Guideline for the perioperative care of patients selected for day stay procedures

Background Paper

1. Purpose of review

PG15(POM) Guideline for the perioperative care of patients selected for day stay procedures was last revised in 2006 and republished in 2010. Although the document was due for review, the time frame was influenced by a number of other factors:

- To update the format to align with the other ANZCA professional documents.
- PG15(POM) (2010) references the 2004 Australian Day Surgery Handbook. The Australian Day Surgery Council no longer exists.
- Day Stay Procedures (DSP) are performed in a wide range of health care facilities catering for a spectrum of procedures and circumstances. Consequently it is imperative to ensure that the same safe standards apply to all “Day Surgery” patients irrespective of the nature of facilities.
- The range of patients being treated in DSP facilities has increased. This includes age, co-morbidities and more acute/emergency procedures. Patients at the extremes of age (the very young and the very old) require special consideration. The accompanying guideline should be aligned with *PG29(A) Guideline for the provision of anaesthesia care to children*.
- The South Australian Coroner’s report of February 2014 recommended that higher risk patients (in particular obese patients) have procedures performed in facilities that are capable of providing appropriate intra and post-operative care. Although the procedures performed mentioned in the coroner’s report were not “day case”, the implications of poor matching of resources to patient requirements is a salient issue to DSP.
- A fasting guideline was previously contained within PG15(POM). However, following the recent review of *PG07(A) Guideline on pre-anaesthesia consultation and patient preparation* (2016) the fasting guideline was incorporated into PG07(A) as an appendix but still apply to the DSP setting.

2. Background and discussion

PG09(G) Guideline on sedation and/or analgesia for diagnostic and interventional medical, dental or surgical procedures, PG15(POM), and PG29(A) are all closely related and as such, revisions of these documents should be co-ordinated to ensure consistency.

The aim of the accompanying guideline is to provide guidance in relation to patients undergoing procedures, who are subsequently discharged and spend their first postoperative night outside any healthcare facility. As a result, the title of PG15(POM) has changed from “Day Surgery” to “Day Stay Procedures”. The reasons for this are discussed below.

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The term “Day Surgery” (or “Ambulatory Surgery”) specifically refers to patients who are admitted and discharged on the same day (see also the AAGBI document of 2011) resulting in patients spending their first postoperative/post-procedure night outside the facility where their operation/procedure was performed. “Outpatient” procedures also have the same aim. Variations in Day Surgery practice have evolved, including “23 hour“ healthcare facilities and “Short Stay Surgery” units (although some of these units may keep patients overnight).

Patients from rural/remote areas may be admitted the day prior to their planned DSP. As a result of an overnight stay, these patients no longer fall under the category of “Day Surgery” or “Ambulatory surgery” even though they are part of an operating list that is clearly a “day surgery” list (e.g. endoscopy). As a result of medical comorbidities, some patients may be admitted the day prior to their planned procedure. In these cases serious consideration should be given to the timing of their discharge. Practitioners discharging such patients should have mechanisms in place to ensure that subsequent complications resulting from either anaesthesia, the procedure performed or the patient’s medical co-morbidities can be identified and dealt with in a timely manner.

The document development group (DDG) was aware that more DSPs are being performed after hours (typically emergencies) resulting in patients being discharged the next day but within six to eight hours of their procedure.

2.1 Facilities involved in DSP

The following issues regarding the range of healthcare facilities and services provided were considered:

- Differentiation between DSP and “Day of Surgery Admission”. “Day of Surgery Admission” refers to patients admitted to Health Care Facilities on the day of their planned procedure/surgery, but who may or may not be discharged on the same day. Such patients may have already undergone a pre-anaesthesia consultation.
- Facilities involved with the delivery of DSP may include the following:
    - Tertiary/Quaternary Hospitals (with ICU and other inpatient facilities) where patients planned for surgery may be included on normal operating lists.
    - Co-located DSP facilities within a tertiary/Quaternary Hospital (with ICU and other inpatient facilities). This may include endoscopy units.
    - DSPs may be performed in hospitals without Intensive Care/High Dependency Units. Such hospitals may vary in the availability of overnight, on-site registered medical practitioners. The ability to access Intensive Care/High Dependency care may also vary depending on geography (urban versus rural) as well as availability of retrieval services.
    - “Stand alone” DSP facilities where there is no 24 hour “inpatient” services and the facility generally closes down for part of the 24 hour cycle.
    - “23 hour” facilities also known as Extended Day Only (EDO).
    - “Office-based” facilities. All procedures performed using parenteral sedation should be performed in strict compliance with jurisdictional regulations.
- “Staggered” admissions are more likely to occur with DSP patients for a variety of reasons. Adequate resources should be in place to ensure the principles of PG07(A) are observed, in

particular adequate time and an appropriate environment for preoperative assessment and consultation.

- High volume/high turnover lists (e.g. Endoscopy, cataract extractions and lens implants) may require additional recovery room spaces per operating theatre (see *PS04(A) Position statement on the post-anaesthesia care unit*). Note the NSW Health document on High Volume Short Stay Surgical (HVSSS) Model (2012) recommends 2.5 to 3 beds per HVSS theatre in PACU.

- Plans for patients who fail to achieve satisfactory discharge criteria should be in place, particularly for free-standing DSP facilities.

2.2 Extremes of Age

Day stay procedures have expanded to include an increasingly broad range of ages of patients being cared for as day stay. This introduces a number of concerns specific to those at the extremes of ages.

- Cataract and endoscopy procedures are performed in DSP facilities on elderly patients and some may have significant co-morbidities, that is, more complex ASA 3 and possibly ASA 4. It is important that such patients with complex, chronic diseases are optimised prior to their procedure.

- Many elderly patients now live alone. Some elderly patients have repeated minor surgery and the issue of ensuring overnight supervision by an adult is significant.

- Many children undergo procedures in day surgery facilities. Such procedures typically include ENT and dental and occur outside the teaching hospital environment. It should be noted that paediatric patients, in particular those having ENT, are more likely to be at risk of Obstructive Sleep Apnoea.

- The age of paediatric patients admitted to a DSP facility will vary depending on:

    - Whether they were born prematurely.
    - The geographic location of the DSP facility.
    - The paediatric experience of the anaesthetist and proceduralist.
    - The type of procedure planned (tonsillectomy is controversial).
    - The resources available (staff, equipment, etc.) at the DSP facility.

  Guidance on these issues is provided in *PG29(A) Guideline for the provision of anaesthesia care to children*.

- There is an absence of dedicated paediatric hospitals in Tasmania, ACT, Northern Territory and the South Island of New Zealand. These regions typically have dedicated paediatric wards and suitably trained paediatric healthcare practitioners. As most paediatric resources are concentrated in urban areas and are less common in rural/remote locations, the DDG considered accessibility to DSP facilities in the formulation of the accompanying document.

2.3 South Australian Coroner's Recommendations

In February 2014 the South Australian Coroner handed down recommendations after investigating the deaths of two morbidly obese patients in a small private facility.

Although the recommendations were not specifically about Day Case surgery/anaesthesia, they do highlight some important issues as detailed in the following dot points:

- Small private hospitals that have no on-site medical practitioners overnight, and no ICU backup should develop robust pre-admission processes in which higher risk patients are screened to ensure that they are not accepted for overnight admission unless they have been assessed as suitable for that facility by a medical specialist or anaesthetist, well in advance of the planned admission date.

- The process by which higher risk patients are referred for pre-anaesthesia assessment is streamlined and last minute changes to operating lists resulting in a different anaesthetist taking over immediately before surgery should be avoided.

- Awareness should be raised amongst medical practitioners and nurses about the inherent risks of post-operative respiratory depression occurring in obese patients in particular, who may or may not have a diagnosis of sleep apnoea and who are receiving, or have received, opioid analgesia.

- The Association of Anaesthetists of Great Britain and Ireland (AAGBI)/British Association of Day Surgery (BADS) 2011 document noted that even though the incidence of complications with procedures is increased with increasing BMI, obese patients do benefit from short duration anaesthesia/procedures and early mobilization.

- There should be adequate resources that allow safe manual handling and transport of obese patients within a DSP facility.

- While a diagnosis of OSA does not in itself exclude DSP, careful consideration is required in assessing suitability. The major risk factors for post-operative respiratory complications in these patients are severity of disease, co-morbid conditions and requirement for postoperative opioid analgesia.

- Allowances for variations in post-operative management may be required, in particular longer periods of observation in PACU.

2.4 Performance of Emergency/Acute Procedures in DSP Facilities

DSP usually involves elective or pre-planned procedures. Increasingly, it is noted that emergency procedures may occur in DSPs. Particular examples would be haematemesis, significant PR bleeding, retinal detachments where specific equipment and expert nursing staff are located at those facilities. Some patients may well be unstable ASA 3 or 4, in which case the issue of adequate post-anaesthesia care should be resolved before proceeding.

2.5 PG07(A) and Fasting Guideline

PG07(A) underwent a significant revision in 2016. Revision of PG15(POM) ensured that the two documents aligned. In particular, PG15(POM) under section 4.5.2 (and subsequent sub-sections) outlined the fasting guideline. This is now replaced by the appendix in PG07(A).

- Several Fellows expressed concerns regarding the currency of ANZCA's fasting guideline. This included concerns that the guideline referred to "healthy" patients when most often they should also apply to ASA 3 and 4 patients. There was also concern that prolonged fasting may have potentially deleterious effects.

- In 2011, both the American Society of Anesthesiologists and the European Society of Anaesthesiology (ESA) produced updated fasting guidelines based on consensus and

literature review. The ESA in particular emphasised the need to avoid prolonged fasting and indeed encourage intake of clear fluids up to two hours prior to anaesthesia.

- Specific mention has been made of “chewing gum”. The risks of allowing gum are related more to the presence of a foreign body rather than increased gastric content. The update from WebAIRS at the ANZCA ASM 2015 quoted a number of instances where chewing gum was noted as a cause of an adverse airway event.

- In view of the above, there was some discussion about creating a new policy document specifically on fasting. It was noted that there are an increasing number of professional documents and as they are not catalogued according to area of relevance. A decision was made to develop a fasting guideline as an appendix to PG07(A), as the pre-anaesthesia period of care is where instructions on fasting are given to patients. The intention is that this appendix can then be updated/amended as necessary without requiring a revision of the entire document.

- At this stage, consideration may be given to provision of clear carbohydrate rich fluids, specifically developed for perioperative use, up to two hours before an anaesthetic. Research into the proven benefit of such fluids is not yet conclusive.

- Bariatric surgery as a potential contributor to delayed gastric emptying/oesophageal motility disorder has also been included for specific consideration. There was discussion in particular about anecdotal and some European case reports regarding aspiration in patients with adjustable gastric bands.

2.6 Discharge Criteria

- The time frames of some of the discharge criteria such as vital signs were removed in line with “fast tracking” and ERAS policies. The American Society of Anesthesiologists have removed mandatory times from their criteria.

- Mobility or activity have been added.

- Guidance on use of opioids for obese patients/OSA has been included.

- More generally, emphasis is given to the need for careful consideration of prescription of opioids on discharge of all patients because of the now well recognised risks of inappropriate opioid use and diversion.

- There is considerable debate regarding the requirement and duration for a responsible person to be present with the patient in the post-operative period. The DDG was aware of variances in practice. The “Day Case and Short Stay Surgery” guidelines of the AAGBI quote “*Advice should be given not to drink alcohol, operate machinery or drive for 24 h after a general anaesthetic [45]. More importantly, patients should not drive until the pain or immobility from their operation allows them to control their car safely and perform an emergency stop*.”

- There is no evidence to support variation from the current requirement.

3. Summary

PG15(POM) revision was guided by advice from the document development group. The recommendations in the guideline are based on the application of the general principles in recognition of recent changes in practices and demands, as well as advances in technologies.

These same considerations apply to PG29(A), which should be reviewed at the earliest possible time.

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Faculty of Pain Medicine Board and regional committees
ANZCA Trainee Committee
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