PATIENT PROFILE

Key point

One in five PEG procedures were futile or not indicated.

In this sample 40% (719/1,818) of patients underwent a PEG procedure for enteral feeding, of which 55% (392/719) of patients were male. The age profile of the sample is presented in Figure 9 and shows that 588/719 (82%) patients were aged 70 years or older.

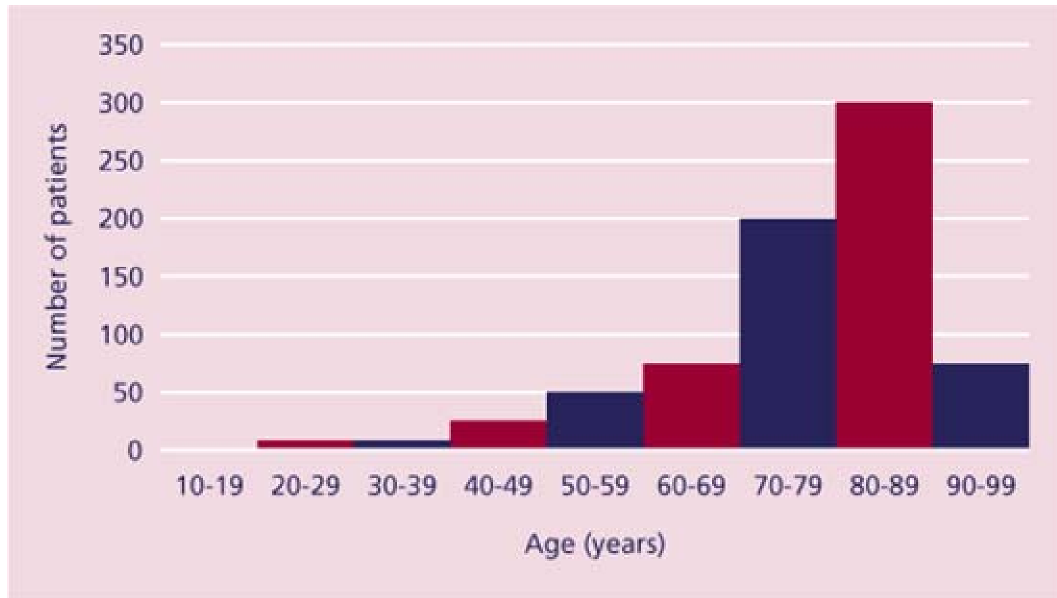

Figure 9. Age profile of patient undergoing PEG procedure

There is little evidence that PEG insertion in older persons can increase survival per se. A meta-analysis by Mitchell and co-workers[3] who used a MEDLINE search of studies between 1980-1998 inclusive found that 19% died within one month, a further 11% within two months and a further 14% died within six months. Only 38% survived for one year. An earlier study of American hospitalised Medicare beneficiaries aged 65 years or older discharged in 1991 found an overall 30-day mortality rate of 24%[4]. None of the five cohort studies reviewed, that compared survival in nursing homes with or without feeding tubes, demonstrated a benefit. Another of the studies reviewed showed increased survival in those patients with amyotrophic lateral sclerosis. With such depressing mortality figures the indications for insertion of PEG in older patients should be strongly influenced by a consideration of its benefit to quality of life as much as for survival. The patient needs to understand this and take part in the decision. It may be appropriate for a study to be undertaken which would further examine who would benefit from this procedure.

Figure 10 shows that 84% (607/719) of patients were ASA 3 or poorer.

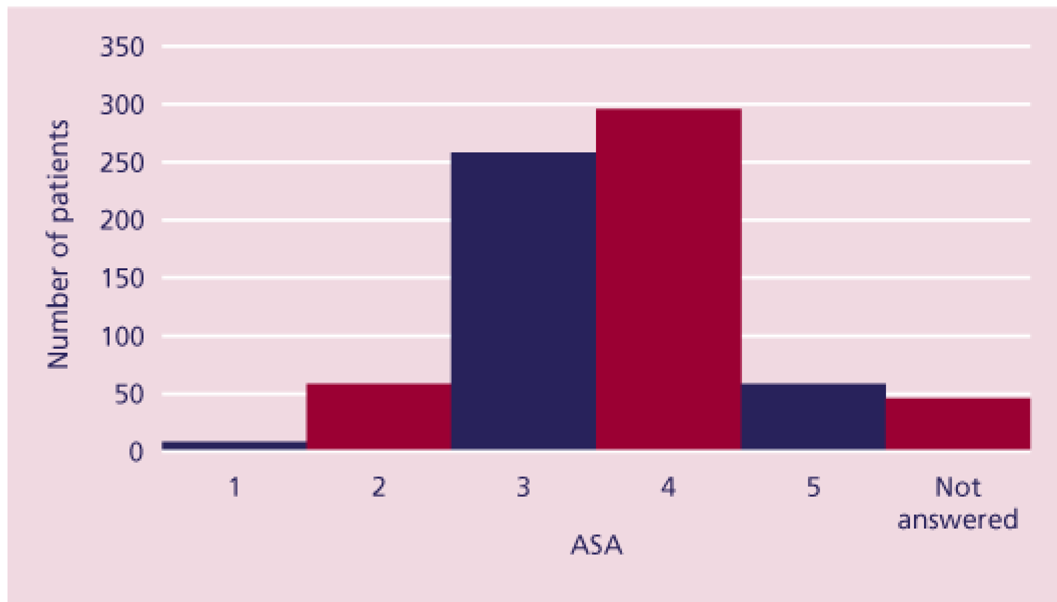

Figure 10. Physical status of patients undergoing PEG procedure

Table 28 lists the medical disorders of the patients.

Table 28. Co-existing medical disorders in patients undergoing PEG procedures (answers may be multiple)	
System involved	**Total *n* = *710***
Neurological	695
Respiratory	402
Cardiac	338
Renal	57
Total	**1,492**
Not answered	9

Table 29. Urgency of PEG procedure		
Urgency	Total	*(%)*
Elective/scheduled	641	*(95)*
Urgent	34	*(5)*
Emergency	2	*(<1)*
Sub-total	**677**	
Not answered	42	
Total	**719**	

Predictably, most PEGs were inserted as an elective or scheduled procedure (Table 29). The urgent procedures were likely to be patients with a mechanical obstruction to swallowing where the passing of a nasogastric tube was impractical. However, the advisors were of the opinion that a PEG insertion should never be an urgent procedure and were concerned about the role of PEG feeding in those receiving palliative care. One of the emergencies was for mechanical obstruction. The other case which may have been poorly categorised, received a PEG three weeks after admission.

Table 30. Days between PEG procedure and death

Days between procedure and death	Total	*(%)*
0	14	*(2)*
1-3	126	*(18)*
4-7	156	*(23)*
8-14	183	*(26)*
15-21	112	*(16)*
22-30	101	*(15)*
Sub-total	**692**	
Procedure date unknown	27	
Total	**719**	

There was an alarming association between PEG insertion and early death (Table 30). Out of 692 cases 2% (14/692) of patients died on the day of the procedure, of whom three died in the recovery room, and a further 18% (126/692) died between the first and third post endoscopy day. A total of 43% (296/692) of deaths occurred within one week and a further 26% (183/692) in the second week.

On review of these cases NCEPOD advisors often expressed concern about the timing of the procedure indicating that these procedures were futile or precipitated death. In one case where a patient was over 90 years-of-age an advisor commented, *"The PEG placement was technically OK - but the timing was wrong. The patient was very ill, dehydrated and had pneumonia. They should not have had a PEG at this time and died six days later. There is no information about the last few days of life."*

Early death after PEG procedure is an area where things are going badly wrong. Endoscopists who perform the procedures may not be aware of the patient's outcome following transfer back to the referring clinician.

Clinicians were asked to state the expectation of death (Figure 11). In 22 cases no answer was given and in 6% (42/697) death was expected.

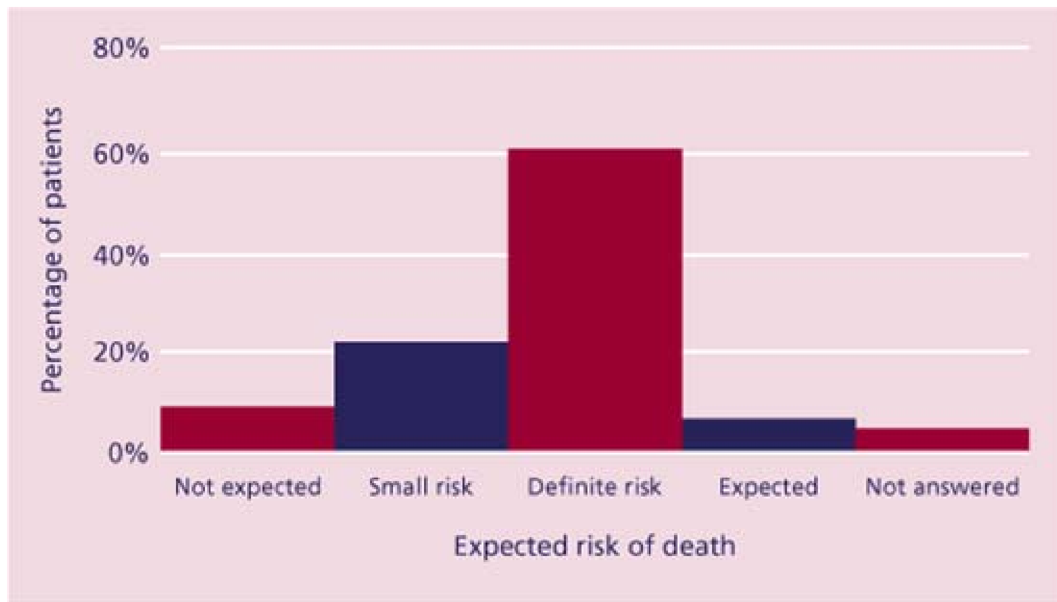

Figure 11. Expectation of death following PEG procedure

Many of these had malignant disease such as oesophageal cancer, and the PEG was to palliate hunger. It was surprising that in 63% (440/697) of cases the patient was classified as having a definite risk of death. On review of the cases NCEPOD advisors were asked to give an opinion on whether the procedure was appropriate for that patient. One in five (19%, 135/719) of PEG procedures were thought to be either futile or no procedure was indicated. For these cases, the quality of information provided to the patient and their relatives must be questioned.