Dosage: Nine of the patients were 2–5-years old and received one tablet six hourly for seven days. One patient (aged 16 years) received two tablets six hourly for seven days. None of the ten patients received concomitant antibiotic therapy.

Cures: Seven, four of these had been unsuccessfully treated previously with Ampicillin or Colomycin, or both.

Failures: Three—these, however, were clinically cured and only one of the three post-treatment swabs was positive in each case. One of these was also a Salmonella typhimurium carrier before the treatment and the three post-treatment swabs were all negative. This case is not included below.

Salmonella carriers (16 adults)
All had received previous antibiotics without effect. None were given during the trial.
Criterion of “cure”: Three negative daily post-treatment swabs.
Dosage: Two tablets six hourly for seven days.
Cures: Three only.

Use in thrush (Candida albicans) post-antibiotic infection
Perianal itching and soreness was rapidly cured in six adults, observed in general practice. Chronic diarrhoea (more than one month’s duration) associated with persistant Candida albicans gut infection (see Alexander 1967) was cured in one baby. The tablets were crushed and half a tablet given six hourly.

Discussion
The results in the Shigella sonnei cases are encouraging. Antibiotics prolong the carrier state and are generally contra-indicated (Lancet 1970). The failure to cure the salmonella carrier state is not surprising considering the systemic nature of the infection. Hypersensitivity of the perianal skin or intestinal mucous membrane to Candida albicans is relatively rare and it would not seem warranted to give Lactobacillus casei with every dose of antibiotic. This view (with regard to Nystatin for the same purpose) is held by The British Tuberculosis Association (1968). If Servier Laboritories can be encouraged to manufacture these tablets they might also be useful to prevent dysentery in holidaymakers going abroad.

Conclusion
Lactobacillus casei tablets cured seven out of ten Shigella sonnei infections. All ten were clinically improved. The cure rate in Salmonella carriers was poor (three out of 16). Encouraging results were obtained in postantibiotic thrush infections of the perianal skin and bowel.

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RESEARCH

Problems in mounting a multi-observer survey

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A record of problems encountered in mounting a research survey in general practice may help to prevent others making the same mistakes.

Earlier work (Hull 1969a, 1969b) had shown patterns of diagnostic behaviour in my own practice and led to the hypothesis that a patient might or might not consult his doctor about a given symptom depending upon the social group to which he belonged. In January 1969, it was decided to attempt a survey to make comparisons with other practices and to test the hypothesis.

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To do this the main requirements appeared to be:

1. To design a protocol, a data collection form and instructions for completing the form.
2. To find doctors to assist in data collection.
3. To arrange for data processing.
4. To find financial support.

In March 1969, armed with a draft proforma I visited Drs Pinsent and Crombie of the Research Committee of Council of the College, in Birmingham. With great care and patience they examined the whole project making detailed suggestions for the modification of the protocol, proforma and instructions. They felt confident that doctors would be found to assist in data collecting and that ultimately funds would be available. The problem of data processing was arranged with the help of Mr R. Stamper of London School of Economics and Professor Buxton at Warwick University.

In May an appeal was published in the Faculty Newsletter inviting doctors to participate. There were six replies, and none of the doctors felt able to take part. Abandonment of the project was seriously considered. On the advice of Dr Pinsent a further appeal was made, this time as an editorial in the College Journal of August 1969. There were immediately replies from Yorkshire, Somerset, Essex, Sussex and London, agreeing to take part.

With volunteers to collect data the project at last seemed viable. In October at a prolonged meeting with Research Committee it was decided:

1. To apply to the Research Foundation Board of the College for a grant.
2. To arrange printing of the proforma which we had at last perfected.
3. To arrange a meeting of all the participating doctors.

Just as the form went to be printed one of the volunteers asked for the inclusion of some questions of his own, this required modification of the form.

In November the Research Foundation Board approved the grant but requested alteration of a question relating to the necessity of the consultation. This question had always been difficult as it was almost impossible to remove subjective bias and it was now remodified in the light of the Board's suggestions.

At a meeting of the collecting doctors at the London School of Economics in November the form was further modified. This meeting which was attended by all but one of the doctors, the statistician, Mr Stamper, and Dr Pinsent was invaluable for ironing out problems and establishing an esprit de corps which contributed to results. The doctor who was unable to attend was subsequently visited in Somerset.

In the second week of December the much altered form was sent to the printer who produced 6,000 copies in time for distribution, allowing for a start to be made on 1 January, 1970.

Just before Christmas the project was discussed with Dr Anderson and Dr Draper at Guy's Hospital. They considered the form clumsy, hinted at disaster, and they strongly urged the need for a pilot study. At this late stage this advice was devastating but clearly sound. After discussion with the Research Foundation Board and the Research Committee it was decided to start as planned on 1 January, 1970 and to run for the first two weeks of January as a pilot.

The form is designed to be completed down to question 20 at the first consultation and then updated after 28 days by the completion of the remaining questions. Thus no forms were returned until February. By this time a research assistant, Mrs Hodkinson, had been appointed and she checked the incoming forms coding where necessary and referring back to the doctors to check incomplete or illegible forms. The commonest error was omission of occupation and grade but apart from this the standard of form filling was high and it was felt that it was reasonable to proceed with the main study on 1 April, 1970. One factor emerged from the pilot study: the original estimate of cost proved too low. A further application was made to the Research Foundation Board and was granted.

Throughout the summer forms returned fast and checking, coding and error chasing (figure 1) proved quite easy. As shown by the pilot study the commonest error was the omission of occupation and in some cases this was unobtainable. As time progressed the rate of return fell off and there was a need for frequent encouragement and persuasion by letter and phone to get the last forms in.

By February 1971, collection of data was complete and the returned forms had been checked,
Figure 1
Scheme for error checking

coded and punched: 6,000 forms had been sent out and 5,934 returned—a return rate of 98.9 per cent.

Lessons to be learned

1. Expect the project to take a long time and be patient.
2. Talk to as many informed advisers as possible as early as possible.
3. Plan a pilot study from the outset.
4. Don’t underestimate cost.
5. Don’t underestimate the willingness of people to help or their ability to do so.
6. Have someone to lean on when it all goes wrong: the most difficult problems are subjective.

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