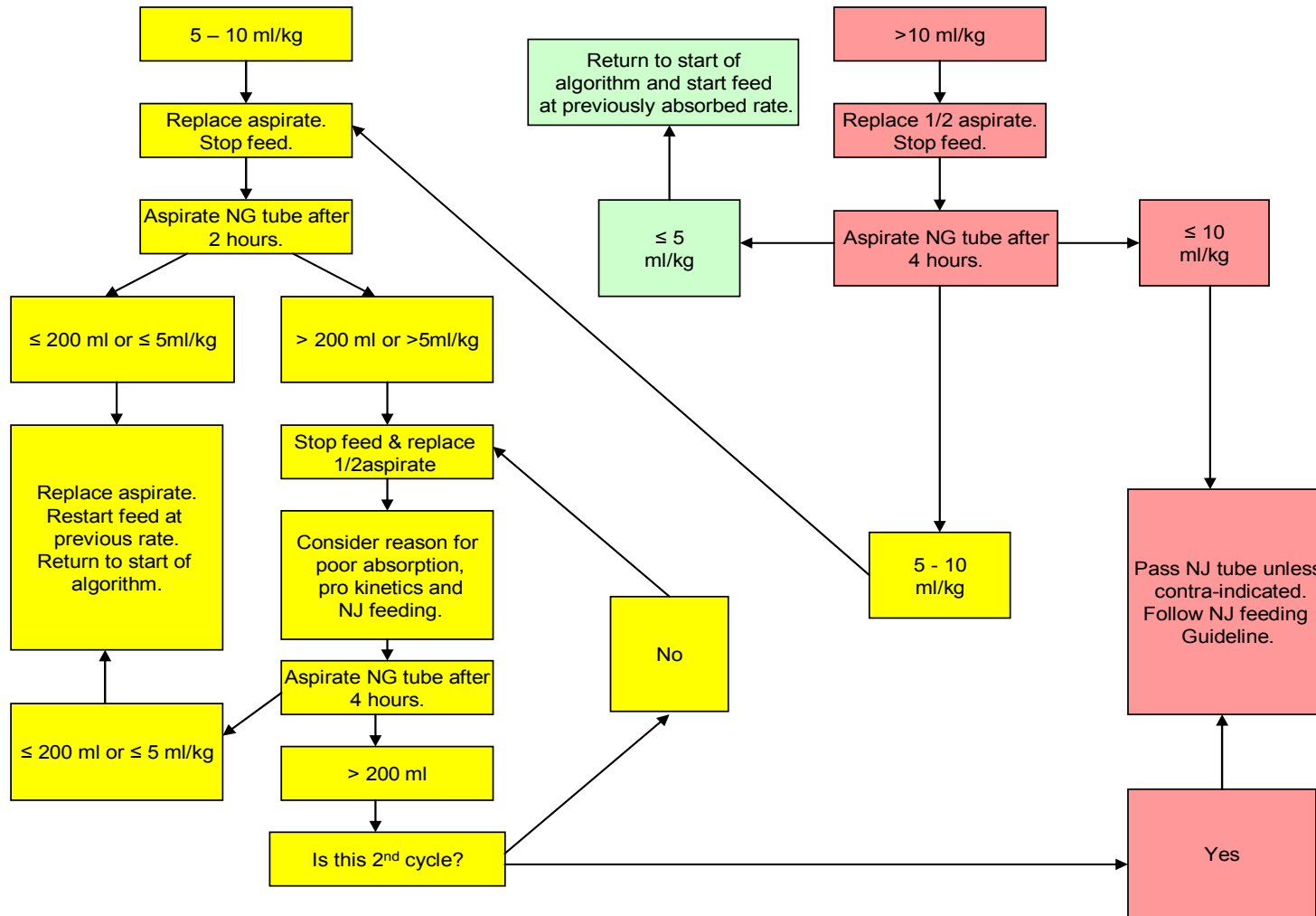
5. If feeding fails despite following the flow diagram then consider the following:
  - Feed Reduction
  - Pro-Kinetics
  - Naso-Jejunal Tube
6. If all methods of enteral feeding have failed then consider commencing parenteral nutrition (TPN).
7. If feeds are discontinued then the reason must be documented at the time in the patient's notes.
8. Once the child is tolerating full enteral feeds discuss with the dietitian the need for additional calories.
9. If the child develops diarrhoea then discuss this with the medical team and dietitian.
10. IV maintenance fluids should be commenced if feeds are discontinued for any reason unless specifically stated otherwise by the consultant.





## PICU Nasogastric (NG) Feeding Algorithm.







## Paediatric Intensive Care Unit.

### Nasojejunal (NJ) Feeding Guideline.

This NJ feeding guideline is intended to provide general advice and recommendations for NJ feeding. It should be used in conjunction with the practitioner's knowledge and skills. There will be occasions where deviation from the guideline will be necessary. On these occasions it is essential that the reason is clearly documented in the patient's notes.

#### Contra-indications to NJ feeding.

These include but are not limited to:

- Total gastrointestinal failure
- Gastrointestinal tract surgery with anastomosis formation
- Unstable respiratory status in a non-intubated patient
- Awaiting extubation

Place NJ tube following guidance included.

Record the length of the NJ tube where it is taped at the nostrils. This should be checked and documented at the start of each shift as a minimum.

If an NG tube is present prior to placement of an NJ tube, **do not** remove it unless clinically indicated.

Do not place an NG tube unless one is already present. If pre-existing NG tube becomes dislodged, replacement is not necessary.

Once correctly placed an NJ tube will not migrate back into the stomach.

Aspirate from an NJ tube will never be acidic.

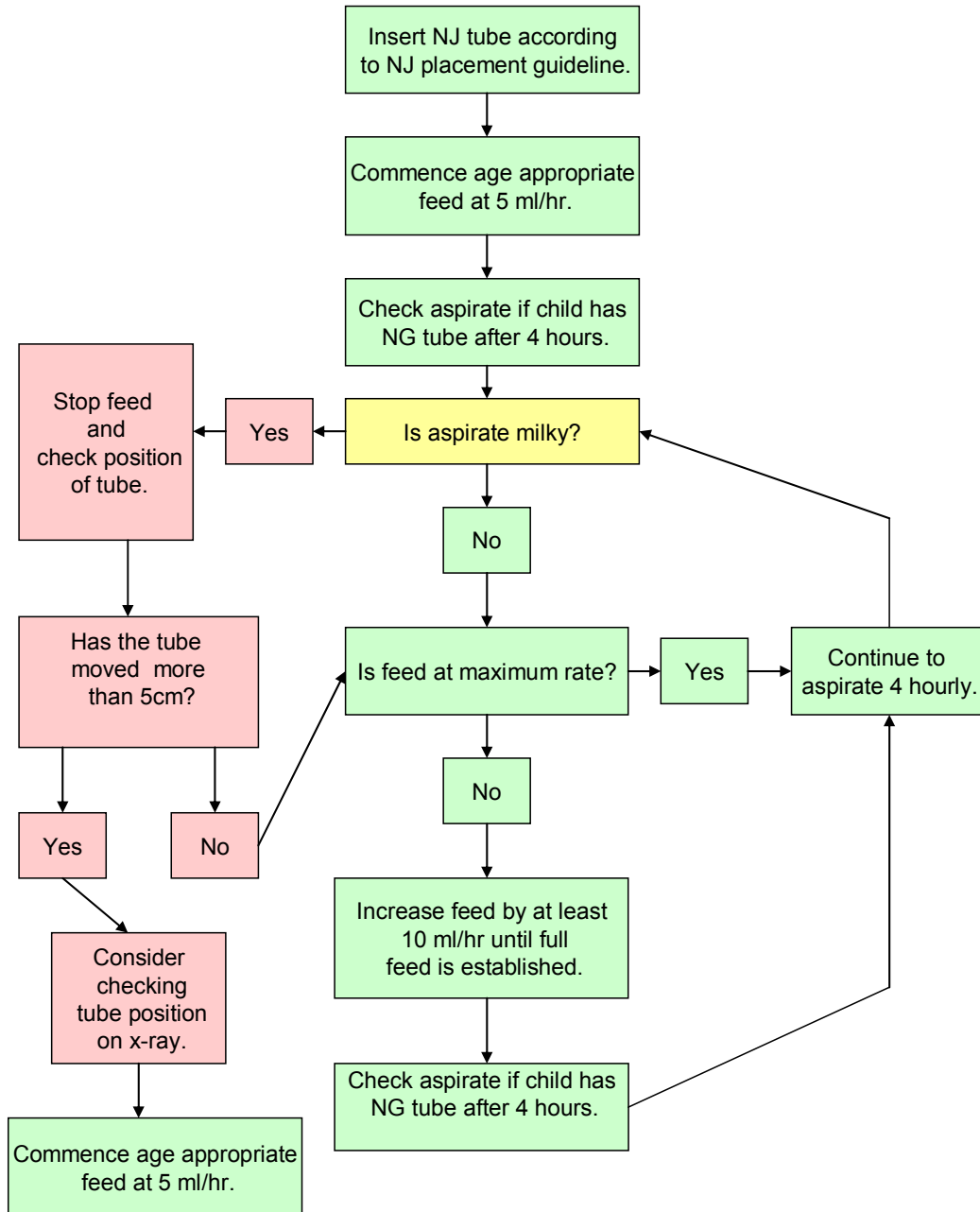
If there are concerns that the tube has been displaced, discuss with the consultant and consider requesting an x-ray.

If a routine chest x-ray is to be performed, consider whether this x-ray could include upper abdomen so that position of the NJ tube can be confirmed.

If in doubt, discuss concerns with consultants and dietitians.



## PICU Nasojejunal (NJ) feeding algorithm.





## Paediatric Intensive Care Unit.

### Guidelines for the Bedside Placement of Nasojejunal (NJ) Feeding Tubes.

#### Equipment needed;

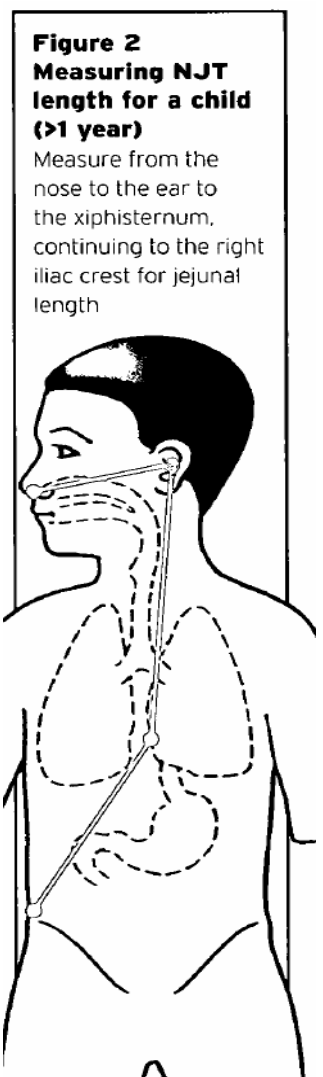
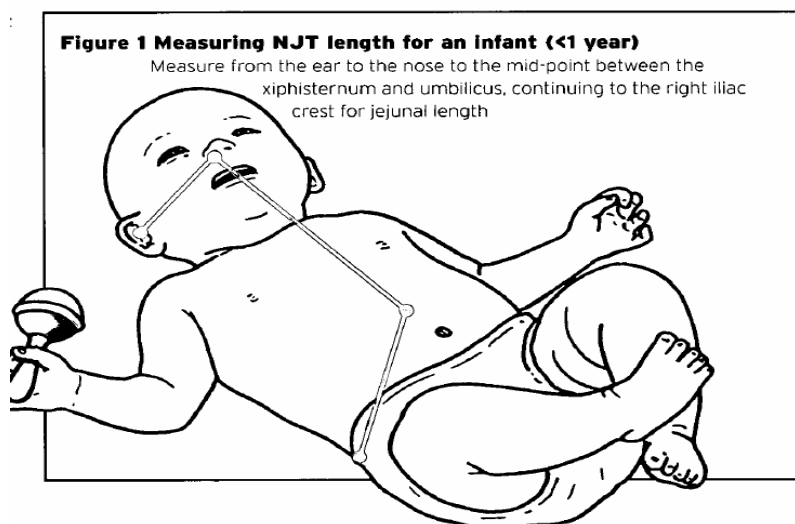
- Fine bore feeding tube (Measured to appropriate length)

The purple NG tubes used currently on the unit are suitable for short-term use (up to 30 days). If long-term use is perceived then NJ tubes can be obtained from the nutritional trolley located outside theatre 8 out of hours or contact the nutrition team.

- 10ml syringe
- Aquagel
- Tape

#### Preparation;

- Explain need for insertion to patient / family
- Consider the need for sedation
- Collect equipment needed
- Measure desired length for NJ placement
- Position patient on to their right side, if clinically appropriate
- Remove guide wire and flush tube with water to lubricate before replacing guidewire.





Tube placement;

- Insert the NJ Tube as you would for NG placement, to previously measured length
- Instil 10ml/kg of air (to aid tube progression, maximum 500ml)
- If not previously done so position patient on to their right side if clinically appropriate
- Wait half an hour then confirm position of tube on x-ray
- If NJ tube not in desired position remove and repeat

If two attempts are unsuccessful then radiological positioning should be considered only available Monday to Friday 9-5.



## Paediatric Intensive Care Unit.

### Guidelines for Bowel Management.

#### **Rationale**

Children on PICU are at increased risk of constipation due to a number of factors including change of diet (the majority of our children are nasogastrically fed), lack of exercise, inability to squat (as children are usually sedated and bed-bound) and the widespread use of medications whose side effects include decreased colon peristalsis leading to constipation.

Bowel care is part of the Fundamentals of Care.

#### **Aim**

For the bowel motions children on the unit to be successfully monitored and appropriate action taken if problems with bowel motions are identified.

#### **What is “normal”?**

Bowel movements vary greatly from child to child in both quantity of stools, consistency of stools, and frequency of bowel motions.

A history from the parent/guardian will allow you to decide what is normal for your patient.

Age	“Normal”
3 months – 1 year	Once every 2 days – 4 times a day
1 – 3 years	1 – 2 times a day
3+ years	3 times a week – 3 times a day

Benninga *et al.* (2004)

Children less than 3 months may pass stools after every feed; babies who are solely breast fed are likely to pass stools even more frequently!

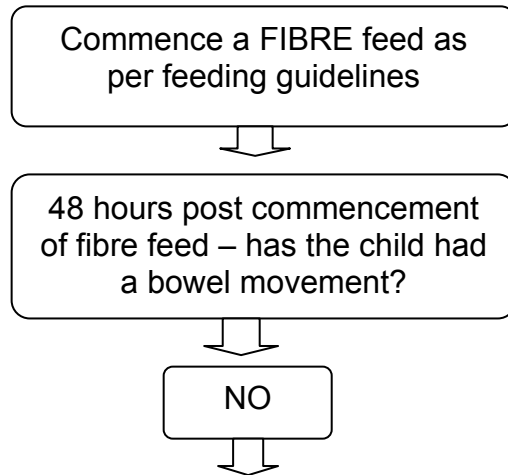
Can you hear bowel sounds on auscultation of the abdomen?

#### **Recording stools**

It is good practice to document on the fluid balance chart that the child has had their bowels open (**BO**) plus a Bristol Stool Chart score.



## Constipation Care Plan



CONSIDER CAUSE? Could it be obstruction?

Commence **Lactulose**® by mouth / NG as per BNF for Children  
The doses can be adjusted according to response in discussion with the medical team.

If Stool successfully passed within 48 hours of Lactulose

Lactulose should be continued at dose unless stool type 6 or 7 (ensuring it is not overflow) in which case Lactulose dose should be halved.

If stools continue to be type 6 or 7 when dose halved for 24 hours, cease Lactulose therapy and monitor.

If bowels not opened for further 24 hours following discontinuation of Lactulose, restart at half dose.

Stool not passed within 48 hours of Lactulose therapy

Discuss with consultant regarding further management.

## Diarrhoea Care Plan

If a child develops diarrhoea – consider cause and treatability  
e.g. Have stool samples been sent for MC&S?  
Is the child on antibiotics such as clindamycin or do their oral drugs contain sorbitol and can these be discontinued?



## Paediatric Intensive Care Unit.

### Dietician Contact Details.

Monday to Friday 08:15 – 16:15.

Kath Singleton – Bleep 07623905538 or Extension 4294

Weekend and Bank Holidays 09:00 – 17:00.

Phone the switch board and ask for the on-call paediatric dietician.

There is no dietician service during the evening.

Non – sterile feeds (from powder) should not be made up on the unit. Dietician can be contacted for these.

The PICU dietician is responsible for ordering and restocking feeds on PICU

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