Joint primary-secondary care design of PEG care pathways

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The use of PEG feeding has increased over the past decade. This article describes the development of a care pathway to support patients and maintain standards of care in PEG feeding.

At City Hospital, Birmingham, the use of percutaneous endoscopic gastrostomy (PEG) feeding tubes has increased over the last decade. However, once the PEGs were in situ – placed through an artificial opening in the abdominal wall into the stomach using an endoscope – there was a lack of staff with the skills and knowledge required to support these patients and maintain standards of care. When problems arose such as blockages or if new end connectors were needed, for example, ward nurses tended to contact those in the endoscopy unit, who had been involved in the initial insertion. This meant knowledge and expertise became concentrated in the endoscopy department. The gastroenterology clinical nurse specialist/endoscopist (gastro CNS) consequently developed a keen interest in PEGs and identified a number of problems and shortfalls in their care.

Care pathway

At about the same time as the shortfalls in PEG care were identified, the hospital appointed a care pathway facilitator. A care pathway is a structured multidisciplinary care plan developed to take account of current knowledge and best practice, which details the essential steps in the care of a patient with a specific clinical problem. It encourages evidence-based practice and is a means of applying national guidelines in clinical practice (Campbell et al, 1998). Care pathways originated in the US when clinicians began to develop patient-focused ways to redefine care delivery and identify measurable outcomes.

After some discussion of the issue, the gastro CNS and care pathway facilitator agreed to develop a PEG care pathway. The first step was to map patients’ experience with PEGs. A process map was developed (Box 1) and all patients referred over a two-week period had their experience monitored to highlight areas for improvement (Box 2).

The next step was to identify key multidisciplinary players in the patient journey and get them together to develop the pathway. It was felt that for the pathway to be successful, collaboration with primary care was essential, so the community nutrition nurse (CNN) was asked to be involved in the development process.

The development process

Initially, study days were held in which the team looked at the concepts behind care pathways, literature searching, interpreting research and evidence-based practice. A literature review was undertaken to identify best practice to improve care. Discussions were held on how to deal with the immediate problems raised in process-mapping/auditing. Meetings were held monthly and the pathway was gradually developed.

The literature review identified a number of factors to be taken into account in developing the care pathway, including:

- Dysphagia secondary to acute stroke is an appropriate referral for PEG-feeding rather than nasogastric feeding (Norton et al, 1996);
- Advanced dementia is not an appropriate routine

Box 1. PROCESS MAP

- Decision made to PEG-feed
- Referral for PEG
- Endoscopy staff allocate date for PEG
- Consent obtained
- Patient prepared for procedure
- Procedure performed
- Immediate post-procedure care
- Feeding regime commenced
- Stoma site healing
- Patient/carer educated about PEG care
- Patient discharged
referral for PEG or indeed for any form of artificial nutrition (Gillick, 2000).

- Tube feeding has been shown not to decrease the risk of aspiration in people with advanced dementia (Finucane and Bynum, 1996).
- Patients with advanced dementia do not appear to live any longer with artificial nutrition (Mitchell et al, 1997).
- Pre-procedural antibiotic prophylaxis is recommended to prevent infection (British Society of Gastroenterology, 2001), as there is a risk of peri-tonitis or localised stoma infection.
- Patient consent must be obtained for the procedure to be carried out, but if patients are judged not to have sufficient mental capacity to give consent it may be carried out if it is considered to be in the patient’s best interests (Department of Health, 2001).
- When the PEG is inserted, a gap should be left between the skin and the PEG’s external fixator, while additional bulky dressings should not be placed around the site as these can increase the risk of pressure necrosis (Heximer, 1997).
- The stoma site should be cleaned daily with normal saline, and the tube should be rotated at the same time to prevent adherence to the tract. Once it has healed the site should be cleaned daily with mild soap and water and dried thoroughly (Arrowsmith, 1996).
- Patients should be fed in a semi-recumbent position to help prevent aspiration (Taylor and Goodinson-McLaren, 1992).
- To prevent blockage the tube should be flushed with 50ml of water before and after every feed or any medication (Ricciardi and Brown, 1994).

It was further intended that the care pathway document would facilitate the PEG placement process by focusing on the patient rather than the system (Overill, 1998). According to Roebuck (1998), care pathways should be an aid to practice and communication not only among health professionals but also for patients, as they provide a clear summary of their expected care plan and progress.

With increasing demands on health professionals’ time it was important to ensure the care pathway document was easy to use. Specific aspects of care were identified and a checklist of all necessary interventions devised. By identifying specific interventions at specified times, a checklist was developed to enable new staff – or those unfamiliar with PEG care – to quickly learn key interventions and to appreciate likely variants (Overill, 1998). Any variants from normal are noted and will be analysed as part of the agreed outcome indicators. These included:

- Patient seen by the nutrition team;
- Consent form signed by two medical staff;
- Stat dose of antibiotic given 30 minutes prior to the procedure;
- Analgesia given post-procedure for 24 hours;
- Patient mortality within 30 days;
- In the case of the above, the time the patient died, for example day seven at 12 noon;
- Patient in hospital for more than 30 days;
- Patient referred to community team;
- Nurse discharge letter completed.

This encourages practice development and improves standards of care (Wigfield, 1996). Documentation of care relating to the PEG is therefore recorded in a consistent, concise manner, which fulfils the principles of record-keeping as laid down by the NMC (2004).

Patient education

With a patient-focused care pathway, it was essential to develop supporting patient literature that would be relevant for use in both primary and secondary care settings (Brett, 2001). Two booklets were therefore developed.

What is a PEG? is given to patients prior to placement, either in the hospital setting or the community when the pre-PEG assessment is being undertaken. The booklet outlines what patients can expect leading up to and during the procedure. It also identifies the potential risks associated with

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**REFERENCES**


This article has been double-blind peer-reviewed.

For related articles on this subject and links to relevant websites see www.nursingtimes.net
PEG placement and consequently improves the 
quality of information available to patients, who 
are therefore able to give their informed consent for 
the procedure. In order to give informed con-
sent they must understand what a procedure involves and also how it may or may not affect 
them in future (McKee, 1999). In order for this to 
happen effective communication between the 
health professional and the patient is required.

Caring for your PEG Tube at Home outlines all 
aspects of PEG care from the first day post proce-
dure and incorporates all the interventions detailed 
on the checklist used on the wards. The booklet is 
not written to relate to a specific PEG and can be 
used as a basis for a care plan in all primary care 
settings. It includes sections on problem-solving 
and the administration of medication via the PEG 
tube, together with contact numbers for the com-

munity nutrition nurse, community nurses, dietitians 
and the endoscopy unit where the PEG was placed.

The care pathway was launched throughout the 
hospital after a multidisciplinary study day, which 
was open to both hospital and community staff 
who would come into contact with PEG patients 
discharged from City Hospital. The day was over-
subscribed, well evaluated and will be repeated in 
the near future.

Discussion
Norris (1998) sees care pathways as a means of 
delivering seamless care to patients across the 
secondary and primary care interface of the NHS. 
However, they must be developed with the patient 
as their primary focus (Overill, 1998).

The development of the care pathway at City 
Hospital has greatly improved collaborative work-
ing between secondary care and primary care in 
Birmingham. This has benefited both patients and 
staff, and fits in with The NHS Plan (DoH, 1997), 
which requires primary care and secondary care 
trusts to develop long-term partnerships.

The plan also advocates extending nursing roles 
in managing care across organisational and profes-

sionals involved in providing care for patients 
with PEGs.

 Collaborative working has also improved the 
level of care and support to some patients, such as 
those with head and neck cancers who have a PEG placed prior to radiotherapy. These patients now receive both pre and post-PEG intervention by the community nutrition nurse, which did not happen before the introduction of the care pathway.

However, as with any change process some 
areas have been identified that need further con-
sideration in terms of time and resources. Overill 
(1998) discusses the need for primary care groups, 
social services and other agencies to identify and 
develop seamless episodes of care and says that 
the leaders of such projects need leadership time 
and good communication skills.

The impact of the pathway development and 
introduction on time and workload, particularly for 
the gastro CNS, was not anticipated. This nurse 
had to take on the roles of care pathway coordina-
tor, patient assessor and discharge liaison in order 
for the pathway to be effectively introduced and 
for it to function as intended. There has been an 
increase in referrals from primary care, and we 
believe that early intervention by the nutrition 
nurse allows for PEG management to continue in a 
seamless way, reducing problems and anxiety for 
patients and carers.

The way forward
The PEG Care pathway will be regularly reviewed 
and will be audited in both primary and secondary 
care against the outcome indicators. Issues identi-
fied as a result of the implementation of the path-
way will be addressed as they arise. For example, 
it has become evident that ongoing education for 
ward staff, district nurses, patients and carers is 
needed. As a result of this, another study day has 
been planned at City Hospital and towards the end 
of this year study days are planned in the primary 
care setting.

Links have now been established through this 
collaborative working between staff in the primary 
and secondary care sectors and these need to be 
built on in the future.

Box 3. Benefits to Patients

- Consistent advice from pre-PEG assessment 
to post-PEG community follow-up
- Better continuity of care
- Information booklets
- Quicker referrals when problems identified
- Better informed
- Encourages patients/carers to be more 
involved
- Patients have a point of contact/ telephone numbers

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