

Parenteral Nutrition Audit – Regional

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| Hospital: | |
| Age: | |
| Gender: | |

Patient / Admission details

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|--|------------------------|--------------------------|-------------------------|--------------------------|
| Weight: | In Kilos | | Not recorded | <input type="checkbox"/> |
| Height: | In cm | | Not recorded | <input type="checkbox"/> |
| Date of admission | | | | |
| Was the admission: | A planned admission | <input type="checkbox"/> | Inter-hospital transfer | <input type="checkbox"/> |
| | An emergency admission | <input type="checkbox"/> | Unknown | <input type="checkbox"/> |
| Date of referral for PN | | | Not available | <input type="checkbox"/> |
| Date of decision to commence of PN | | | | |
| Date and time infusion commenced | | | | |
| Was there a delay of more than 24hr between making the decision that the patient required PN and the commencement of PN? | | | Yes/No | |
| If 'Yes', please expand on your answer | | | | |
| Day of week infusion commenced | Weekday | <input type="checkbox"/> | Weekend/Bank holiday | <input type="checkbox"/> |

Patient Assessment

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| Was a nutritional assessment carried out before PN commenced | Yes/No | | | |
| If 'Yes', what did the assessment involve (tick all that apply)? | Clinical assessment | <input type="checkbox"/> | Malnutrition screening tool (e.g. MUST) | <input type="checkbox"/> |
| | Standard electrolytes Magnesium, phosphate | <input type="checkbox"/> | Oral intake | <input type="checkbox"/> |
| | Anthropometry | <input type="checkbox"/> | Other | <input type="checkbox"/> |
| | Nutritional Requirements | <input type="checkbox"/> | Risk of re-feeding | <input type="checkbox"/> |
| Where any electrolyte abnormalities corrected before commencing PN? | | | Yes/No | |
| Who made the decision that PN should be commenced | Nurse | <input type="checkbox"/> | | |

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| (tick multiple if required)? | Dietician | <input type="checkbox"/> | Grade/Speciality | |
| | Doctor | <input type="checkbox"/> | Grade/Speciality | |
| | Unknown | <input type="checkbox"/> | | |
| | Other | <input type="checkbox"/> | | |
| If 'Other', please state | | | | |
| Were they members of the nutrition team? | | | Yes/No | |
| What type of PN was given first? | Multi-chamber bag ('off the shelf') | <input type="checkbox"/> | Bespoke bag specially ordered from manufacturer | <input type="checkbox"/> |
| | Multi-chamber bag ('off the shelf') with additives | <input type="checkbox"/> | Other | <input type="checkbox"/> |
| | Bespoke bag (made in hospital pharmacy) | <input type="checkbox"/> | Not documented | <input type="checkbox"/> |
| Were intravenous vitamins (e.g. pabrinex) given? | | | Yes/No | |
| Were the PN prescription requirements documented in the case notes? | | | Yes/No | |
| If 'Yes', were these of adequate detail | | | Yes/No | |
| Who reviewed the patient during the period they were on PN (tick multiple if required)? | Nurse | <input type="checkbox"/> | | |
| | Doctor | <input type="checkbox"/> | Grade/Speciality | |
| | Dietician | <input type="checkbox"/> | Grade/Speciality | |
| | Pharmacist | <input type="checkbox"/> | | |
| | Unknown | <input type="checkbox"/> | | |
| | Other | <input type="checkbox"/> | | |
| If 'Other', please state | | | | |
| How often was the patient reviewed with respect to PN in the first 2 weeks? | Daily (7 days) | <input type="checkbox"/> | 1-2 days/week | <input type="checkbox"/> |
| | Daily (working week) | <input type="checkbox"/> | <1 day/week | <input type="checkbox"/> |
| | 3-4 days/week | <input type="checkbox"/> | unknown | <input type="checkbox"/> |
| What was reviewed (tick multiple if required) and how frequently (delete as appropriate)? | Constitution of PN | <input type="checkbox"/> | Daily /weekly | |
| | Biochemical review | <input type="checkbox"/> | Daily/ weekly | |
| | Clinical status | <input type="checkbox"/> | Daily /weekly | |
| | Ongoing need for PN | <input type="checkbox"/> | Daily/ weekly | |
| | Weight | <input type="checkbox"/> | Daily /weekly | |
| | Vascular access | <input type="checkbox"/> | Daily/ weekly | |
| | Anthropometry | <input type="checkbox"/> | Daily/ weekly | |

Indication for PN

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| What was the indication (whether documented or not) Please tick the box which is most appropriate | Congenital anomalies; gut | <input type="checkbox"/> | No access for enteral nutrition | <input type="checkbox"/> |
| | Congenital anomalies; non gut | <input type="checkbox"/> | Pre-operative nutrition | <input type="checkbox"/> |
| | Necrotizing enterocolitis | <input type="checkbox"/> | Radiation enteritis | <input type="checkbox"/> |
| | Non functioning gut | <input type="checkbox"/> | Infection (e.g. C.difficile) | <input type="checkbox"/> |
| | Perforated / leaking gut | <input type="checkbox"/> | Chemotherapy | <input type="checkbox"/> |
| | Short bowel | <input type="checkbox"/> | Post-surgical complications | <input type="checkbox"/> |
| | Dysphagia | <input type="checkbox"/> | Volvulus | <input type="checkbox"/> |
| | Obstruction | <input type="checkbox"/> | Crohn's disease | <input type="checkbox"/> |
| | Dysmotility | <input type="checkbox"/> | Cancer | <input type="checkbox"/> |
| | Fistulae | <input type="checkbox"/> | Post-op ileus | <input type="checkbox"/> |
| | Malabsorption | <input type="checkbox"/> | Other | <input type="checkbox"/> |
| If 'Other', please state | | | | |
| Was an indication for PN recorded in the case notes? | | | Yes/No | |
| Was the Nutrition team involved in the decision to commence PN? | | | Yes/No/Unknown | |
| If 'No', please expand on your answer | | | | |
| Was a treatment goal documented? | | | Yes/No | |
| If 'Yes', what was this? e.g. optimisation of nutrition pre-surgery | | | | |
| Was EN given to prior to PN? | Not possible | <input type="checkbox"/> | Trial of EN unsuccessful | <input type="checkbox"/> |
| | Dual therapy | <input type="checkbox"/> | Not documented | <input type="checkbox"/> |

Venous Access / Line Care (where multiple, please use new page for each new line used)

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| Was the type line used for PN documented in the case notes? | | | Yes/No | |
| What type of line used (delete details as appropriate for central line)? | Central line | <input type="checkbox"/> | Tunnelled/Not tunnelled | |
| | | | Single/Multilumen | |
| | Peripherally inserted central line (PICC) | <input type="checkbox"/> | | |
| | Peripherally inserted long line (e.g. Mid-line) | <input type="checkbox"/> | | |

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| | Standard Peripheral cannula | <input type="checkbox"/> | | |
| Was the insertion of the feeding line documented in the case notes? | | Yes/No | | |
| Was aseptic technique documented? | | Yes/No | | |
| Speciality and grade of the operator inserting the line? | | Not documented | <input type="checkbox"/> | |
| Was the position of the tip documented? | | Yes/No | | |
| Did the patient develop any line-related complications | | Yes/No | | |
| If 'Yes', which complications? | Line misplacement | <input type="checkbox"/> | Line occlusion | <input type="checkbox"/> |
| | Line site infection | <input type="checkbox"/> | Venous thrombosis | <input type="checkbox"/> |
| | Suspected systemic line infection* | <input type="checkbox"/> | Line fracture/rupture | <input type="checkbox"/> |
| | Confirmed systemic line infection * | <input type="checkbox"/> | Pneumothorax | <input type="checkbox"/> |
| | Phlebitis | <input type="checkbox"/> | Haemathorax | <input type="checkbox"/> |
| | Accidental removal | <input type="checkbox"/> | TPN extravasation | <input type="checkbox"/> |
| | Nerve damage | <input type="checkbox"/> | <i>Other</i> | <input type="checkbox"/> |
| Was PN interrupted by a line complication? | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |

Metabolic Complications

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|--|-------------------|--------------------------|-------------------------------------|--------------------------|
| Did the patient develop any metabolic complications? | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| If 'Yes', which complications? (Please your hospital's reference range for electrolytes to define abnormal results) | Hypophosphataemia | <input type="checkbox"/> | Hypermagnesaemia | <input type="checkbox"/> |
| | Hypomagnesaemia | <input type="checkbox"/> | Hyperphosphataemia | <input type="checkbox"/> |
| | Hypokalaemia | <input type="checkbox"/> | Hyperkalaemia | <input type="checkbox"/> |
| | Hyponatraemia | <input type="checkbox"/> | Hyperglycaemia | <input type="checkbox"/> |
| | Hypernatraemia | <input type="checkbox"/> | Abnormal LFTs (but not jaundice) | <input type="checkbox"/> |
| | | | | Jaundice |
| If the patient had abnormal LFTs how much glucose cal/kg body weight/day did they receive from PN? | | | | |
| If the patient had abnormal LFTs how much Fat g/kg body weight/day did they receive from PN? | | | | |
| In your opinion were any of the complications avoidable? | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| | Unknown | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| If 'Yes', please expand on your answer | | | | |

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| Were the complications managed appropriately? | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> | | |
| | Unknown | <input type="checkbox"/> | N/A | <input type="checkbox"/> | | |
| If 'No', please expand on your answer | | | | | | |
| Were IV fluids given in addition to the PN during the first 2 weeks of PN therapy? | Yes/No/Unknown | | | | | |
| If 'Yes', was this: (tick all that apply) | To correct deficit | <input type="checkbox"/> | Routine maintenance fluid provision | <input type="checkbox"/> | | |
| | To correct ongoing losses | <input type="checkbox"/> | No indication documented | <input type="checkbox"/> | | |
| | Other, please state | <input type="checkbox"/> | | | | |
| What type of fluid was given? | Saline | <input type="checkbox"/> | Colliod | <input type="checkbox"/> | Hartmanns | <input type="checkbox"/> |
| What volume of fluid was given? | | | | | | |
| Duration of PN (days) | | | | | | |
| What was the outcome for this patient at 30 days? (tick all that apply) | Weaned onto oral/enteral feeding | <input type="checkbox"/> | Discharged home | <input type="checkbox"/> | | |
| | Home parenteral nutrition | <input type="checkbox"/> | Died during hospital stay | <input type="checkbox"/> | | |
| | Transferred to other unit | <input type="checkbox"/> | | | | |

Comments:

*Suspected line infection: Positive blood cultures and evidence of sepsis (fevers, hypotension etc) with no obvious source other than line.

*Confirmed line infection: A recognised pathogen cultured from one or more blood cultures and the organism cultured from blood is not related to an infection at another site. Or a common commensal (i.e., diphtheroids [*Corynebacterium* spp. not *C. diphtheriae*], *Bacillus* spp. [not *B. anthracis*], *Propionibacterium* spp., coagulase-negative staphylococci [including *S. epidermidis*], viridans group streptococci, *Aerococcus* spp., and *Micrococcus* spp.) cultured from two or more blood cultures drawn on separate occasions and evidence of sepsis and positive laboratory results are not related to an infection at another site