tunity class for handicapped children which attempts to remedy this shortage here in Stevenage. The class is founded upon three aims; to provide nursery facilities for handicapped children; to enable handicapped children to mix with normal children; and to enable mothers to meet at the same time, yet apart from their children. Children with any form or degree of handicap are welcome.

The range includes severe subnormality, cerebral palsy, spina bifida, deafness, aphasia, autism, and the restless and aggressive group who defy classification. The normal children are children of the numerous helpers, or siblings of the handicapped. While the children are playing, the mothers meet in a separate room. They receive regular support from a social worker and also gain a great deal from a more informal sharing of problems among themselves. This aspect of the class means that children may attend from birth. Supervision is by a trained nursery nurse.

The development of this project was simplified by the sponsorship of an existing part-time nursery school, which meets in the morning and allows us to use their premises and equipment in the afternoon. A close association has developed, and the opportunity class is now constitutionally a department of the sponsoring nursery school. Apart from the practical advantages of shared costs, there is a positive value in this association, as it prevents the opportunity class becoming an inward-looking group of handicapped children and their parents.

Our experience suggests that this is a comprehensive, cheap, and simple method of providing the stimulus of nursery activities for a wide range of handicapped children, and at the same time offering support to their mothers. To paediatricians and all who work with handicapped children it offers an unrivalled situation for the continuing observation of child development in this group. I recommend this organization to all who are concerned with the welfare of handicapped children and their families.—I am, etc.,

R. E. FAULKNER,
Honorary Chairman,
Opportunity Class for Handicapped Children.
Stevenage, Herts.

Follow-up after Abortion

SIR,—I am sure that all concerned with this Act will be extremely interested in the report of Mr. T. L. T. Lewis (25 January, p. 241) in which he gives the figures for terminations notified in England and Wales. It would be interesting to know how the large numbers of women who are having abortions done on psychiatric and other grounds fare in the months and years following the operation. In an attempt to assess this outcome a prospective study has been undertaken on the cases referred with a view to termination to my colleagues and myself since the inception of the Act. The follow-up period is still relatively short, and it is hoped to present detailed results of this study after a longer period of time has elapsed.

In the meantime you might be interested in some of the preliminary impressions based on our experience in this area since the Act came into force. The figures relate to those cases referred to my psychiatric colleagues and myself during the period from the introduction of the Act on 27 April 1968 until 31 December 1968. Of the 42 cases referred with a view to termination, termination was recommended in 33 cases. In this group two "spontaneous abortions" are reported to have occurred, and the other 31 were in fact terminated. The recommendations were on psychiatric grounds, or, in a small number of cases, on combined psychiatric and social grounds—that is, either entirely because of the condition of the pregnant woman herself or because of the possible effects continuation of the pregnancy might have on other children of the family. In the nine cases where termination was not recommended our follow-up shows that termination was subsequently performed in one, in one a "spontaneous abortion" occurred, in one there was a stillbirth, and in the remaining six pregnancy proceeded. The cases have been reviewed with the assistance of our psychiatric social worker, Mrs. M. J. Marszalek.

Considerable tact has been required in the follow-up of some of the cases, especially unmarried girls where the parents were possibly not aware of the true situation. The six patients with the continuing pregnancies are all fully reconciled and content, and in those cases where the baby has been born all is going well. In the 33 cases where termination was recommended 31 have been traced and reviewed. The interesting findings so far, although admittedly the follow-up period is still relatively short, have been the lack of any significant psychiatric disturbance which could be related to the termination of pregnancy or the continuation of pregnancy in any of our cases.

The satisfactory psychiatric outcome in all our cases so far allows three possible conclusions. Either our judgement is infallible and we have been right every time in deciding which pregnancy shall continue and which pregnancy shall be terminated, or (a more likely conclusion) whether termination is done or not the great majority of women will come to very little harm, or, thirdly, psychiatric complications may yet occur in some of our cases. One of the factors taken into account in resisting the demands of patients for termination has always been the fear that interference with pregnancy might lead to serious depression or other psychiatric disturbance. It is hoped that by continued study of our patients it may be possible to determine among other things whether this fear is well-founded or not.—I am, etc.,

AARON GILLIS.
Cherry Knowle Hospital,
Sunderland,
Co. Durham.

Pregnancy Advisory Services

SIR,—You appear to have some reservations about the establishment of the pregnancy advisory services (25 January, p. 199), and suggest that in certain circumstances these might be open to "grave ethical objections." In fact, the London-based Pregnancy Advisory Service, the only one about which I can speak with authority, is a registered charity run on similar lines to the Family Planning Association. It employs a full-time social worker and doctors on a sessional basis who advise patients who have not been able to obtain a sympathetic hearing from their own doctors, or those who, in increasing numbers, have actually been sent to us by their family doctors because, although they have grounds for abortion under the Abortion Act, the local consultants are unable or unwilling to accept most abortion cases, and the patients cannot afford the fees charged for abortions in regular private practice.

There is a wide regional variation in the legal abortion rate. Women who qualify for abortion under the Act find it extremely difficult to obtain legal abortions in some areas, either because of the shortage of hospital facilities or because local gynaecologists happen to be hostile to this procedure, sometimes on moral or religious grounds. If each regional hospital board had one specialist abortion unit (half a day a week from 10 surgeons), then greater equality of treatment might prevail. Until the Department of Health and Social Security fully recognizes its responsibilities in this field, the Pregnancy Advisory Service and the Birmingham Pregnancy Advisory Service must seek to alleviate some of these more glaring inequalities.

Sir Theodore Fox once remarked: "On the whole, the family planning movement has been created not by the medical profession but in spite of it." The same is true of the services mentioned above. We are confident, however, that in time the entirely "ethical" nature of the service that we provide will come to be recognized—even by the medical establishment.—I am, etc.,

SARA R. ABELS,
Honorary Medical Secretary,
Pregnancy Advisory Service.
London W.1.

Abortions and Gynaecological Practice

SIR,—We were most interested to read the article on the Abortion Act by Mr. T. L. T. Lewis (25 January, p. 241), which illustrates clearly the effect exerted by this Act upon current gynaecological practice in hospitals throughout the country.

We felt it would be of interest to see whether the experiences at the Chelsea Hospital for Women and Guy's Hospital are reflected in a provincial hospital such as Cheltenham. Here as elsewhere the number of therapeutic abortions has increased greatly, and we have modified Tables II and IV in Mr. Lewis's article to include the Cheltenham figures for the comparable periods.

When considering the high proportion of terminations performed on women who are single, divorced, or separated Mr. Lewis rightly stresses the fact that ". . . it is difficult to understand how medical indications can be so much more frequent in the women without husbands." In Cheltenham so far we have found that the proportion of married women (68%) undergoing therapeutic abortion is significantly higher than the comparable average for England and Wales (45%), while the figures for those without husbands are 32% and 55% respectively. However, time will tell whether these proportions will vary and by how much.

We note with interest that the total number of therapeutic abortions performed in Chel-

TABLE A.—*Abortions Notified in England and Wales, Second and Third Quarters, 1968, According to Marital State*

Marital State :	Not stated	Single	Widowed, Divorced, or Separated	Married	Total
England and Wales	29	5,773(47%)	970(8%)	5,579(45%)	12,351
Cheltenham	—	7(21%)	4(11%)	23(68%)	34

TABLE B.—*Total Number of Therapeutic Abortions at Two London Teaching Hospitals and at Cheltenham*

	1963	1968		
	(one year)	7 months	12 months estimated	Increase
Chelsea Hospital for Women	30	148	254	8½ times
Guy's Hospital	10	81	138	14 times
Cheltenham	10	47	80	8 times

tenham in 1963 was the same as at Guy's Hospital (10), but the subsequent increase at Guy's has been appreciably greater. Presumably this is partly due to the fact that many women seeking abortions gravitate to London, whereas the cases dealt with in Cheltenham come from the clinical area served by the hospital.

Already we are finding that the impact of the Abortion Act is making great demands on hospital beds and operating time, and we agree wholeheartedly with Mr. Lewis's statement to the effect that the whole character of the gynaecologist's outpatient work has altered because of the numerous requests for termination at almost every session.—We are, etc.,

D. H. K. SOLTAU.
W. J. BAKER.

Cheltenham, Glos.

Is Quinidine Outdated?

SIR,—"Be not the last to cast the old aside" must have come to many minds on reading your leading article on quinidine (8 February, p. 331).

I have used this drug for 20 years, without disaster, for two main purposes. First, in a small maintenance dose, 300–900 mg. daily, to control annoying but not dangerous arrhythmias (for example, paroxysmal atrial tachycardia or fibrillation) in those with otherwise normal hearts. Some have maintained control for over ten years without mishap, among them some of my colleagues or their wives, whose mishaps could not escape my notice. Second, to control dangerous arrhythmias (for example, ventricular tachycardia) after myocardial infarction. Five years ago, the reports that you quote, notably that of Oram and Davies,[1] led me to discontinue this last practice. The frequency of late, often fatal, recurrences in the third or fourth week, however, made me go back to quinidine with an improvement in results. Certainly D.C. shock can be repeated, though multiple shocks—60 in one record—must be trying to the patient. Lignocaine infusions can run for a while, but the patients described in your columns a week earlier (25 January, p. 213), who died in recurrent ventricular tachycardia some days after a "full course" of lignocaine, seem to me to cry out for quinidine.

Oram and Davies must be listened to with respect, and there are doubtless reasons for their different experience. Yet one patient who had two episodes of atrial fibrillation reverted by shock at their hospital was referred to me with a third recurrence and remains in sinus rhythm on quinidine. Finally, I must agree with your conclusion that we need a safe oral antiarrhythmic agent for long term use (can any depressant of myocardial excitability be quite safe?), but until we find one let us not discard quinidine. —I am, etc.,

C. P. PETCH.

London W.1.

REFERENCE

1 Oram, S., and Davies, J. P. H., *Lancet*, 1964, **1**, 1294.

Treating Shock

SIR,—The most interesting paper by Dr. J. F. Riordan and Dr. G. Walters (18 January, p. 155) comes at a time when many physicians are flirting with the idea of using phenoxybenzamine in cardiogenic shock and in intractable pulmonary oedema. It would, therefore, be a tragedy if these people were to be deterred from trying this regimen because of one series of failures.

McGowan and Walters[1] were among the first to demonstrate the importance of restoring flow rather than blood-pressure in the shocked state. It would be a great pity if Dr. Walters were now to contribute to perpetuation of the fallacy that there is some mystical fundamental difference between cardiogenic shock and all other forms of shock. Of course there is a difference in that a cardiac lesion is the primary factor in inducing the shocked state, but Lillehei's team[2] have shown clearly that shock can ensue where the initial infarct is very small, and that the extensive infarction found at necropsy may be the result of, rather than the cause of, the shocked state.

There are, therefore, good academic grounds for believing that phenoxybenzamine is worthy of trial in cardiogenic shock, and these are well supported by observations on experimental myocardial infarction in dogs. One of the most difficult problems, however, is that of definition in cardiogenic shock. Three separate syndromes tend to be confused: morphine-induced hypotension; vasovagal collapse; and true shock.

In the absence of complete heart block, we believe that true cardiogenic shock has tachycardia as one of its essential components, and that the group as defined by Drs. Riordan and Walters, but with the addition of tachycardia, has a mortality nearer to 100% than 80%. On the other hand, where there is bradycardia, the prognosis is probably very much better despite the other "shock" features. We would, therefore, have predicted a more favourable outcome for case 6, as was indeed the case. Indeed, if Drs. Riordan and Walters's paper proves anything, it proves the difference between hypotensive coronary patients with bradycardia and those with tachycardia. It seems likely that a larger dose of atropine might have produced a more dramatic beneficial effect in this case.

Dietzman and his co-workers' observation that shock produces extension of infarction coupled with Drs. Riordan and Walters's statement that the signs of shock were present in all their cases "for at least four hours" would seem to hold the key to the failure of treatment in these six cases. Accepting that cardiogenic shock is ever reversible, it seems too much to ask of any regimen that it should reverse the condition when it has been present for such a length of time. Accordingly, failure of treatment is no proof of ineffectiveness of the drug used in such circumstances. Nor is any mention made of the use of inotropic drugs, correction of metabolic acidosis, and the possible place of blood-volume expanders, all of which must form an integral part of the treatment regimen.

More disquieting is the report of adverse respiratory effects following phenoxybenzamine. The workers cited above have advocated use of the drug for, or to prevent, pulmonary oedema. We have now used it for this indication in several patients with uniform success—the moist lungs in each case clearing completely where digoxin and frusemide had failed. We cannot understand why our experience has been so different from your contributors' in this context. We only wish we could claim equal success with cardiogenic shock, in which our survival rate so far has been identical with that which your contributors report. We believe, however, that our failures are the result of untoward delay—the hesitation to use an experimental approach before one is certain that conventional treatment has failed. We now believe that we are sufficiently familiar with this drug to justify our use of it immediately where shock is apparent, and we hope that this approach will enable us to make a better appraisal of its effect.—We are, etc.,

D. A. L. WATT.
E. N. OBINECHE.
W. R. LIVINGSTONE.

Stobhill General Hospital, Glasgow N.1.

REFERENCES

1 McGowan, G. K., and Walters, G., *Lancet*, 1966, **1**, 611.
2 Dietzman, R. H., Lyons, G. W., Bloch, J. H., and Lillehei, R. C., *J. Amer. med. Ass.*, 1967, **199**, 825.

Awareness during Anaesthesia

SIR,—Awareness during operation, and at any other time, depends in the main on sensory input, a large part of which can be the proprioceptive impulses from muscles. When light anaesthesia is coupled with the administration of a muscle relaxant, if signs of arousal such as movement, attempts to open the eyes, pupillary dilatation, or lachrymation appear, these usually disappear as soon as more relaxant is given—probably owing to the reduction of muscle tone and consequent diminution of proprioceptive input. Furthermore, if an operation is performed under hypnosis, signs of arousal frequently parallel the increase of proprioceptive impulses produced by the stretching of muscle; painful stimuli, such as those arising