



Best Practice

Supplement

Evidence Based Practice Information Sheets for Health Professionals

Management of the Day Surgery Patient

Information Source

This Best Practice Information Sheet has been derived from three systematic reviews conducted by the Nursing Practice Unit, La Trobe University and the Day Surgery Special Interest Group, ANF, Victorian Branch.²⁻⁴ The primary references on which this information sheet is based are available in the systematic review reports available from the Joanna Briggs Institute and from the web site:

www.joannabriggs.edu.au

Background

Day surgery is defined, for the purposes of this document, as the performance of a procedure that occurs without overnight admission of the patient prior to or following the intervention. Patients undergoing day surgery attend specialised, "stand alone" day surgery centres or units attached to a hospital. A variety of procedures are performed as day

This Information Sheet Covers the Following Interventions:

- Pre-admission
- Post-admission procedures
- Staffing mix

surgery including, but not limited to, orthopaedic surgery, gynaecological procedures, ophthalmic surgery, plastic surgery and a wide range of other surgical procedures and investigations.

Since the 1970's there has been a dramatic increase in the number of procedures that are carried out as ambulatory (day) surgery. Across developed countries it is estimated that 50% of all surgical procedures are being carried out on an ambulatory

Levels of Evidence

All studies were categorised according to the strength of the evidence based on the following revised classification system:

Level I Evidence obtained from a systematic review of all relevant randomised controlled trials.

Level II Evidence obtained from at least one properly designed randomised controlled trial.

Level III.1 Evidence obtained from well-designed controlled trials without randomisation.

Level III.2 Evidence obtained from well-designed cohort or case-control analytical studies preferably from more than one centre or research group.

Level III.3 Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments.

Level IV Opinion of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.

basis. Although day surgery is reported to be associated with increased patient throughput, cost reduction and patient satisfaction, disadvantages include inadequate control of nausea and vomiting and pain and the imposition of the burden of on family members and community services.⁵ Preoperative care, care during surgery, postoper-

ative care including monitoring and assessment, discharge, and follow up via telephone post-discharge are strategies frequently implemented in day surgery units to minimise post-discharge complications and the support needed by patients.



Pre-admission Care

In a day surgery setting, time to undertake a complete preoperative assessment is restricted. Many centres have implemented a system of undertaking pre-admission assessments a week or more earlier than the day of surgery. This occurs in pre-admission clinics, at appointments with day surgery staff, and/or via telephone. Proper preoperative evaluation allows for positive surgical outcomes to be successfully achieved.⁶ This assessment also allows for screening of patients not suitable for surgery thus reducing unnecessary cancellations.

Preoperative assessment is often coupled with preoperative education for the patient. This education may be presented in a variety of ways including one-on-one consultations, tours of facilities, group meetings or telephone consultations. The aim of preoperative education is to decrease anxiety preoperatively, assess patient and family learning needs, and to individualise information for each patient.⁷

Findings

Although there were no comparative trials of pre-admission clinics one survey of patients using a pre-admission clinic demonstrated a high level of satisfaction. Attendance at the clinic reduced patient anxiety and improved their state of mind, as well increasing their understanding of the admission process. Understanding of the importance of fasting before surgery and satisfaction with after-care instructions were also increased.

Pre-operative telephone screening or questionnaires were found in one study to be effective in reducing the rate of cancellations/postponements. Another study compared the effectiveness of a pre-operative telephone call with the call plus an additional home visit. The result did not show any evidence that the additional home visit reduced cancellation rates.

Although there is little research into the suitability of pre-admission criteria, screening criteria guidelines by the Association of Anaesthetists of Great Britain and Ireland indicate that the patient's willingness to have day surgery, availability of adult care in the home, telephone access and the patients general home situation should all be considered prior to admission. These guidelines also indicate that the patient should have the ability to understand the procedure, be in good physical health and be of reasonable weight.

This information is based on level II and level III.2 evidence.²

Post-admission Care

There are many advantages to the use of day surgery including a faster throughput of patients and a fixed time for surgery, reduced demand for night and weekend nursing staff, reduced waiting lists, savings in hospital costs, a shorter wait for children and older people, minimal disruption of normal routine and less costs for the family of the patient.⁵ However, there are also disadvantages to day surgery, such as complications if patients are discharged too soon after anaesthetic or experience nausea and vomiting, inadequate pain control, insufficient rest at home and an extra burden being placed on family members and community services. These possible complications make it especially important that all aspects of day surgery are carried out as meticulously as possible. These aspects include preoperative care, care during surgery, postoperative care including monitoring and assessment, discharge, and follow up.

Findings

The findings of one randomised-controlled trial support the use of distraction in reducing patient pre-operative anxiety, and intraoperative anaesthetic requirements. In terms of anaesthetic management/ guidelines, descriptive studies and expert opinion, indicate that fasting prior to surgery is no longer necessary FOR PATIENTS HAVING LOCAL ANAESTHETIC ONLY and that a large majority of surgeons and anaesthetists would continue with surgery prior to procedures under local anaesthetic if patients had consumed orally.

It was also found that, while tympanic temperature is not a useful measure for discharge readiness, the Post-Anaesthetic Discharge Scoring System is, and could be used to replace the existing clinical discharge criteria. Surgery with the least complications should be scheduled for later in the day, and discharge times should be flexible, if unanticipated admission levels are to be reduced. Patient satisfaction surveys indicate that many patients felt that information provided prior to surgery was inadequate and failed to meet their needs in terms of preparing them for what to expect from the operation itself, admission care and discharge. This information is based on a variety of evidence levels including level II.³

Staffing Mix

Traditionally operating theatres have been staffed solely by medical and nursing personnel however new roles, such as operating room assistants and anaesthetic technicians, have emerged over the past thirty years in response to advances in surgical and procedural techniques, increased expectation of patients and societal demands for cost containment.

Findings

The systematic review identified that there is no high quality evidence to establish the relationship between skill mix, staffing levels and the achievement of desired health outcomes in day surgery units. There is therefore a need for research into this area. Evidence derived from expert opinion and published guidelines, although lacking in terms of validity, currently represents the best available evidence.

The lack of studies addressing the complexity of staffing issues in the day surgery units results in decisions being made based on the number of patients admitted, rather than on the complexity of cases. An over-reliance on tradition and the maintenance of professional boundaries appears to characterise current approaches to skill mix and staffing levels in day surgery units.

The findings of this review suggest that current practices related to calculating and providing appropriate staffing in day surgery units to ensure appropriate staffing requirements/ systems have yet to be evaluated in terms of their effect on costs and outcomes. This information is based on evidence that is level IV.⁴

Implications for Practice

Pre-admission

1. Telephoning patients pre-operatively to re-enforce appointment dates and times, pre-operative oral intake and to screen for any illness may prevent postponement of surgery.
2. Setting up pre-admission clinics for the same reasons as telephoning patients pre-operatively may also reduce patient anxiety and increase patient understanding and satisfaction.
3. Patients should be screened for suitability based on their ability to meet the assessment criteria.

Post-admission to Discharge

1. Tools for distraction should be provided in day surgery waiting areas (eg. music, television, magazines) to reduce patient pre-operative anxiety.
2. The Post-Anaesthetic Discharge Scoring System should be trialled as an alternative to the existing Clinical Discharge Criteria.
3. Discharge times after day surgery should be flexible if unanticipated admission levels are to be reduced.

4. Surgery with least anticipated complications should be scheduled for later in the day.
5. Staff should ensure that patients have arranged transportation home and someone to assist in caring for them, prior to surgery taking place.
6. Patients need to be provided with specific information regarding what to expect from the operation, admission care and discharge.
7. This information should be day surgery specific and should include details of what to expect in terms of pain and discomfort.
8. Fasting guidelines should be updated to reflect changes to practice and new findings.

Staff Mix

1. Giving the paucity of valid evidence, there is an urgent need for research and development in this area.
2. Workload (using measures that incorporate data on the complexity of care required) may play a major determining role in identifying appropriate staffing levels and skill mix.

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