PARENTERAL NUTRITION (PN) STUDY
National Confidential Enquiry into Patient Outcome and Death (NCEPOD)

Patient Care Questionnaire

Hospital number of patient: ________________________________

Name of NCEPOD Local Reporter: ________________________________

Specialty of doctor completing form: ________________________________

What is this study about?

NCEPOD is examining the process of care of patients of all ages who received parenteral nutrition as an inpatient between 1st January 2008 and 31st March 2008. The study aims to identify areas where the care of these patients might have been improved (remediable factors). All NHS and independent hospitals that admit both acute and elective admissions in England, Wales and Northern Ireland; public hospitals in the Isle of Man, Jersey and Guernsey, will be included in the study.

Exclusions - None

Questions or help?

If you have any queries about the study or this questionnaire, please contact NCEPOD at:
Email: parenteralnutrition@ncepod.org.uk

Telephone: 020 7631 3444

Thank you for taking the time to complete this questionnaire. The findings of the full study will be published in mid to late 2010.

CPD Accreditation

Consultants who complete NCEPOD questionnaires make a valuable contribution to the investigation of patient care. Completion of questionnaires also provides an opportunity for consultants to review their clinical management and undertake a period of personal reflection. These activities have a continuing medical and professional development value for individual consultants. Consequently, NCEPOD recommends that consultants who complete NCEPOD questionnaires keep a record of this activity which can be included as evidence of internal/ self directed Continuous Professional Development in their appraisal portfolio.

How to complete this questionnaire?

Information will be collected using two methods: Box cross and free text, where your clinical opinion will be requested.

This form will be electronically scanned. Please use a black or blue pen. Please complete all questions with either block capitals or a bold cross inside the boxes provided e.g.

Had the patient previously received PN?

☑ Yes ☐ No

If you make a mistake, please “black-out” the incorrect box and re-enter the correct information, e.g.

☐ Yes ☑ No

Unless indicated, please mark only one box per question.

Clinician specialty codes and grades are listed on page 11

Please return the completed questionnaire and casenote extracts to NCEPOD in the SAE provided.

To ensure confidentiality of the data, completed questionnaires must be returned directly to NCEPOD.

A copy must not be kept in the patient’s notes.
Please supply photocopies of the following casenote extracts from admission to PN start date and subsequent 2 weeks of PN (or until discharge if this is sooner)

Inpatient annotations (i.e. the main casenotes)
Nursing notes
Nutrition notes (these are sometimes filed separately)
Biochemistry results (e.g. LFT, U&Es)
Haematology results (e.g. FBC)
Fluid balance charts (including urine output)
Drug charts (including PN prescription chart)
Nutritional charts
Observation charts (including TPR, CVP)
Weight chart
Urinalysis
X-ray/CT/USS reports
Any operating notes

Please provide a clinical summary of the patient's care in hospital
A. PATIENT DETAILS

1. Age at time of admission □□□ years
   If less than 2 years old □□□ months □□ weeks □□ days
   If premature baby Gestation □□□ weeks □□ days

2. Gender: □ Male □ Female

B. THE ADMISSION

3. What was the date of admission? □□□□□
   d d m m y y

4. What was the time of admission?
   (please use 24-hr clock) □□□□
   h h m m

5. a. Was the admission:
   □ A planned admission
   □ An emergency admission
   □ An Inter-hospital transfer
   □ Unknown

   b. Specialty of consultant patient admitted under
      (Please see codes on page 11) □□□□

C. PARENTERAL NUTRITION INDICATION

6. Under what specialty was the patient when
   the decision was made to commence PN?
   (Please see codes on page 11)
   □□□□
   □ Unknown

7. Under what specialty was the patient when
   PN was administered?
   (Please see codes on page 11)
   □□□□
   □ Unknown

8. Had the patient previously been given PN?
   □ Yes □ No □ Unknown
9. a. On what type of ward was the PN initially administered?
   - Adult Medical
   - Adult Surgical
   - Adult Critical Care
   - Paediatric Medical
   - Paediatric Surgical
   - Neonatal unit (SCBU)
   - Dedicated Nutrition ward/area
   - Other

b. What level of care was this ward?
   - Level 1
   - Level 2 (e.g. HDU)
   - Level 3 (e.g. ICU)
   - Unknown

10. a. What was the indication for PN (answers may be multiple)?
   - Immaturity of GI function
   - Dysmotility
   - Chemotherapy
   - Congenital anomalies; gut
   - Fistulae
   - Cancer
   - Congenital anomalies; non gut
   - Malabsorption
   - Volvulus
   - Necrotizing enterocolitis
   - Pre-operative nutrition
   - Crohn's disease
   - Non functioning gut
   - No access for enteral nutrition
   - Post-surgical complications
   - Perforated/leaking gut
   - Failure of enteral nutrition
   - Radiation damage
   - Short bowel
   - Radiation enteritis
   - Post-operative ileus
   - Dysphagia
   - GVHD
   - Malabsorption
   - Obstruction
   - Infection (e.g. C. difficile)
   - Other (please specify)

11. a. Had the patient received any kind of enteral feeding in the week prior to the decision to commence PN?
   - Yes
   - No
   - Unknown

b. If Yes, what:
   - Oral supplements
   - RIG
   - Nasogastric feeding
   - PEG-J
   - Naso-jejunal feeding
   - Surgical jejunostomy
   - PEG
   - Distal feeding

c. Why was it not possible to continue to feed the patient enterally?

12. If PN was the first method of nutritional support, how long had the patient been without adequate food or nutritional support before the PN was started?
   - [ ] days
   - Unknown

13. a. What was the interval between the decision to start PN and its commencement?
   - [ ] days
   - Unknown

b. If greater than 1 day, why was this?
14. a. Was a treatment goal documented? □ Yes □ No
   b. If yes what was this? e.g. optimisation of nutrition pre-surgery

**D. PATIENT ASSESSMENT**

15. a. Did the patient have an assessment made for the need for PN □ Yes □ No □ Unknown
   b. If yes what were the elements of the assessment?
      □ Clinical grounds
      □ Biochemical review
      □ Weight
      □ Mid-arm circumference
      □ Tricep circumference/skin fold thickness
      □ Grip strength
      □ Other

16. a. Who made the decision that PN should be commenced (answers may be multiple)?
      □ Nurse
      □ Dietitian
      □ Pharmacist
      □ Unknown
      □ Doctor
      (specialty) □ □ □
      (grade) □ □ □
      □ Other

   b. Were they members of a nutrition team? □ Yes □ No □ Unknown

17. Was the decision to start the PN made in normal working hours (8am - 5pm, Mon - Fri)? □ Yes □ No □ Unknown

**E. PARENTERAL NUTRITION PRESCRIPTION**

18. What type of PN was first given?
    □ Multi-chamber bag ('Off the shelf')
    □ Tailored bag
    □ Multi-chamber bag with micronutrients only
    □ Unknown
    □ Multi-chamber bag with micronutrients and tailored additions

19. If this was subsequently changed what was it to?
    □ Multi-chamber bag ('Off the shelf')
    □ Tailored bag
    □ PN not changed
    □ Unknown
    □ Multi-chamber bag with micronutrients only
    □ Multi-chamber bag with micronutrients and tailored additions

20. a. Who determined the nutritional requirements of the patient (answers may be multiple)?
    □ Nurse
    □ Doctor
    □ Dietitian
    □ specialty (see page 11) □ □ □
    □ Pharmacist
    □ grade (see page 11) □ □ □
    □ Other

   b. Were they part of a nutrition team? □ Yes □ No
      □ Unknown
21. a. Who signed the prescription?
   - Nurse
   - Pharmacist
   - Unknown
   - Other

b. Were they part of a nutrition team?
   - Yes
   - No
   - Unknown

c. Was this a different individual to the person(s) who determined the constitution?
   - Yes
   - No
   - Unknown

22. a. Who reviewed the patient with respect to their PN (answers may be multiple)?
   - Nurse
   - Dietitian
   - Pharmacist
   - Unknown

b. Were they part of a nutrition team?
   - Yes
   - No
   - Unknown

23. How often was the patient reviewed with respect to PN?
   - Daily (7 days)
   - Daily (working week)
   - 3-5 days/week
   - 1-2 days/week
   - <1 day/week
   - Unknown

24. What was reviewed (answers may be multiple)?
   - Constitution of PN
   - Biochemical review
   - Clinical status
   - Ongoing need for PN
   - Weight
   - Mid-arm circumference
   - Tricep circumference/skin fold thickness
   - Grip strength
   - Vascular access
   - Other

25. How often was the PN prescription re-prescribed?
   - Daily (7 days)
   - Daily (working week)
   - Weekly
   - Other
   - Not re-prescribed
   - Unknown

b. How many times was the prescription changed during this admission?
   - 
   - No changes
F. VENOUS ACCESS/LINE CARE

26. How many CVCs did this patient have for PN during this admission? □ Unknown

Please answer the following questions with respect to the first catheter the patient received for PN

27. What was the initial mode of PN delivery
   □ Peripheral venous catheter
   □ Peripherally inserted central catheter
   □ Umbilical vein
   □ Implanted (e.g. Portacath)
   □ Centrally inserted venous catheter
   □ Non-tunnelled
   □ Tunelled
   □ Unknown

28. Type of catheter
   □ Multilumen
   □ Single lumen
   □ Cuffed
   □ Uncuffed
   □ Unknown

29. Was the catheter inserted?
   □ Solely for PN
   □ For general central venous access with one lumen for PN
   □ Unknown

30. Who inserted the catheter?
   □ Nurse
   □ Doctor
   □ Other
   □ Unknown
   (see page 11)

31. Where was the patient when the catheter was inserted?
   □ General ward
   □ Treatment room
   □ Critical care
   □ Radiology department
   □ Operating theatre
   □ Other
   □ Unknown
   (see page 11)

32. What insertion technique was used?
   □ Open surgical
   □ Percutaneous
   □ Unknown

33. What asepsis precautions were used (answers may be multiple)?
   □ Gown & gloves
   □ Face mask
   □ Draping
   □ Not recorded
   □ Skin cleansing solution
   □ Iodine
   □ Chlorhexidine 0.5%
   □ Chlorhexidine 2.0%
   □ Unknown
34. Were prophylactic antibiotics given during insertion of the catheter?  
☐ Yes  ☐ No  ☐ Unknown

35. Where was the tip of the central catheter positioned?  
☐ Superior vena cava  ☐ Inferior vena cava  ☐ Right atrium  ☐ SVC/RA junction  ☐ Other  ☐ Not applicable  ☐ Not documented

36. How was the position of the catheter verified?  
☐ Image intensifier at time of insertion  ☐ ECG  ☐ Unknown  ☐ Post insertion CXR  ☐ Ultrasound

37. For how long was the initial catheter in place?  
☐ days  ☐ Unknown

38. If removed, what was the reason for removal (answers may be multiple)?  
☐ End of PN  ☐ Malfunction  ☐ Line renewal  ☐ Accidental  ☐ Infection  ☐ Other  ☐ Occlusion  ☐ Unknown  ☐ Thrombosis

39. Who was responsible for changing the PN infusion bags (answers may be multiple)?  
☐ General ward nurse  ☐ Specifically PN trained nurse  ☐ Other  ☐ Unknown

40. Was access to catheter handling limited to PN-trained individuals?  
☐ Yes  ☐ No  ☐ Unknown
G. NON-METABOLIC COMPLICATIONS

41. a. Did any non-metabolic complications occur with the first catheter inserted for PN?
   - Yes
   - No
   - Unknown

   b. If Yes which of the following non-metabolic complications occurred (answers may be multiple)?
   - Line misplacement
   - Line occlusion
   - Line fracture/rupture
   - Venous thrombosis
   - Pneumothorax
   - Haemothorax
   - Pneumothorax
   - TPN-oma/extravasation
   - Suspected line infection
   - Confirmed line infection
   - Phlebitis
   - Accidental line removal
   - Other

H. METABOLIC COMPLICATIONS

42. a. Did any metabolic complications occur with the first PN catheter?
   - Yes
   - No
   - Unknown

   b. If Yes which of the following metabolic complications occurred (answers may be multiple)?
   - Re-feeding syndrome
   - Abnormal liver function
   - Oedema
   - Hypophosphataemia
   - Hypomagnesaemia
   - Hypokalaemia
   - Hyponatraemia
   - Hyperkalaemia
   - Hyperglycaemia
   - Hypernatraemia
   - Hypermagnesaemia
   - Hyperphosphataemia
   - Other

43. a. Was there documented evidence that the patient was at risk from re-feeding syndrome?
   - Yes
   - No

   b. If Yes what precautions were taken to prevent re-feeding syndrome?
   - IV vitamins
   - IV phosphate infusion
   - Reduced initial rate of feeding
   - Other
   - None
   - Unknown
I. MISCELLANEOUS

44. a. Was the patient given insulin? □ Yes □ No □ Unknown
   b. If Yes was this: (answers may be multiple)
      □ Part of critical care standard protocol
      □ Response to PN induced hyperglycaemia
      □ Diabetic patient
      □ Other

45. a. Were IV fluids prescribed in addition to the PN? □ Yes □ No □ Unknown
   b. If Yes was this: (answers may be multiple)
      □ To correct deficit
      □ To correct ongoing losses
      □ Routine maintenance fluid provision
      □ Other

46. In total for how many days did the patient receive PN during this admission? □□□□ days □ Unknown

47. a. Was feeding:
      □ Continuous
      □ Cyclical
      □ Unknown
   b. If feeding was cyclical, how many hours/day did feeding last? □□□□ hours □ Unknown

48. What was the eventual outcome for this patient?
      □ Weaned onto oral/enteral feeding
      □ Home parenteral nutrition
      □ Transferred to other unit
      □ Discharged home
      □ Died during hospital stay
      □ Other

Thank you for completing this questionnaire - the findings of the study will be published in mid to late 2010
### NATIONAL SPECIALTY CODES

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### CLINICIAN GRADES

When completing the questionnaire please use the codes below for the relevant clinician grades

- Consultant = CONS
- Non Consultant Career Grade = NCCG
- Staff and Associate Specialist = SAS
- Trainee with completed certificate of training = CCT

**Senior specialist trainee (SpR 3+ or ST3+) = ST3**

**Junior specialist trainee (SpR 1&2 or ST 1&2) = ST2**

**Basic grade (FY, HO's, SHO's or CT's) = FY**