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FOCUS ON: ENHANCED RECOVERY

Pre-operative preparation: Essential elements for delivering enhanced recovery pathways

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SUMMARY

Pre-operative preparation is the first stage in the enhanced recovery process. If it goes wrong it will adversely impact on the peri and post-operative stages of enhanced recovery. If done well it enables the success of enhanced recovery. At this stage the expectations of the patient and their family are set to prepare them for the planned surgery and its effects on the patient. It involves both primary and secondary care. Information is transferred both from the patient and to the patient. This is done by verbal, written and increasingly electronic communication. The patient is evaluated to ensure that there is no medical or social cause to prevent the enhanced recovery process. This has been referred to in the past as pre-assessment but is probably more accurately called pre-operative preparation.

1. Overview: the objectives of a pre-operative preparation service

The development of a coherent pre-operative service is fundamental to delivering the smart pathways of an enhanced recovery service. Assessment and preparation of the patient referred for potential elective surgery needs to start in primary care and continue seamlessly into secondary and tertiary services. All patients should receive the same standard of pre-operative service whether or not it is intended that they will follow an enhanced recovery pathway. This includes patients who have their surgery in the out patient clinic or the day surgery unit (often described as office based surgery and ambulatory surgery in North America).

The service should be designed in such a way that it achieves the following

- agreement with primary care that they will only refer patients for non-urgent surgery if they are in the best possible condition and are willing to consider having surgery as a treatment option.
- clarity around what the patient expects to achieve by undergoing a surgical procedure.
- a process that is completely patient focussed.
- no unnecessary delays for patients, clinicians and hospitals.
- waiting times compatible with achieving an 18-week Referral to Treatment Time (18-week RTT) in England or other agreed treatment target times.
- a full medical and social assessment.
- immediate access to the appropriate tests and investigations.
- a comprehensive information package specific to each surgical procedure that takes into account the patients social, cultural, and ethnic background.
- an individualised assessment of risk to help the patient in using informed decision making to achieve consent.
- access to a range of health professionals to plan care appropriate to the operation and the patient's individual needs.
- a nurse based service supported by doctors from all of the required medical specialties.
- optimisation of patients condition prior to surgery including access to weight and smoking management and exercise programmes.
- a plan for managing therapies prior to admission such as anticoagulation and diabetic treatment.
- identification of the necessary level or type of post-operative care.
- a discharge process that is planned right from the start, including home visits and support in the community where appropriate.
- excellent communications with patients, carers and all agencies involved in their care.
- efficiency for the health community through minimising "do not attends" (DNAs), cancellations on the day of surgery and inability to access critical care beds through inadequate planning.
- the ability to admit on the day of surgery.

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- a clear point of contact for the patient throughout the pre-operative period.
- a definite date for surgery, booked at a time convenient for the patient.
- the ability to combine the pre-operative service with other clinics or investigations to provide a one-stop visit.
- the above will clarify the patients expectations for peri-operative and post-operative care.
- a strategy for ongoing management of patients who either decline surgery or have their surgery deferred for medical reasons must be in place.

2. History

In 1949 J. Alfred Lee described his Anaesthetic Out Patient Clinic that was intended to make patient as safe for surgery as possible.[1] He states that patients "should be seen and as soon as possible after his name is added to the waiting list." This and many other comments he makes hold just as true sixty years later. Thirty years ago most UK surgical practice involved pre-operative admission to hospital for investigations instigated by trainee medical staff the day or days before surgery. This was followed by a long post-operative stay in hospital. Changes in surgical practice, an increased volume of surgery, the advent of both office based and same day surgery, reduction in trainee doctors' hours and a desire to drive down health care costs have led to the development of pre-operative assessment clinics. These have been predominantly nurse-led[2,3] usually with some medical support particularly for high-risk patients.[4] There are a number of different styles of clinic in use and while there is no uniformity between different countries or even within the same country they do share many common themes.[5,6] In addition to the publications describing the out patient pre-operative process there is evidence that changing the pre-operative process to an out patient clinic reduces cancellations on the day of surgery, reduces investigations and reduces patients anxiety.[7–10]

3. The optimum process and setting for pre-operative preparation

All patients undergoing elective surgery should undergo pre-operative assessment that is centred on preparing the patient and their family for the proposed surgery. Information gathering and test ordering is the easy part of the process; decision making consequent on these findings and addressing the detail of organisation of the admission is much more difficult.

Pre-operative preparation should start in Primary Care from the time that a referral to a specialist service is made for possible surgery. The general practitioner can play a major part by performing a "fit for list" health screening, identifying causes of increased morbidity such as anaemia, sub-optimal diabetic control, obesity, smoking and general low levels of physical fitness and instigating management plans to optimise the patient's condition. As soon as surgery becomes a definite option, further elements of the preparation can take place and a face-to-face pre-operative assessment should be performed as soon as possible in the specialist setting by clinicians who fully understand the enhanced recovery pathway and its requirements.

Pre-operative assessment and preparation can take place wherever there is access to the skills that can deliver the components described in the 'Overview' section. This could be achieved in a variety of ways and places depending on local facilities, policies and protocols. Delays that affect compliance with 18 week RTT (referral to treatment) or more challenging local targets must be avoided.

The stages that need addressing are

1. information gathering
2. information giving
3. the ordering of appropriate investigations, tests and the scrutiny of any abnormal findings
4. organisation of actions consequent on them, including further investigation or tests
5. review and as necessary, further communication with the patient
6. as appropriate, further communication with any clinicians caring for the patient
7. discussion between patient and clinical staff leading to informed decision making and consent
8. optimisation of the patient's condition

Ideally a pre-operative service should be combined with booking for ease of communications.

Stages 1–3 can easily be achieved through a number of models

- primary care practitioners
- telephone interviews
- internet questionnaire or other IT-supported methods
- an intermediate assessment service
- a secondary care based service

Stages 4–7 involve more complex patients and processes and will normally require some specialist input.

Stage 8 can and should take place at every possible opportunity as the patient moves through the surgical pathway from primary care to secondary care and back. Everyone who interacts with the patient should be involved in this process irrespective of the professional background or relationship with the patient.

There should be a clear model which risk stratifies patients and then defines how the pre-operative preparation process should be conducted and by whom. Lower risk patients can be seen by nurses trained in pre-operative assessment, while higher risk patients will need to see an anaesthetist and may in addition need to undergo advanced testing. Peri-operative risk of death and morbidity can be inferred from the age and sex of the patient. In the UK the Office for National Statistics through the government actuarial department (www.gad.gov.uk) publishes life expectancy data for age, sex and region.[11] Adding in a history of medical co-morbidities can further refine this risk. Heart failure is probably the biggest risk factors but other risk factors have been demonstrated by Lee in a Revised Cardiac Risk Score.[12,13] Finally individual hospital data and national data on survival after different types of major surgery can refine the risk assessment even further. To optimise the use of medical and nursing staff it may be helpful to triage patients into three groups based on risk of peri-operative death. Patients can then be assigned to a low risk (risk of death better than 1 in 200) nurse-run clinic, to a medium risk (risk of death between 1 in 100 and 1 in 200) clinic with nurse and anaesthetist, or a high-risk (risk of death more than 1 in 100), medically led clinic with facilities for advance testing. A model that has been successfully trialled in knee and hip joint in knee and hip joint replacement surgery is described in Appendix A.

Achieving true informed decision making is difficult without a face-to-face interview although tools are being developed to help support this process. Patients may prefer personal contact with a team who will deliver their care in hospital. Some patients may wish to have initial engagement with their pre-operative preparation by using the Internet in the comfort of their own home or near to their home at their primary care health centre. Others may want to attend a clinic on the site where they are going to have the future