Criteria for the safe discharge of patients from the recovery room

AUTHOR Helen Reed, RGN, BA, is staff nurse, Freeman Hospital, Newcastle upon Tyne.

Guidelines need to be in place to help nurses in the recovery room make appropriate and safe decisions when discharging patients to a surgical ward. Consciousness level, respiration, circulation, pain control, homeostasis and wound care should all be considered. Criteria from the Freeman Hospital provides practical guidance.

Guidelines from the Association of Anaesthetists of Great Britain and Ireland state that criteria need to be in place in all recovery units to ensure the safe discharge of patients to surgical wards (AAGBI, 2002). They must provide practical guidance and advice to all staff responsible for the nursing care of patients in the immediate postoperative period, with the aim of ensuring a consistently high standard of care. This reflects one of the aims of The NHS Plan (Department of Health, 2000).

Tailor-made guidelines

The Freeman Hospital has developed guidelines to assist all nursing staff working in the recovery area who are responsible for the care of patients in the immediate postoperative period, particularly those staff who are less experienced.

The development of the document was driven by the decision to provide written information that staff could use both in recovery and in theatre, to ensure consistency of care. The guidelines have an education function for new and junior recovery nurses, and also serve as an agreed set of criteria that experienced nurses can apply to their routine practice.

Two reference sources formed the basis for developing the guidelines (Hatfield and Tronson, 2001; Mallet and Bailey, 1996). A more extensive review of the literature will be carried out next year, with the goal of ensuring that the guidelines are continually improved and that they remain both current and valid.

The guidelines incorporate headings taken from the recovery chart used to document a patient’s progress from operating theatre to ward. Out of hours, patients are ‘recovered’ in theatre, so a quick-reference laminated version of the guidelines is available in theatre. This has the advantage that necessary equipment and drugs are at hand and staff are familiar with the location of these items, reducing the risks to the patient.

The quick-reference format (Boxes 1–5) has been readily adopted and is similar in style to guidance produced by the Scottish Intercollegiate Guidelines Network (SIGN) (2003). Both the full text and quick-reference versions of our guidelines should soon be available on the trust’s intranet database, as well as in printed format throughout the theatre department.

Discharge criteria guidelines

These guidelines are to be used for patients being discharged from the recovery room to a surgical ward, but not from an intensive-care or high-dependency unit. The nurse responsible for care should make the following assessments before discharge.

**BOX 1. QUICK REFERENCE GUIDELINES**

**PATIENT’S CONSCIOUSNESS LEVEL**

- Easily roused
- Moving all limbs on request
- Able to cough

Consciousness level

Patients should respond to verbal stimulation, be able to answer questions appropriately and to be oriented to their surroundings. They should be able to move all four limbs when asked to do so, providing this was the case preoperatively. They should also be able to cough when asked and be easily roused by voice alone.

Respiration

The patient should have an adequate gas exchange. This is assessed clinically in most of the patients who are expected to return to a surgical ward. However, some may have an arterial line that can be used for blood gas sampling if there is any cause for concern. Before discharge it must be established that the patient can maintain his or her own airway and can cough and breathe deeply.

The patient should have a respiratory rate of 10–20 breaths per minute (in adults), with no increased work in breathing. The patient’s saturated partial pressure of oxygen (SpO₂) should be more than 95 per cent on air, unless there is lung disease. It should be noted that baseline oxygen saturation levels are rarely assessed preoperatively. Professional judgement is required in individual cases, but if there is any doubt medical advice should be sought. Patients with an epidural or patient-controlled analgesia may require supplementary oxygen and must return to the ward with this.
Nausea can be difficult to control. It is important to determine the location of any pain nature of the pain: is it sharp, dull, stabbing, continuous or spasmodic? Simple pain assessment tools are a quick and easy way to assess pain. It is also important to assess, document and treat any side-effects, such as sedation, respiratory depression and nausea.

Multimodal analgesia is commonly used intraoperatively and is important for adequate pain control.

The patient should be able to breathe deeply and cough without experiencing severe pain and should be prescribed adequate and appropriate analgesia before discharge to the ward. Check for any drug sensitivities or allergies and any contraindications.

All patients with an epidural should be able to maintain a systolic blood pressure of 100mmHg. All patients should have a respiratory rate of 10 breaths per minute or more and, if sedated, they should be easily roused. The epidural sensory level should be at or below T4 and the spinal sensory level at T10. Patients with an epidural should not be discharged with a complete motor block. The anaesthetist should be informed if the patient cannot move his or her feet. Patients on opiate therapy should return to the ward with supplemental oxygen.

**REFERENCES**


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**BOX 2. QUICK REFERENCE GUIDELINES**

**RESPIRATION**

- Adequate gas exchange
- Respiratory rate: 10–20 breaths per minute (in adults)
- SpO₂ > 95 per cent on room air
- Additional oxygen, if prescribed or if receiving epidural or patient-controlled analgesia

**CIRCULATION**

- Adequate perfusion of vital organs (assessed clinically using the parameters and observations below)
- Blood pressure within 10–20 per cent of the patient’s preoperative baseline
- Heart rate 60–90 beats per minute (in adults)
- Urine output 0.5–1.0ml/kg of bodyweight/hr

**BOX 3. QUICK REFERENCE GUIDELINES**

**PAIN CONTROL**

- Ascertain location of pain
- Use pain assessment tools to assess pain intensity
- Use multimodal analgesia
- Blood pressure > 100mmHg
- Respiratory rate > 10 breaths per minute
- Epidural sensory level ≤ T4
- Motor block (epidural) regressing: able to move feet
- Spinal sensory level at T10
- Adequate and appropriate analgesia prescribed
- Pain controlled to a level acceptable to the patient
- Check drug sensitivities, allergies and contraindications

**REFERENCES**


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**Circulation**

There should be adequate perfusion of all vital organs. In most cases this is assessed by measuring the patient’s blood pressure, urine output, monitoring his or her heart rate and taking an electrocardiogram and, clinically, by observing skin colour and temperature, particularly of the hands and feet.

Some patients will return to the ward with a central venous pressure (CVP) line, which will help in assessing their circulatory status. It is important to check with the anaesthetist whether the CVP line should remain in situ before the patient is transferred to the ward. Arterial lines should be removed in all patients before discharge to a surgical ward.

The patient’s blood pressure should be within 10–20 per cent of his or her preoperative baseline reading. It is important to be wary of one-off readings, and the patient’s medical notes should be checked for previous blood pressure measurements.

Heart rate should be 60–90 beats per minute (in adults) and urine output 0.5–1.0ml per kilogram of bodyweight per hour. If any measurements are outside these parameters, it will be necessary to seek medical advice. The patient’s skin should be warm and dry, not mottled, pale, clammy or cool.

**Pain control**

As far as possible pain should be controlled to a level that ensures the patient’s comfort while maintaining sedation at a level that allows the patient to respond to verbal stimulation alone.

It is important to determine the location of any pain because patients can complain of pain that is not related to the operation site or the procedure. In addition, the patient should be questioned about the intensity and...
Fluid balance
Fluid loss and replacement should be accurately documented on the recovery chart. The anaesthetist should give precise instructions for fluid replacement, but this may need to be reviewed in recovery if there is continued bleeding. A patient who has a significant bleed should not return to a surgical ward without further medical assessment by both the surgeon and the anaesthetist.

Bleeding after transurethral resection of the prostate is difficult to assess. If the irrigation fluid contains visible signs of blood or needs a fast rate to keep the output ‘pink’ and consequently requires large volumes of irrigation fluid the nurse responsible for the patient should seek advice from medical staff.

Using a mobile haematology analyser is a quick way of determining a patient’s haemoglobin level, which will help in the management of fluid replacement. However, the sample should ideally be taken directly from a vein. Blood is given to replace red cells and not volume. Hypovolaemia caused by blood loss is treated with crystalloid and colloid fluids.

Heat conservation
The patient can often be cold on admission to the recovery room. The recovery nurse should note both the peripheral temperature and the core temperature, which is measured with a tympanic monitor. Patients who are cold should be warmed.

Some patients who appear to be shivering may have an elevated temperature that could indicate the presence of infection. All patients should have their temperature checked. The normal range for core temperature is 36.5–37.2°C.

Wound site, drains and dressings
Drains should be patent and, if appropriate, vacuum sealed. Wound dressings should be intact and dry. If the cause of any bleeding from the wound or into the drains is uncertain, the recovery nurse must seek advice. Pulses must be checked in vascular and orthopaedic patients.

Wound drains should be marked with the time the patient was released from theatre. The volume of blood that has been removed by the drain should be replaced within five hours.

Chest drains are a closed system and any opening of the thoracic cavity (as occurs in some spinal surgery that may involve a thoracotomy) will result in loss of negative pressure, causing the lungs to collapse.

Chest drains may have been inserted to allow the lung to re-expand. The underwater seal should not be breached – the tube must be submerged to a depth of around 3cm (British Thoracic Society, 2003). The bottle should be secure and below the level of the tube entry site; drainage will be facilitated by gravity.

The tubing should not be clamped unless the drain needs to be moved above the level of entry into the chest or the drainage tube becomes separated from the bottle, thereby allowing air to enter the pleural cavity. It is vital to ensure that there is respiratory swing in fluid in the chest tube, to confirm both tube patency and the correct positioning of the tube in the pleural cavity.

Documentation
It is crucial that all documents are promptly completed accurately and signed.

Conclusion
Discharge from the recovery room to a surgical ward entails consideration of a range of criteria. Guidelines can ensure a consistently high standard of care for all patients, reducing risk and putting patients’ safety and comfort at the centre of nursing practice.

BOX 4. QUICK REFERENCE GUIDELINES

<table>
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<tr>
<th>HOMEOSTASIS</th>
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<tr>
<td>NAUSEA AND VOMITING</td>
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<tr>
<td>● Use several antiemetics if any single one is not effective</td>
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<tr>
<td>● Consider fluid replacement</td>
</tr>
<tr>
<td>● Check blood pressure</td>
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<tr>
<td>● Consider antiemetic therapy</td>
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| INTRAVENOUS THERAPY / FLUID BALANCE |
| ● Fluid loss and replacement should be documented accurately |
| ● Further surgical or anaesthetic assessment must be carried out if the patient has a bleed in recovery |
| ● Check haemoglobin level |
| ● Blood given, as prescribed, to replace red cells or correct anaemia |

| HEAT CONSERVATION |
| ● Measure temperature |
| ● Use warming devices on cold patients |
| ● Shivering may be indicative of infection |

BOX 5. QUICK REFERENCE GUIDELINES

| WOUND SITES, DRAINS AND DRESSINGS |
| ● Drains are patent and, if appropriate, vacuum sealed |
| ● Dressings are dry and intact |
| ● Check for pulse in vascular and orthopaedic patients |
| ● Wound drains are marked with release time. Volume of blood drained is replaced within five hours |
| ● Chest drains are secured, have an underwater seal and hang below the level of the drainage tube. Tubes should not be clamped unless they are disconnected or moved higher than the level of chest entry. Look for fluid in the drainage tube |