SIR,—In all the literature on this matter that I have read the general explanation of reduced efficiency of penicillin seems to indicate that the bacteria have acquired a tolerance to penicillin by reason of small doses given in mild conditions, usually by local application. It ill becomes a general practitioner with no special knowledge of pharmacology to dispute this explanation, but it has occurred to me that the penicillin itself may have lost some of its potency by reason of long-continued cultivation of *Penicillium notatum* in the laboratory. The analogy of a bacterial culture of, say, *B. pestis* losing some of its virulence by culture *in vitro* might apply to penicillin.

After all, penicillin is a biological product and not a synthesized substance, and its rapid production under artificial conditions might adversely affect its potency. *P. notatum* in its natural state feeds on a large variety of organic substances, but commercially it is bred presumably on a very limited number of media. Can it be that *P. notatum* (like some of us) is getting tired of its monotonous diet and is losing some of its virility, if the latter quality can be attributed to a vegetable? Whatever the real explanation may be, it is certainly time that the experts investigated the matter. I am beginning to feel guilty whenever I prescribe a bottle of troch. penicillin.—I am, etc.,

Holcombe Rogus, Somerset.

J. V. MAINPRISE.

Staphylococcal Infection by Penicillin-resistant Strains

SIR,—An important cause of the multiplication of penicillin-resistant strains of *Staphylococcus pyogenes* is the indiscriminate local use of penicillin in the treatment of skin diseases. Penicillin, at any rate in cream or ointment form, has little or no therapeutic value even in conditions generally regarded as superficial infections by pus cocci. Moreover, penicillin is responsible more or less directly for the conversion of many trivial and benign dermatoses into severe and troublesome cases of acute dermatitis.

Penicillin, originally puffed as a talisman of immunity on the battlefield, has been the subject of such intense advertisement that it is demanded by patients who, thanks to 50 years of compulsory education, can more or less recognizably lisp its name. Our figures at the Skin Hospital correspond with those of Dr. Mary Barber (Nov. 29, p. 863). We have also seen several penicillin-resistant β -haemolytic streptococci.—I am, etc.,

Manchester.

J. H. TWISTON DAVIES.

Penicillin in Scarlet Fever

SIR,—I was interested to read your annotation in the *Journal* of Dec. 6 (p. 915) on "Penicillin in Scarlet Fever," as I was the writer (French) of the paper in the *Journal of Hygiene* to which you make reference. I have to point out, however, that there is a printer's error in the reference you quote, as my paper on scarlet fever was published not in 1945 as stated, but in 1939 (Sept. 16). I think this is important, inasmuch as if my conclusions on the value of sulphonamides in scarlet fever stand unrefuted after a period of eight years more weight may be given to them than if they were only unrefuted for two years.

I may add that I have had a considerable experience of the treatment of scarlet fever since 1939, and I am still quite convinced that the sulphonamides are of little or no value—even the newer and less toxic varieties that have appeared since 1939. I am still equally far from knowing why they should be so useless. Perhaps someone with more opportunity than I now have will be able to elucidate this. I would also like to know the results of a properly controlled therapeutic trial of penicillin in scarlet fever. If you know of any such I would be much obliged if you would tell me about it.—I am, etc.,

Darwen, Lancs.

JANE O. MILLAR.

Measles

SIR,—May I support Dr. Harwood Stevenson's advocacy (Dec. 6, p. 928) of the use of parental whole blood as a routine measure in the attenuation of measles in contacts, and particularly in the dangerous period up to the age of 5? It is a method particularly applicable to general practice, where as a rule attenuation and not prevention is the objective. There

can be little doubt that if this procedure were widely used there would be an appreciable drop in the death rate from measles.

In your leading article of June 29, 1946 (p. 991), there occurs this startling statement: "Despite the success which has been achieved in lowering the mortality from this disease it remains one of the largest causes of death among children." This fact alone would justify any safe method which could reasonably be expected to attenuate the disease, and in the *Journal* of June 30, 1945 (p. 923), I described a series of cases of 25 contacts so treated with most satisfactory results. An earlier series of cases of successful attenuation was described by Dr. T. D. Culbert (*British Medical Journal*, 1938, 2, 705). As regards dosage, I feel that if disappointment is to be avoided not less than 8 ml. of whole blood should be injected, and that it should not be reduced on account of the age of the child, for it is after all in the youngest contacts that attenuation is most important. (I do not think one would reduce the dose of diphtheria antitoxin because of the age of the patient.)

Finally, I would venture to suggest that Dr. Stevenson is a little optimistic if he expects any material attenuation when the blood is given "at any time up to the sixth or seventh day of incubation." This would probably succeed if one were using convalescent serum, but it would almost certainly fail to produce satisfactory attenuation in the case of whole blood and might well bring the method into disrepute. In my experience if it is to be really effective it should be given forthwith—that is to say, on the day when the fact of contact has been established or as soon after as possible.—I am, etc.,

London, N.W.7.

A. H. MORLEY.

Dogs and Poliomyelitis

SIR,—Dr. Norman Macfadyen's letter (Dec. 6, p. 930) is interesting because a paragraph in an evening paper a few days ago stated there has been an epidemic of paralysis in dogs in the eastern counties and that 300 cases had been reported. I have two "pekes," and last June one of them, after a day's malaise, became partially paralysed in her hind legs and tail. Recovery ensued in 14 days. Then a month afterwards the other, after 24 hours of lassitude, became totally paralysed in both hind legs and tail.

The lesion must have been in the dorsal cord, for both hind legs and the tail, and also the abdominal muscles, were spastic. The bladder function was unimpaired but the bowel was difficult from the loss of the muscles accessory to defaecation. The dog was very ill for a week and then got better, but the spastic paralysis remained unchanged for over two months and then recovery ensued, though the hind legs are still weak. Injury can be absolutely ruled out; and both dogs are beyond the age for distemper, and, moreover, there were no symptoms of it. It seems pretty certain that the condition was due to a virus, and the occurrence of such cases at the same time that an epidemic of anterior poliomyelitis is affecting the country is surely suggestive.—I am, etc.,

London, W.1.

VICTOR BONNEY.

Chronic Sinusitis in Children

SIR,—Mr. F. M. Walker (Dec. 6, p. 908) raises the question of the treatment of chronic nasal sinusitis in children. This matter has been receiving attention at Warwick Hospital for some years, and the following observations may prove of interest.

In order to obviate the necessity of giving repeated general anaesthetics for antral washouts in cases that have not been cured by the use of nasal drops and attention to the general health, we have been placing a ureteric catheter into each infected antrum, some inches of the tube being strapped on to the opposite cheek, the extra-nasal end being wrapped in sterile gauze, following the technique described by R. H. Hunt Williams (*Proc. roy. Soc. Med.*, 1946, 39, 280). The antra have then been washed out from one to several times daily. Solutions we have been using are: "soluthiazole" 5%; ephedrine 0.5%. "flavazole" 1 in 2,500, with or without penicillin, 500 units per ml., in normal saline; isotonic or slightly hypertonic sodium chloride; proflavine 1 in 2,000 in normal saline.

In a recent American paper (the exact reference to which I am unable to trace at present) evidence was presented indicating that isotonic or somewhat hypertonic saline solutions were as effective therapeutically as solutions containing chemotherapeutic agents. On

a few occasions we used solutions containing several thousand units of penicillin per ml., but these sometimes caused excessive mucoid nasal discharge. A. W. Proetz (*Ann. Oto-laryng.*, 1945, **54**, 94) has shown that concentrations of more than a few hundred units of penicillin per ml. interfere with ciliary action. The extranasal end of the catheter may be treated with a disinfectant before performing the washout. The amount of solution employed for each washout has varied from 7 to several hundred ml.

The lavages have been discontinued after there has been a return free from pus several times, or after a maximum period of three weeks, the catheter then being removed. A number of cases still having pus in the antra after such treatment for three weeks have been found to be free from sinusitis after a further month or two without treatment. Some others have been cured by staying in a convalescent home at the seaside. Vitamins in adequate amounts have also been administered to all these patients.

Cases not cured by such treatment have also not been cured by intranasal antrostomy, which we have found therapeutically inferior to it; also, children prefer antral lavages through a catheter as described to washouts through an antrostomy by the usual methods. These uncured cases, when the symptoms caused by the sinusitis have been sufficiently severe, have been treated by Caldwell-Luc operations, the diseased antral lining being removed. The youngest patient so treated was four years old, but in some older children also the antral cavity may be so small as to make the operation not feasible without damaging unerupted teeth. The results of this operation in children in general have been found satisfactory; no harm has resulted in any case; continuation of symptoms and signs of sinusitis is usually due to disease of other nasal sinuses, and in a few severe cases we have been able to relieve or cure them by intranasal, transantral, or external surgery to the ethmoid, sphenoid, or frontal sinuses.

In some unruly or small children who persist in pulling out the catheter we have followed the lead of G. H. Bateman (*J. Laryng.*, 1945, **60**, 110), filling the antra once or twice with a paste containing penicillin, sulphathiazole, flavazole, soluthiazole, or several of these in lanette wax or plasma solution concentrated to the consistency of honey. A few cases have been cured, and some more temporarily relieved, by this method.

In our experience systemic penicillin or sulphonamide therapy for chronic nasal sinusitis, while temporarily relieving some cases, has nearly always failed to cure them. Proetz suction-displacement treatment we have also found disappointing. It has been our experience that the removal of tonsils and adenoids in cases of chronic sinusitis does not lead to its cure, that it is often more important to treat it than to remove the tonsils and adenoids, and that at any rate in very purulent cases it is best treated before this operation is done. Incidentally, bronchiectasis and chronic nasal sinusitis co-exist fairly frequently.—I am, etc.,

Warwick,

J. A. HARPMAN.

Relief from Pain in Obstetrics

SIR,—It would be a fitting centenary tribute to Simpson if we could create and build up an adequate national organization for giving relief from pain in obstetrics. One hundred years ago James Young Simpson showed that the suffering endured by our young mothers could be reduced to a minimum, but his teaching was not understood. In 1933 R. J. Minnitt produced an automatic apparatus for the administration of gas-air analgesia; his teaching has been wilfully neglected. Can we never abolish the scandal of the "woman in pain"?

I have closely watched the results of gas-air analgesia when properly administered since November, 1933, and I have in my possession many hundreds of record papers signed by mothers stating that the vast majority of them were given adequate relief from pain. I am sorry to say that I have also received many letters from patients from all parts of England telling me of experience of indifferent analgesia. One writes: "One nurse in charge of a ward has told me that she always gives mothers the machine to use, but never turned it on." Another: "The birth of my own baby was a nightmare I shall never forget, and the gas-and-air machine provided in the County Council hospital . . . had no effect whatever." And this sad story is repeated over and over again. I know that these letters are true. I have many times visited hospitals and seen gas-air machines in such a condition that no help could be expected from their use. I have seen the gas and air administered in so careless a manner that one was left with the unhappy impression that those in charge of the administration did not care whether the patient was helped or not. Yet from the use of the latest models of gas-air machines it is possible to obtain complete

relief from pain in 95% of cases, and we have in addition the opportunity to use trileine and air, a promising newcomer.

There are two main causes for failure to give adequate analgesia: (a) lack of medical interest; (b) shortage of staff. (a) While the midwife is perfectly capable of taking charge of the administration of analgesia, yet she must have "medical interest" in her work. Machines and equipment need frequent examination by medical practitioners, as they sometimes need adjustment, and experienced practitioners should visit the labour ward to see that there is no error in the technique of administration. In all hospitals and in all districts there is need for the appointment of medical analgesists to help the midwives. The periodical visit from the manufacturer's agent is not enough. (b) There is an acute shortage of midwives, so that those in practice have too much to do. The demand for the provision of analgesia by the midwife may well be the last straw which is breaking the back of a very willing camel. If this is so, provision must be made for the creation of a body of nurse-technicians who must be trained to become "analgesists."

I criticize and condemn not the midwife nor the medical practitioner but the whole body of our countrymen and countrywomen, who callously allow hundreds of thousands of women to suffer the extremity of pain for the maximum of time when most efficient and adequate means of relief are available for the use of an organized analgesia service. Yet fourteen years after the introduction of the use of nitrous-oxide-and-air analgesia no such organization has been provided.

What a tale to tell of England one hundred years after Simpson's discovery! We have the knowledge of how to relieve pain, we have excellent machines designed for this purpose, we lack only a genuine national desire to help and an efficient national organization.—I am, etc.,

New Barnet, Herts.

JOHN ELAM.

Obstetric Flying Squads

SIR,—The detailed account by Mr. Frank Stabler of the Newcastle-upon-Tyne Obstetric Emergency Service (Nov. 29, p. 878) must have been of great interest to many readers, especially in view of the way the development of the service has been dictated by local conditions. However, there is a danger that some may be misled into believing that the routine described is applicable to most obstetric emergencies, despite the author's remarks that "this centre is probably unique," and forgetting too the tremendous advances that have recently been made in resuscitation and transfusion, developed largely by the Army Transfusion Service.

The author's statement, "There is no doubt that the pregnant woman who has lost blood must be saved an ambulance journey," might lead one to suppose that cases of antepartum haemorrhage are best treated in the home. In most districts the opposite is true, and the emphasis should be placed upon non-interference, a strict ban on vaginal examination, adequate morphine, and admission to hospital as soon as the stage of primary shock is passed. The role of the flying squad should be that of a resuscitation unit for the continuous transfusion of the most severe cases during transit to hospital.

With reference to intra-partum emergencies, the statement, "The *bad old system* [my italics] of transporting these gravely ill and shocked women to hospital lessened their chances of subsequent recovery," is again open to criticism. In addition to blood transfusion and expert obstetrical handling these bad-risk cases require highly skilled anaesthesia, hospital nursing, and frequently the presence of assistants, if the occasional fatality is to be avoided. It would be interesting to know what part the anaesthetic played in the four recorded fatal cases of obstructed labour, while the obstetrician must indeed be a bold man who would set out to control a diabetic coma or tackle a ruptured uterus in the patient's home.

It is certainly among the immediate post-partum emergencies that the service finds its chief field of use, and the description of manual removal of the placenta as a life-saving operation is amply justified. Its hazards and drama may largely be removed by vigorous and enthusiastic blood transfusion pre-operatively. In those cases of retained unseparated placenta in which shock predominates over blood loss the use of "methedrine" will raise the blood pressure enough to ensure safety of operating; while thiopentone injected in small dosage into the transfusion tubing makes an admirable anaesthetic that may be administered by the relatively unskilled assistant.

In conclusion it is emphasized that in most districts the domiciliary treatment of ante-partum and intra-partum