\$24 100.¹ The difference between this figure and the estimate quoted in my editorial is attributable to the inclusion of additional charges for extended acute hospital care and different assumptions about the life expectancy of survivors (5 v 10 years). Even so, the cost of HA-1A still compares favourably with that of many other widely accepted medical interventions.

I find it difficult to reconcile the results of these careful calculations with Sheppard and Kelly's unusual methods of estimating cost effectiveness. Part of the difficulty is their surprisingly low local mortality for Gram negative bacteraemia. As their data have not been published they are difficult to interpret, but the authors have probably included patients who would not fulfil clinical criteria for the diagnosis of sepsis or septic shock and therefore would not qualify to receive HA-1A. Similarly, it is impossible to judge the validity of their assumptions regarding the proportion of their patients with severe underlying illness in whom HA-1A might be inappropriate.

Although current evidence suggests that HA-1A is likely to be cost effective (provided it is not used indiscriminately), I agree with Sheppard and Kelly that confirmatory studies are required and the drug's mechanism of action needs to be clarified to establish beyond doubt that it has a place in sepsis.

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Detecting congenital heart disease prenatally

SIR,—We have a long standing interest in research on the usefulness of symptoms, signs, and investigations. Although not radiologists, we are concerned about the presentation of data in Reuwen Achiron and colleagues' paper on using extended fetal echocardiography to detect cardiac malformations in low risk pregnancies.¹

The authors state that the extended fetal heart examination was completed in 4812 cases, but in the description of the diagnostic accuracy of the test (table III) the specificity is calculated as 5323/5324. Unsuccessful attempts to perform the extended examination seem to have been treated as having yielded true negative results. This seems to be a dangerous assumption (although it does not alter the specificity or predictive value greatly in this case). Perhaps editors should require authors to publish their original 2x2 tables to avoid any confusion.

The authors have clearly acquired great skill at interpreting ultrasonographic images. Before they so strongly recommend using this test, however, they should consider that others may not be as skilled. Sackett *et al* refer specifically to ultrasonography as being a test in which the quality of the results may vary greatly,² and they show the effects of a small change in sensitivity or specificity on predictive value at low prevalences.

Before concluding that a test should be incorporated into routine procedure investigators should consider its resource effectiveness. This may require a formal cost-benefit analysis. In this case, seemingly, an additional 1310 hours of testing was required to detect 18 cases of congenital heart disease—that is, 73 hours a case. The authors' recommendations may therefore need further

scrutiny, especially as a positive finding does not always alter management.

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- 1 Achiron R, Glaser J, Gelernter I, Hegesh J, Yagel S. Extended fetal echocardiographic examination for detecting cardiac malformations in low risk pregnancies. *BMJ* 1992;304:671-4. (14 March.)
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SIR,—In Reuwen Achiron and colleagues' study of using extended fetal echocardiography to screen prenatally for congenital heart disease a positive result seemed generally either to result in termination of the pregnancy or to determine the nature and site of delivery.¹ At least one specific feature of the treatment of certain forms of congenital heart disease in infants might be improved by prenatal diagnosis.

In several forms of congenital heart disease the neonatal circulation depends on persistent patency of the ductus arteriosus, either to sustain systemic or pulmonary blood flow or to permit adequate systemic venous mixing. Closure of the ductus in neonates with these diseases may be lethal. These conditions are treated with intravenous prostaglandin E₁, which is a potent dilator of the ductus. It often dramatically improves the clinical condition of affected infants, allowing the defect to be investigated and elective or semielective surgery planned.²

E series prostaglandins dilate the ductus by a direct relaxant effect on ductal smooth muscle³ and by inhibiting its response to vasoconstrictors such as noradrenaline.⁴ Constriction of the vessel in neonates desensitises the vessel to the dilator effect of prostaglandin E₂.⁵ In infants with pulmonary atresia the cross sectional area of the vessel during infusion of prostaglandin E₁ is directly proportional to that before infusion. It follows, therefore, that in infants with these defects the earlier in neonatal life that prostaglandin E₁ is started the more effective it will be.

Prenatal diagnosis of congenital heart disease in which the neonatal circulation depends on the patency of the duct would allow prostaglandin E₁ to be given immediately after birth, before loss of endogenous circulating prostaglandin E₂ and subsequent constriction of the vessel. This should optimise ductal patency in these neonates.

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Melanoma in people aged 65 and over

SIR,—Pamela M McHenry and colleagues report a disturbingly high rate of thick melanomas with a poor prognosis in the elderly Scottish population.¹ They suggest that health education has failed to

reach this group. We have tried to identify other factors that might be responsible for the late presentation of this potentially curable cancer.

We examined the records of patients who had presented to St George's Hospital with thick primary cutaneous melanoma since 1986. Thick lesions were defined as lesions with a Breslow thickness >3.5 mm.² We identified 24 patients over the six years, of whom 14 had died (10 male, 14 female; age range 22-79, median 61.5). This compares with 168 patients with invasive melanoma less than 3.5 mm thick (age range 12-85, median 46; Mann-Whitney U test, p<0.02).

Circumstances that could have accounted for a delay in diagnosis were noted. Nineteen lesions were nodular³; six were amelanotic; and 11 occurred in or on poorly visualised sites—the back (six), buttock (one), axilla (one), sole (one), and vulva (one), with one amelanotic lesion developing within a tattoo. Four patients had clearly documented evidence of a phobia about doctors or hospitals, one of whom had attempted suicide. Two had chronic schizophrenia, one suffered from agoraphobia, and one misused alcohol. One patient was blind, and another was Greek with no understanding of English. Although some patients had a combination of these factors, only one had none of them.

Therefore, many unavoidable factors could have accounted for delayed referral, including the tumours being amelanotic or occurring at sites that were hard to see, psychiatric illness or phobia about hospitals, and visual or language problems. Most lesions were nodular, perhaps being intrinsically aggressive, rapidly growing lesions.³

Patients in our series tended to be elderly. Other workers have shown a higher proportion of thick melanoma in elderly people.^{1,4,5} Biological factors, such as atrophy or impaired immune function associated with aging skin, may be relevant. We think, however, that delay in presentation is more likely to be due to some of the clinical reasons outlined. Despite the promotion of rapid screening clinics many patients may present too late. Nevertheless, our results support the conclusions of McHenry and colleagues. A specific educational programme directed towards the elderly population is required.

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Changing lifelong habits of elderly people

SIR,—Keith Beard and colleagues question whether elderly people are able to change lifelong habits.¹ We recently studied this issue.

Patients aged over 70 admitted to the coronary care unit at John Radcliffe Hospital with suspected myocardial infarction during 1990 were studied with the agreement of Central Oxford Research Ethics Committee. There was no age limit for admission to the unit. After their discharge sur-

vivors were interviewed about the advice they had been given during and after their admission concerning smoking, diet, and exercise. When appropriate, patients were asked whether the result of serum cholesterol estimation had been discussed with them. Results were analysed with the χ^2 test with Yates's correction.

There were 142 eligible admissions (85 men). Thirty patients died before interview, and 17 refused consent or had dementia. The 95 subjects (58 men) interviewed had a median age of 75 (range 70-86) and were interviewed a median of 8.6 (range 2.6-14) months after admission. Fifteen had regularly smoked cigarettes. Twelve had been advised to stop and 11 had either done so or cut down considerably. One of the three with whom smoking had not been discussed had also stopped.

Fifteen patients had previously been given dietary advice for medical reasons. Of these, six had been advised to make further changes and four claimed to have done so. Of the 80 patients not previously on a diet, 36 remembered having been given advice: nine from a doctor and 21 from a nurse or dietitian, while six had been given a booklet. Two thirds of these claimed to have made positive changes to their diet (specific changes were recalled by 12 of the 24) compared with eight of the 44 not given advice ($\chi^2=6.0$, $df=1$, $p=0.009$).

The serum cholesterol concentration was available in 63 cases: the median was 6.4 (range 3.8-10.0) mmol/l, and 12 subjects had a concentration ≥ 7.8 mmol/l. Nine patients could recall having discussed their cholesterol concentration with a member of staff.

Fifty one people recalled a discussion about exercise. All but five of these said that they had followed the advice. More detailed analysis was not possible because the advice given varied depending on individual circumstances.

For logistical reasons we did not attempt to verify smoking habits or change in diet, and this should be taken into account when interpreting our results. Nevertheless, we confirmed that fit older people are prepared to heed advice on lifestyle and make beneficial changes after admission to a coronary care unit for a suspected myocardial infarction.

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Notifiable diseases

SIR,—Though I welcome Bryan Jefferson Heap's reminder of the statutory obligation on all medical practitioners to notify certain diseases,¹ it is not time that infectious diseases epidemiologists re-examined the methods used to ascertain cases of infection of importance to public health? Presently formal notification, laboratory returns, information from reference laboratories or "spotter" general practitioners, absences from employment, hospital discharges and deaths, and death certificates are all used by many workers but in an uncoordinated fashion with little linking of cases to obtain the true incidence or, more importantly, to initiate action in terms of public health.

The methods used should match the disease. In 1991, 37 539 cases of chickenpox were statutorily notified in Scotland.² This is a disease presently subject only to surveillance. The £75 000 spent on reimbursing practitioners would have been more appropriately used in establishing a representative sample of sentinel doctors to obtain the true incidence of this and other conditions.

It has been proposed that listeriosis should be made a notifiable disease.³ From 1967 to 1991, 155

cases not associated with pregnancy were ascertained in Scotland. One hundred and twenty four were reported by laboratories, 84 were listed in the reference laboratory records, and 67 were listed in the national hospital discharge and death files (unpublished information). Thus reporting based on clinicians would have identified only half the cases identified by laboratories.

A Hill shows the importance of notification with respect to surveillance of measles.⁴ This disease has clear diagnostic criteria and is almost invariably diagnosed clinically, and public health intervention is possible—namely, a two stage immunisation programme with mumps, measles, and rubella vaccine for boys and girls.

The challenge facing consultants in public health medicine (communicable diseases and environmental health) and communicable disease control is to develop surveillance methods appropriate to specific diseases and their potential for action in terms of public health.

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1 Heap BJ. Notifiable diseases. *BMJ* 1992;304:726-7. (21 March.)

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SIR,—Simon Voss has shown ignorance among doctors of the procedure for notifying infectious diseases,¹ and the accompanying editorial outlines other problems such as poor compliance and an outdated list of notifiable diseases.² The shortfalls of the notification system do not end there. The system is also inaccurate, relying on clinical diagnosis rather than laboratory confirmation; slow (notifications in Winchester Health District are often received after, and as a result of, laboratory diagnosis); and entails expensive administration of a derisory payment.

The aims of notification are twofold: to permit rapid intervention to prevent an outbreak, and surveillance. Neither is achieved by the present system, but both are done much more efficiently by microbiology laboratories. In many microbiology laboratories the isolation of important pathogens requiring rapid intervention is reported quickly to those responsible for controlling infection, usually the hospital infection control doctor and more recently the consultant in communicable disease control. Laboratory reporting of microbial isolates to the Communicable Disease Surveillance Centre is thorough, accurate, and sufficiently rapid for surveillance purposes even though there is no statutory obligation. It is true that laboratories can report only on the specimens they receive, but this gives a far more accurate picture of the true incidence of infectious disease than a poorly compliant notification of clinical suspicion.

Is notification ever worth while? It may still have a role in community acquired infections that are less commonly confirmed by a laboratory, such as viral exanthemas and pertussis, and infection in which laboratory diagnosis is often delayed, such as tuberculosis. The table compares the numbers of statutory notifications received and of microbiology reports to the Communicable Disease Surveillance Centre for several conditions. Enteric infections are grossly undernotified. Notifications and microbiology reports for tuberculosis are identical. In contrast, viral exanthemas are more commonly notified than reported by microbiological laboratories.

The current process of statutory notification is anachronistic. Though notification of some infections may still be useful, the process needs to be reviewed. This has been initiated by the Department of Health, although no recommendations

Numbers of statutory notifications of selected infectious diseases and microbiology reports to Communicable Disease Surveillance Centre in Winchester Health District, August 1991 to March 1992

	Notifications	Microbiology reports
Enteric infection (food poisoning)	128	398
Tuberculosis	5	5
Meningitis	4	11
Measles	74	
Mumps	4	
Rubella	8	2

have yet been announced.³ A rapid response to potential outbreaks of infection is ensured if the consultant in communicable disease control maintains close liaison with the microbiology laboratory as well as general practitioners and environmental health officers. Surveillance of most infectious disease is most effectively achieved through microbiology laboratory reports to the Communicable Disease Surveillance Centre.

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Maternity services

SIR,—Though I well understand the need for liberalisation of maternity services in the United Kingdom, I believe that the report of the Commons select committee goes too far.¹

For the past nine years in this district we have had the benefit of excellent maternity services from Hinchingsbrooke Hospital. Here women enjoy the best of all worlds. They are encouraged to choose and plan their own arrangements for labour and delivery, which is led by a midwife. Surroundings are pleasantly informal, and facilities are available to aid active birth. On the other hand, the full technological facilities of a modern unit are available should the need arise. The result of this is an extremely low rate of instrumental deliveries and the lowest perinatal mortality rate in the country. Therefore few women in the district see anything to be gained from a home delivery. During these nine years only three women from our practice (having five births between them) have opted for a home delivery.

I have elected to try to attend these deliveries to support the midwife, but it is ridiculous to pretend that I now have sufficient skills in intrapartum care to be of anything other than decorative value. At the same time these events are extremely time consuming, and if they occurred more frequently they would be completely incompatible with the post-1990 schedule of general practice. Our last home delivery entailed a midwife being in attendance almost continuously for 16 hours and a doctor for six hours—a service that would have been impossible to provide had the delivery not occurred on a Saturday when neither of us was on call.

The select committee is therefore being completely unrealistic in its expectation that all general practices can offer a home delivery service. This would require a massive increase in the numbers of both midwives and skilled general practitioner-obstetricians. Instead maternity services should continue to be concentrated in hospitals (including rural isolated general practitioner units, where the necessary skills in intrapartum care remain). So far as the role of midwives and the need for