powder during operations and the seemingly increasing use of powder-free gloves in operating theatres in the UK, the table shows the present level of usage of powdered gloves for operative procedures worldwide.

Geographic region	*Percentage use of starch powdered gloves*
United Kingdom	15
USA	86
Germany, Austria, Switzerland	75
France	90
Italy, Spain	85
Sweden, Norway, Finland, Denmark	51
Belgium, Luxemburg, Netherlands	74
South Africa	90
Asia Pacific	95

These data were supplied by Regent Medical and represent a combination of internal data and independently commissioned market research carried out using in-depth interviews with suppliers, purchasers and professional bodies. It highlights the magnitude of the problem, particularly outside the United Kingdom, which needs to be addressed if the use of powdered gloves is to be discontinued.

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References

1 Ellis H. Pathological changes produced by surgical dusting powders. *Ann R Coll Surg Engl* 1994; **76**: 5–8.
2 Corless DJ, Holland J, Wastell C. Effect of starch-containing glove powder on wound healing in the rat. *Br J Surg* 1995; **82**: 368–70.

Length of postoperative hospital stay after transurethral resection of the prostate

We read the article by Mr Kirollos (*Annals*, July 1997, vol 79 p284) with great interest, having carried out a departmental audit of the factors affecting the inpatient stay for elective transurethral resection of the prostate. We agree with the author that social reasons for delayed discharge are the largest avoidable factors in protracted hospital stay. The patient's age and general medical condition, as assessed by the American Society of Anesthesiologists (ASA) grade, were associated with delayed discharge, owing to social reasons. A total of 132 patients was studied, of whom 31 (23%) were ASA grade 1, 60 (45%) were ASA grade 2 and 41 (31%) were ASA grades 3 and 4. The median duration of stay was 4 days in ASA group 1, 5 days in ASA group 2 and 6 days in ASA groups 3 and 4. The median duration of postoperative catheterisation was 2 days in all three groups. The main reason for longer stay in patients who were categorised as ASA grades 3 and 4 was social rather than medical. On average 2 bed days per patient were lost because of social reasons in patients categorised as ASA groups 3 and 4, 0.5 days in ASA group 2 and none in ASA group 1. An assessment of social conditions is a vital part of the preadmission clerking, so that social problems can be anticipated and necessary measures instigated.

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Perioperative blood transfusion: a plea for guidelines

Mr Sudhindran's paper (*Annals*, July 1997, vol 79, p299) raised some interesting and imporant issues, but many were not argued to their logical conclusion. Autologous transfusion is arguably preferable to allogenic transfusion, but expensive equipment such as 'cell savers' are not a prerequisite to enable the transfusion of a patient's own blood and, indeed, in some circumstances may be detrimental adding substantially to the cost of a procedure *(1,2)*. It should also be highlighted that from a purely financial perspective the use of a 'cell saver' is only beneficial if more than two units of blood need to be transfused. Predonation of blood before major surgery, possibly in existing preclerking clinics, is a cheap and safe alternative to allogenic transfusion but may not confer as many physiological benefits (oxygen content, 2,3 DPG, clotting factors and platelets) as acute preoperative normovolaemic haemodilution which is normally well tolerated *(3)*.

The cost of using banked blood is an important issue but, in our trust, most of the cost is incurred in the cross-matching of blood and there is no refund if blood is not used. For this reason, it would have been appropriate to include assessment of the practice of ordering cross-matched blood, rather than solely its use.

Guidelines, it must be remembered, are just that and nothing more. While there are arguments for practising medicine by protocol until hard evidence is presented and more basic research is performed on oxygen-carrying capacity, tissue oxygenation and normovolaemic anaemia during and after surgical stress, any guidelines should be interpreted in conjunction with clinical common sense.

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References

1 Huber TS, Carlton LC, Irwin PB *et al.* Intraoperative autologous transfusion during elective infrarenal aortic reconstruction. *J Surg Res* 1997; **67**: 14–20.
2 Goodnough LT, Monk TG, Sicard G *et al.* Intraoperative salvage in patients undergoing elective abdominal aortic aneurysm repair: an analysis of cost and benefit. *J Vasc Surg* 1996; **24**: 213–18.
3 Roberts WA, Kirkley SA, Newby M. A cost comparison of allogeneic and preoperatively or intraoperatively donated autologous blood. *Anesth Analg* 1996; **83**: 129–33.

This is an interesting article (*Annals*, July 1997, vol 79, p299) and I agree with the author that it is high time UK guidelines are brought out regarding indications for perioperative blood transfusion. However, the American College of Physicians (ACP) guidelines are for transfusion for transient anaemia from acute blood loss, without considering the surgical implications. Therefore, the 22% 'inappropriate' transfusions in the study for preoperative and persistent postoperative anaemia should not be judged by the ACP criteria. That leaves only 31% inappropriate transfusions, which is not bad considering no guidelines currently exist. The ACP guidelines do not allow for anticipatory transfusions, but one should remember that these may be esential to ensure an optimum outcome, especially in elective surgery. It is standard teaching that anaemia is detrimental to wound healing and integrity of anastomoses. In this respect it would not be wise to operate electively on an anaemic patient *(1)*, especially in the presence of other risk factors like malignancy, jaundice and malnutrition. In this situation it would be unsafe to perform a low anterior resection or a pancreaticojejunostomy, though it may be acceptable to do a total hip replacement.

The anaesthetist is the best person to judge the intraoperative haemodynamic status and should not be restricted by strict guidelines, and Sudhindran reported that adequate reasons for transfusion were not found when examining anaesthetic records. Audet *et al. (2)* have shown the limitations of retrospective medical record reviews in this situation. However, it would have been interesting to know if the staff at Memorial Hospital adhered to any local protocol for blood transfusion. In conclusion, I suppport the need for a protocol, but this should not be strict ACP guidelines, but a comprehensive and flexible one, catering to each subspecialty *(3)*.

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References

1 Carson LJ *et al.* Effect of anaemia and cardiovascular disease on surgical mortality and morbidity. *Lancet* 1996; **348**(9034): 1055–60.
2 Audet AM, Goodnough LT, Parvin CA. Evaluating the appropriateness of red blood transfusions: the limitations of retrospective medical record reviews. *Int J Qual Health Care* 1996; **8**: 41–9.
3 Goodnough LT, Despotis GJ. Establishing practice guidelines for surgical blood management. *Am J Surg* 1995; **170**(6A Suppl): 16S–20S.

Randomised trial of subcuticular suture *versus* metal clips for wound closure after thyroid and parathyroid surgery

We read Selvadurai *et al*'s paper on closure of the skin after thyroid and parathyroid surgery with interest (*Annals*, July 1997, vol 79, p303).

We would like to recommend a modifcation of the subcuticular closure technique which reduces discomfort felt by the patient on suture removal. Most of the pain felt during suture removal is due to puckering of the wound as the suture is pulled out, caused by drag between the suture and the wound. Reduction of the length of wound through which the suture is pulled, reduces the amount of puckering and thus reduces pain. We reduce the sutured length to two halves by bringing the suture through the skin surface at approximately the midpoint of the wound and crossing the wound line, as a conventional suture would, before recommencing the subcuticular suture. For removal the suture is divided at its midpoint and removed in two halves from each end. For longer wounds the suture may be exteriorised more than once and removed as a series of short segments.

In our unit, Michel clips are not readily available, disposable skin clip applicators (Auto Suture® Royal 35W, £4.35) and extractors (Richard-Allan Disposable Staple Extractor®, £4.00) being used instead. Therefore in the cost comparison, subcuticular suture closure is the cheaper technique. The use of 3/0 nylon stay sutures by Selvadurai *et al.* to aid accurate clip placement further increases the cost of this technique.

These factors thus favour subcuticular suture closure of wounds after thyroid and parathyroid surgery.

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The Didcott dilator

Mr C C Didcott is correct in his claim regarding the expandable metal dilator (*Annals*, July 1997, vol 79, p307). I first saw and heard him describe it for oesophageal carcinoma at least 25 years ago and I believe that while he may have lost out in the patent registration race, all current hollow viscus expandable metal dilators are based upon or are variations of his original design, whether used in the oesopahagus, rectum, arteries, biliary tree or elsewhere. The original concept and design were brilliant and inspired and it is right and proper that Mr Didcott should continue to be recognised by calling these devices Didcott dilators or stents.

Regarding the paper on subcuticular wound closure *versus* metal clips after thyroid and parathyroid surgery (*Annals*, July 1997, vol 79, p303) Michel clips, by their design and method of application, cause discomfort and pain, and especially so during removal. I do not believe that there is any place in modern surgery for their use.