and I believe we should be much readier to make proleptic appointments, up to a year before an anticipated vacancy occurs. This still allows competitive appointment—which has done much to maintain standards in the NHS—to be retained and allows the hospital the time to make a thoughtful choice after the issue of meaningful advertisements. For the chosen candidate this free period offers the chance to plan a personal educational programme to suit a specific situation, which can include the study of technological advances that seem particularly appropriate.

However wide or restricted the field in which a special interest is pursued it is worth remembering the comment quoted by Griffen—"safety is not predicted on frequency of performance of an operation, but appears to be directly related to the adequacy of initial training."³

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- 1 Calne R. OK surgical technology. *BMJ* 1990;301:1479-80. (22-29 December.)
- 2 Fulton JF. *Harvey Cushing: a biography*. Oxford: Blackwell Scientific, 1946:609.
- 3 Griffen WO. Specialization within general surgery. *Ann Surg* 1987;122:637-8.

SIR,—It is reassuring to read that those involved in academic surgery are considering the implications of changes in surgical practice in relation to training.¹ However, it is disappointing to find from one so eminent such a pragmatic view. Perhaps technicians are the answer to the technical problem, but who is going to train the technicians—and retrain them when, for instance, technology has outgrown the specific training?

To look on endoscopic or minimally invasive surgery as a lesser form of surgery undervalues the complexity of the techniques, the rapidity of change, and most of all the decision making involved. For example, laparoscopic cholecystectomy is not the last development: there is now available a rotary lithotrite that can be passed into the gall bladder under local anaesthesia to emulsify the stones, allowing the liquid stones to be aspirated. This could reduce the requirement for laparoscopic cholecystectomy. The clinical decision related to gall stones will be to determine the preferred minimally invasive procedure for the patient, and for this a group offering all variants of treatment is required; it will have little place for a technician who is able to carry out but one procedure, which may be overtaken by other developments.

Surely the way forward is to continue to train surgeons more efficiently to an all round high standard and to provide resources to develop new techniques, so that interested and skilled individuals can be financed to develop a special interest in these OK techniques. Within a short time it will be apparent whether the technique requires a major policy change or whether by training a few interested surgeons (or physicians or interventional radiologists) the workload can be resolved. The rapidity of involvement by surgeons in minimally invasive surgery suggests that there is no shortage of fully accredited surgeons willing to exchange the scalpel for the video camera or, as a result of the excellent basic training they have received, any other advance that technology presents.

The lack at present is finance, with no resources being provided from a cumbersome academic and administrative bureaucracy early in the development of the technology. As well there is a total lack of support from the instrument suppliers who have grown fat on a steady supply of overpriced equipment to a centralised service.

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Hypothermia

SIR,—Professor W R Keatinge discussed the management of hypothermia and made a plea that some patients deserve heroic measures, including extracorporeal rewarming of the blood.¹ It must be understood that these patients will require a cardiopulmonary bypass, a technique not usually available at district general hospitals. When it is impossible to arrange a rapid transfer to an appropriate facility peritoneal dialysis could be used as an alternative method of treating hypothermia.² This not only will raise the core temperature by rewarming the blood but should also normalise plasma potassium concentrations. The technique of peritoneal dialysis is simple and can easily be performed at the bedside in any intensive therapy unit.

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- 1 Keatinge WR. Hypothermia: dead or alive? *BMJ* 1991;302:3-4. (5 January.)
- 2 Reuler JB, Parker RA. Peritoneal dialysis in management of hypothermia. *JAMA* 1978;240:2289-90.

SIR,—Professor W R Keatinge's article on hypothermia in healthy people¹ was a timely reminder to us all. A point that might have been emphasised further is that hypothermia victims should not be diagnosed dead until the core temperature has been raised to normal. Laufman described a patient with a rectal temperature of 18°C one hour after admission who survived.²

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- 1 Keatinge WR. Hypothermia: dead or alive? *BMJ* 1991;302:3-4. (5 January.)
- 2 Laufman H. Profound accidental hypothermia. *JAMA* 1951;147:1201-12.

SIR,—Professor W R Keatinge has written on the dangers of hypothermia.¹ Certain areas of management of hypothermia need to be clarified, in particular the use of warm baths and the need for intravenous infusions.

In mildly hypothermic patients with no underlying illness it may be safe to manage them without intravenous infusions. Warm baths may be appropriate in the care of a fit person who has rapidly become hypothermic owing to immersion and has been quickly rescued,² but it is hazardous to apply these methods of management to most hypothermic patients who present to an urban hospital.³

Any patient who develops moderate or severe hypothermia (temperature <32°C) over a few hours or more will become hypovolaemic at least partly owing to diuresis induced by cold. The intense peripheral vasoconstriction that accompanies hypothermia maintains adequate central blood pressure, but once external heat is applied there is vasodilatation and a mobilisation of intensely cold peripheral blood to the central circulation. This leads to the "after drop phenomenon" when core temperature falls at the start of rewarming.⁴ This drop in temperature, combined with hypotension exacerbated by vasodilatation, almost certainly contributes to the high mortality reported in series where active external rewarming has been used.⁵

There have been many methods advocated for rewarming the patient with moderate to severe hypothermia, including gastric lavage, peritoneal lavage,⁶ and pleural lavage.⁷ Whatever method is used it should at the very least include adequate

oxygenation, with warm humidified oxygen; warm intravenous fluids; and careful monitoring of blood pressure, central venous pressure, and urine output.⁸ A recent report from the United States of such a regimen with intensive monitoring and careful fluid replacement showed recovery in all patients, some of whom had core temperatures below 26°C.⁹

It would seem that this is the simplest and safest approach for patients with severe hypothermia and more invasive methods should be reserved for those patients who either fail to increase their core temperatures at an adequate rate ($\geq 1^\circ\text{C/h}$)⁸ or have a cardiac arrest.

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- 1 Keatinge WR. Hypothermia: dead or alive? *BMJ* 1991;302:3-4. (5 January.)
- 2 Ledingham JMcA, Mowe JG. Treatment of accidental hypothermia: a prospective clinical study. *BMJ* 1980;280:1102-5.
- 3 Milder JW, Danzl DF, Thomas DM. Urban accidental hypothermia: 135 cases. *Ann Emerg Med* 1990;9:456-61.
- 4 Coniam SW. Accidental hypothermia. *Anaesthesia* 1979;34:250-6.
- 5 Brunette DD, Sterner S, Ruiz E. Rewarming in severe hypothermia. *Ann Emerg Med* 1990;19:1076.
- 6 Osborne L, El-Din ASK, Smith JE. Survival after prolonged cardiac arrest and accidental hypothermia. *BMJ* 1984;289:881-2.
- 7 Otto RJ, Metzler MH. Rewarming from experimental hypothermia: comparison of heating aerosol inhalation, peritoneal lavage and pleural lavage. *Crit Care Med* 1988;16:869-75.
- 8 Zell SC, Kurtz JK. Severe exposure hypothermia: a resuscitation protocol. *Ann Emerg Med* 1985;14:339-45.
- 9 Shields CP, Sixsmith DM. Treatment of moderate to severe hypothermia in an urban setting. *Ann Emerg Med* 1990;19:1093-7.

HIV infection and foreign travel

SIR,—We agree with Drs Dermot Maher and Barbara Crosse that travel agents should be encouraged to give advice about the ways of minimising the risks of acquiring a sexually transmitted infection while abroad.¹

In 1990, 538 reports of acute hepatitis B virus infection were received by the Communicable Disease Surveillance Centre. Travel abroad in the preceding six months was recorded in 101 of the 314 reports in which information about travel was given. Travel to Bangkok or Thailand was recorded in six, and in four of these sexual exposure during the visit was mentioned.

The risk of acquiring hepatitis B virus abroad will, like that of acquiring HIV infection, be related to the prevalence of the virus in the local population and to the size and accessibility of the local sex industry. Travel agents may be reluctant to discuss safer sexual holiday practices with prospective clients, but provision of such advice could reduce exposure to hepatitis B virus and penicillinase producing gonococci in addition to HIV. Conversely, care of patients who present with acute hepatitis B virus infection after exposure abroad should include counselling and testing for HIV infection.

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- 1 Maher D, Crosse B. HIV infection and foreign travel. *BMJ* 1990;301:1334-5. (8 December.)

First line treatment in hypertension

SIR,—In their letters in response to Professor J D Swales's editorial¹ Drs Michael D Feher and Ariel Lant and Dr Neil Poulter and colleagues suggest