

Apple and bananas when comparing recovery and patients satisfaction following day surgery

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Abstract

There is still no consensus around how to assess performance, recovery and patient satisfaction following day care anaesthesia and surgery. This

review considers metrics that might be used to assess these phases of day surgery care.

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We are all aiming at improving performance. Anaesthesia should include smooth induction safe and effective intra operative anaesthesia and for the day case a rapid and complete recovery with a minimum of pain and other side effects. Emergence is usually assessed by time from cessation of anaesthesia until response to command, e.g. eye opening, spontaneous breathing and thus extubation or removal of the LMA. The early intermediate recovery has been assessed by the Aldrete scale [1] but is today not uncommonly assessed by the possibility to fast track, defined as patient being sufficiently awake to by-pass the recovery area going directly to a "step-down" unit.

Criteria for facility discharge have been described by Chung as the Post Anaesthesia Discharge Scoring System already in 1993. This score suggested one hour of stable vital signs, no respiratory depression, Patient should also be oriented to person, place, time, able to dress and walk unaided, maintain orally administered fluids, and void. Patient was further to have minimal PONV and pain. Ead [2] made a comprehensive but effective review around discharge criteria in 2007 concluding that comparative studies on the reliability of the different discharge criteria in use are extremely limited. Discharge may be assessed by strict criteria but is not uncommonly merely defined when patient is able to stand and walk and with acceptable control of pain and nausea. The discharge is also dependent on logistics - how active the nurse team works to promote recovery and whether, despite criteria otherwise, still require the patient to be able to drink, eat or void. There is a recent paper from US [3] describing laparoscopic appendectomy direct discharge from the PACU. In a retrospective chart review of more than 800 cases, average time between end of anaesthesia and discharge was merely some 2 hours and 42 minutes. Satisfaction with early recovery is much dependent on staff interventions, recovery room personnel as well as surgeon. [4]

We are struggling to assess also the more protracted recovery. Follow-up and outcome in terms of major morbidity, re-admission and return-to hospital has shown ambulatory/day surgery reassuringly safe. Still, reasons for return to hospital as well contact with health care early following discharge are important quality criteria [5,6]. Majholm et al [7] presented the results from review of recorded data from 57,709 day surgery procedures performed in eight day surgery centres over a 3-year period in the Copenhagen area. The overall rate of return hospital visits was 1.21% caused

by a wide range of diagnoses. No deaths were definitely related to day surgery. The return hospital visits were due to haemorrhage/haematoma 0.50%, infection 0.44% and thromboembolic events 0.03%. The surgical procedures with the highest rate of complication were tonsillectomies 11.4%, surgically induced abortions 3.13% and inguinal hernia repairs 1.23%. Major morbidity was rare. Thus results much like the classical study by Warner et al [8]. We include increasing numbers of older, sicker and more fragile patients as well as more complex procedures as day cases, thus follow-up of hard outcome should be conducted on a more or less continuous basis. Follow-up of the more protracted recovery including patient satisfaction has also a huge interest in terms of quality of care, and should possibly be measures for open comparisons between units. Philips showed that a simple questionnaire do provide important feedback, describing frequent experience of minor symptoms for several days [9].

There are today several structured tools for the assessment of recovery:

- Quality of Recovery Score (QoR score) (Myles et al. 1999)
- Quality of Recovery Score 40 (QoR-40) (Myles et al. 2000)
- 24-Hour Functional Ability Questionnaire (24-h FAQ) (Hogue et al. 2000)
- Post discharge Surgical Recovery Scale (PSR) (Kleinbeck 2000)
- Quality of Life After Abdominal Surgery (Urbach et al. 2006)
- Functional Recovery Index (FRI) (Wong et al. 2009)
- Postoperative Recovery Profile (PRP) (Allvin et al. 2009, Allvin et al. 2011)
- Postoperative Quality Recovery Scale (PQRS) (Royse et al. 2010)
- Surgical Recovery Scale (SRS) (Paddison et al. 2011)
- Quality of Recovery Score 15 (QoR-15) (Stark et al. 2013)

Chanthong et al [10] published in 2007 a review of available recovery assessment tools concluding there is still no valid or reliable questionnaire for measuring patient satisfaction in ambulatory anaesthesia. Further study should be conducted to develop standardized instruments to measure this outcome. Herrera et al [11]

conducted a similar review assessing recovery assessment scores and commented, only one instrument, 40-item Quality of recovery score, fulfilled all eight criteria, however this instrument was not specifically designed for ambulatory surgery and anaesthesia. Sällila et al [12] conducted a similar review around assessment of patients' satisfaction following outpatient care. Thirty-five articles were included. The quality of care was measured using both quantitative and qualitative methods. Patient satisfaction is widely used as one indicator among others in assessing the quality of outpatient care. However, there is no single, universally accepted method for measuring this.

The Postoperative Quality of Recovery scale (PQRS) was developed and validated in 2010 [13]. Bowyer et al [14] published a review around assessment of recovery in 2014. They commented that the PQRS assesses recovery in multiple domains, including physiological, nociceptive, emotive, activities of daily living, cognition and patient satisfaction. It addresses recovery over time and compares individual patient data with base line, thus describing resumption of capacities and is an acceptable method for identification of individual patient recovery. The PQRS include an overall patient perspective; patients rate of their recovery with respect to their activities of daily living, clarity of thought, ability to work, and satisfaction with anaesthetic care. This is reported on a 5-point scale in the same manner as nociceptive. Return to work is only applied to those who currently work and intend to return after surgery. This domain differs from the others because there are no baseline measurements. It is complimentary to the other "recovery domains" but is not included in analysis of return to baseline. There is obvious room for further studies in order to show whether the PQRS could be a feasible and effective tool for assessment of recovery and patients satisfaction also following day surgery. The questions have been tested and found valid for phone follow-up in healthy volunteers [15]. The Quality of Recovery score 15 items is a short version of the QoR40 recently tested and found accurate and effective [16]. The QoR tool provides a sum result that can be followed over time making comparisons between groups possible.

There is still no consensus around how to assess performance, recovery and patient satisfaction following day care surgery/ anaesthesia. Return to hospital and or need for medical consultations in outpatient clinics, or general practitioner caused by surgery/ anaesthesia is an important quality indicator. There is a need for generally accepted simple and easy to use tool for follow-up assessment in order to be able to compare performance between centres, possibly providing open comparisons. There are different initiatives such as the SAMBA Clinical Outcomes Registry SCOR [17]. The American Society of Anesthesiologists (ASA) and its partner, Anesthesia Quality Institute (AQI), have likewise developed a physician quality reporting system, the National Anaesthesia Clinical Outcomes Registry (NACOR) [18]. A national initiative has also been taken in Denmark following thoracic surgery [19]. Rapid and high quality resumption of activity of daily living, being able to go back to work perform everyday tasks have many implications. Effective benchmarking could possibly improve both patient quality of care and utilisation of health resources. Open comparisons of defined quality indicators should allow for benchmarking and subsequent improvements of care.

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