also had gonococcal urethritis. Four had identified contacts with gonorrhoea—two urethral and two rectal.

These figures do indeed suggest that infection of the pharynx is less common in London than has been reported in Denmark.—I am, etc.,

D. KEITH ROBINSON

Middlesex Hospital,
London W.1

Attitudes to Abortions

SIR,—The light is amber and may soon be red. It is sad to read in a leading article (13 April, p. 69) in a responsible journal with a world-wide distribution that conscience which "was manifestly essential" in 1967 to the clinical application of the Abortion Act is no longer just as important. Moreover, your article was inconsistent. "There will always be some women who are refused abortion by N.H.S. gynaecologists and later obtain a termination privately. The reason is simply that the private sector operates on a principle very near to abortion-on-request but the N.H.S. does not and should not—as the committee itself agreed." This acknowledges the reality of differing standards of case assessment and interpretation of the Act. "Conscience" helps when decisions are difficult.

In the reorganized Health Service it should be easier than hitherto for adequate teams to provide a comprehensive service in obstetrics and gynaecology if there is the necessary financial support. High ethical standards, conscience, and differing religious beliefs, when associated with freedom of thought and expression within the fellowship of a team, can prove enriching for the doctors and therefore beneficial to the patients. Delegation of work within the team by mutual agreement can avoid losing men and women of great potential from the practice of obstetrics and gynaecology, and probably from medicine. Having been privileged to work for over 30 years in a department which has helped train doctors of different cultures and religions from all over the world it has been possible to see something of what this fellowship of medicine can achieve. It includes respect for the ethics and principles of those with whom you may disagree over certain clinical decisions.

If doctors cannot, or will not, put their own house in order, they may find too late that control is passing into other hands. These may not be sympathetic ones.—I am, etc.,

JOHN STALLWORTHY

Oxford

SIR,—Like Professors H. C. McLaren and J. S. Scott (11 May, p. 329), the Nazis thoroughly disapproved of abortion and were determined to stamp it out. Consequently, one of the first laws they passed when they came to power in Germany in 1933 was one increasing the penalties against abortion. Under this law the woman herself could be imprisoned for attempting self-abortion, and anyone permitting "the advertisement or display of instruments or other means for procuring abortion" could be sentenced to two years' imprisonment. I mention this for the historical record, since

both your correspondents give the impression, no doubt unintentionally, that Nazi views about abortion were quite different from their own.

Professor Scott seems to labour under another misapprehension. He says, "The Lane inquiry has achieved what was probably the main political intention behind its institution—a decrease in the public expression of concern over the whole question of abortion." This is a puzzling remark in face of the fact that the inquiry was set up as a result of Roman Catholic pressure. As the Catholic M.P. Mr. Norman St. John-Stevas has made clear,¹ he organized the campaign in the House of Commons. And now that it has all ended so tiresomely, he may be wishing he had left well alone.

Another curiosity I observe in your columns is that doctors refusing to undertake abortions invariably seem to be credited with the highest motives, while those who support a more liberal law are considered to have not merely different moral attitudes, but inferior and disreputable ones. Hence, Dr. J. R. Nolan's observation (11 May, p. 330): "As they (that is, the morally superior) retire they will be replaced by other doctors who will be prepared to kill fetuses for the social convenience of their mothers." Such views and attitudes are analysed historically in a paper in the April issue of the *British Journal of Criminology*.²—I am, etc.,

MADELEINE SIMMS
Research Fellow,
The Eugenics Society

London S.W.1

¹ St. John-Stevas, N., *The Tablet*, 1974, 228, 362.
² Simms, M., *British Journal of Criminology*, 1974, 14, 118.

Isolation System for General Hospitals

SIR,—The Control of Infection Group at Northwick Park Hospital have outlined the system used in the isolation unit of their hospital for the past few years (6 April, p. 41). However, some aspects of the system have become so over-elaborate as to detract from its undoubted value. There would not appear to be much justification for dividing "source infections" into three grades, particularly since the techniques described are almost identical and since it would not be possible to grade many of the patients admitted without several days of investigation in hospital.

In particular, of the list of diseases for which "strict isolation" is suggested, only infantile gastroenteritis really deserves inclusion and, though opinions may vary, the other diseases on the list do not really come into the category of serious infections with a high risk of spread. Examples include: suspected smallpox (which should never be admitted or retained in a general hospital); generalized vaccinia (which is probably no more infectious than a vaccinated person); severe staphylococcal infections (which are a risk only to debilitated "open ward" patients); pulmonary anthrax (virtually non-existent); and dermatitis with severe sepsis (surely no more infectious than any other wound or burn infection). Conversely, salmonella infections, which share with infantile gastroenteritis the worst reputation for causing hospital cross-infection, are relegated to a lesser degree of isolation.

While the overall technical measures de-

scribed in the article are excellent and are broadly similar to those in use in most of the major infectious diseases units in Britain, I feel that the use of a single high-standard isolation routine would considerably simplify and improve the system and make it more suitable for adoption in other general hospitals.—I am, etc.,

A. G. IRONSIDE

Regional Department of Infectious Diseases,
Monsall Hospital,
Manchester

Drugs for Gastric Ulceration

SIR,—The title of your leading article (27 April, p. 186) is misleading and the advice in the concluding paragraph unjustified.

A desirable feature in management of patients is relief of symptoms, and yet "established clinical remedies" are dismissed in your opening sentence. Antacids are not specifically mentioned, and from this it might be inferred that these are not recommended. They give symptomatic relief without acceleration of healing,^{2,3} and are reasonably safe in moderate dosage or when not absorbed.³ In contradistinction, carbenoxolone merely hastens the healing of gastric ulcers, but does not shorten the duration of pain,⁴ and furthermore is dangerous.⁵ It is surely unjustified to conclude that "carbenoxolone seems still to be the drug of choice" for all patients other than those specifically excluded. Antacids must remain the first choice; indeed, in only one⁶ of the trials mentioned in your article were patients deprived of their benefits.

It is difficult to condone your uncritical assumption that simply because carbenoxolone hastens healing of gastric ulcers it has any place in the management of the disease at all. While rapid healing might perhaps reduce complications or the probability of recurrence, you quote neither possibility nor, for that matter, any other advantage, and no available evidence suggests any such benefit. In the companion article⁷ to the one by Rudick⁸ to which you referred, Sachar queried whether this drug will "produce any useful alteration in the long-term history of the gastric ulcers." You ignored this problem. Unless some demonstrable benefit other than simply accelerated healing is derived by patients, the present use of carbenoxolone should be restricted to controlled experiments.

Your nomination of deglycyrrhizinated liquorice as the "most logical choice" for patients in whom carbenoxolone is regarded as being too dangerous is suspect when the most said in support is that it is "probably reasonably effective" and appears to be free of side effects. It is fortunate that, since a proprietary preparation which contains deglycyrrhizinated liquorice also includes antacids, patients are coincidentally not deprived of their benefits.

Some years ago Gill⁹ concluded that an essential factor both in relief of pain and in ulcer healing was the patient's belief that the treatment would be successful. A negative result of your leading article might be that doctors henceforth dispense this factor via the medium of dangerous carbenoxolone or possibly ineffectual deglycyrrhizinated liquorice, while beneficial antacids are ignored.

In your final sentence you refer to "the

virtues of established simple treatment" (my italics). Bed rest is certainly effective,¹⁰ but when carbenoxolone has been proposed as the "drug of choice" it would be prudent to mention that the drug actually confers no benefit on patients in bed.¹¹ As regards smoking, I agree that patients should be advised to stop.¹² When this was done the reduction in ulcer crater size was 83.2% in patients who stopped smoking and 71.8% in those who did not; it was only 56.6% in those not so advised. Interestingly, the reduction was 61.3% in non-smokers.—I am, etc.,

A. B. S. MITCHELL

Prince of Wales's General Hospital,
London N.15

- 1 Lawrence, J. S., *Lancet*, 1952, 1, 482.
- 2 Doll, R., et al., *Lancet*, 1956, 1, 70.
- 3 Baume, P. E., and Hunt, J. H., *Australasian Annals of Medicine*, 1969, 18, 113.
- 4 Doll, R., et al., *Lancet*, 1962, 2, 793.
- 5 Mitchell, A. B. S., *Postgraduate Medical Journal*, 1971, 47, 807.
- 6 Zimmon, D. S., et al., *Gastroenterology*, 1969, 56, 19.
- 7 Sachar, D. B., *American Journal of Gastroenterology*, 1973, 60, 83.
- 8 Rudick, J., *American Journal of Gastroenterology*, 1973, 60, 81.
- 9 Gill, A. M., *Lancet*, 1947, 1, 291.
- 10 Doll, R., and Pygott, F., *Lancet*, 1952, 1, 171.
- 11 Middleton, W. R. J., et al., *Lancet*, 1965, 1, 1030.
- 12 Doll, R., Jones, F. A., and Pygott, F., *Lancet*, 1958, 1, 657.

Oncology Centres

SIR,—May I endorse, with regret, the conclusion reached in your leading article (5 January, p. 2) regarding the funding of the recently established oncology centres? With the encouragement of the Leeds Regional Oncology Centre a group of regional surgeons, together with radiotherapists and backed by steroid biochemists and statisticians, developed a five-year plan for the investigation of breast cancer which we carefully costed at £6,000 per annum. We applied for funds from the Department of Health and Social Security and were advised that we could not hope to receive any money despite the admitted excellence of the project. It would appear that funds for oncology will have to come either from the Medical Research Council, which must be approached through the usual channels, or through local or national cancer charities. I am writing this letter in order that other enthusiasts should not waste their time and energies trying to obtain non-existent money from the D.H.S.S. cupboard, which is obviously bare.—I am, etc.,

E. A. BENSON

General Infirmary,
Leeds

Sequelae of Virus Infection in Pregnancy

SIR,—Following the first reports that maternal influenza¹ and chickenpox² were associated with increased risks of leukaemia in the child we identified records of women who had suffered any virus infection in pregnancy with a view to follow-up of records of the children. Included in the study were pregnancies in sufferers from Hodgkin's disease and multiple sclerosis and samples of women from two local authority areas who had been immunized against poliomyelitis while pregnant.

Records from general practice, local authority, hospital, and virus laboratory sources where the

Observed and Expected Deaths from Leukaemia, all Malignant Neoplasms, and All Causes among Children whose Mothers had Virus Infections in Pregnancy

Infection	No. of cases*	Leukaemia		All malignant neoplasms		All causes	
		Obs.	Exp.	Obs.	Exp.	Obs.	Exp.
Influenza	553	—	0.11	—	0.25	8	12.45
Chickenpox	335	2	0.17	2	0.41	6	4.12
Herpes zoster	78	—	0.02	—	0.05	2	1.90
Mumps	525	—	0.27	1	0.67	3	6.54
Rubella	860	—	0.33	2	0.80	15	17.14
Measles	38	—	0.01	—	0.03	2	1.27
Infectious hepatitis ..	173	—	0.04	1	0.09	7	4.05
Other natural infections ..	67	—	0.02	—	0.05	1	1.75
Hodgkin's disease ..	16	—	0.00	—	0.01	—	0.41
Multiple sclerosis ..	103	—	0.04	—	0.09	1	2.97
Poliomyelitis vaccination							
Salk type	2,213	—	0.89	1	2.02	48	61.65
Oral	373	—	0.08	—	0.20	7	8.59

The total cases listed include the cases of maternal chickenpox, rubella, and mumps previously reported.

fact of a virus infection in pregnancy was readily retrievable were exploited. Children born alive from these pregnancies were identified from birth registers and details of any deaths among them obtained via the National Health Service Central Registers for England and Wales and for Scotland. Children who had emigrated or had been adopted (the latter were not traced further) were also identified in this way. For each infection the expected numbers of deaths from leukaemia, all malignant neoplasms, and all causes were calculated. These values are the deaths expected among populations born in England and Wales at the same time and followed from birth (or from the second birthday for those included in the earlier report³) to the end of 1973.

The observed and expected numbers of deaths following each virus infection are shown in the table, where it will be seen that maternal virus infections have no influence on total mortality. Only for chickenpox in pregnancy does the incidence of neoplasms significantly exceed expectation. No neoplasms occurred following maternal influenza. The one tumour following immunization with killed poliovirus arose from neural tissue at age 13; this vaccination has been implicated³ as a cause of these tumours in younger children. We therefore support the findings of others that only these infections carry any excess risk of childhood tumours.

Further details will be published elsewhere,⁴ but one further result should be noted here. In our earlier report² a child whose mother had mumps in pregnancy was recorded to have died of Still's disease, which is very rare. The names of children identified in this study were therefore checked against a list of all 167 known sufferers from Still's disease born in the same years, and no further cases of Still's disease following maternal virus infection were found.

Many of the infections reported were identified by the Epidemic Observation Unit and by the Research Unit of the Royal College of General Practitioners. The list of sufferers from Still's disease was provided by Dr. Philip Wood, of the Arthritis and Rheumatism Council Field Unit for Epidemiological Investigations.

—We are, etc.,

JOHN DONOVAN

A. M. ADELSTEIN

Office of Population Censuses and Surveys,
London W.C.2

PETRONELLA LEIGHTON

D.H.S.S. Cancer Epidemiology and Clinical
Trials Unit,
Department of Regius Professor of Medicine,
Oxford

1 Fedrick, J., and Alberman, E. D., *British Medical Journal*, 1972, 2, 485.

2 Adelstein, A. M., and Donovan, J. W., *British Medical Journal*, 1972, 4, 629.

3 Heinonen, O. P., et al., *International Journal of Epidemiology*, 1973, 2, 229.

4 Office of Population Censuses and Surveys, *Studies on Medical and Population Subjects*. In press.

Treatment of Aspergillosis

SIR,—May I take issue with your leading article on treatment of Aspergillosis (20 April, p. 133)? Atkinson and Israel¹ have shown that 5-fluorocytosine is at least as effective as, and possibly more so than, other available agents for the treatment of this disease.—I am, etc.,

S. FREEDMAN

Chase Farm Hospital, Enfield, Middlesex

1 Atkinson, G. W., and Israel, H. L., *American Journal of Medicine*, 1973, 55, 496.

Airborne Lead in Aberystwyth

SIR,—Dr. W. H. Beasley and others (3 November 1973, p. 267) suggested that a possible source of lead which might account for the high blood levels reported found in Aberystwyth blood donors might be airborne dust derived from old mine workings in the district. We have investigated this possibility in collaboration with the department of chemistry at the E. Davies Memorial Laboratories of the University of Wales in Aberystwyth.

Two high-volume air samplers similar to those currently employed in our investigation of the atmospheric lead concentrations at the Midlands motorway link in Birmingham were taken to Aberystwyth and were sited on a suitable flat roof of the university buildings. The two particulate air samplers were positioned so that one bank of 16 Millipore filters faced south-west towards the sea and the other bank faced north-east towards the land. The air flow through the filters was adjusted so that during a 25-hr period 22.5 m³ of air was sampled. Altogether fifteen 24-hr samples were collected between 30 January and 13 February 1974. These samples were returned to our laboratories and analysed by dissolving the filters in a perchloric-nitric acid mixture (1:4) followed by lead determination of the solution obtained with a Perkin-Elmer 303 atomic absorption spectrophotometer using the 2,833-A line from a hollow lead cathode lamp source.

The mean values of lead found for the samplers facing south-west and north-east were 0.07 and 0.11 µg/m³ respectively. Compared with the background values of around 0.8 µg/m³ we have obtained in Birmingham, the Aberystwyth airborne lead concentration appears to be low. In the light of these observations it seems that airborne lead cannot be responsible for the high blood lead levels reported. In this instance an investigation into the lead content of water supplied to the town may be helpful in identifying the source of lead.—We are, etc.,

J. D. BUTLER

S. D. MACMURDO

Department of Chemistry,
University of Aston, Birmingham