article (20 February, p 575) seems to support his thesis. I understood his article to say that: "the concept of child surveillance has gained widespread acceptance, although there has been no true validation of this concept," and that: "despite the increasing pressure to extend health surveillance and the increasing resources being devoted to it, there has been little evaluation of important aspects of health surveillance." In other words, there is not yet adequate published evidence to justify the enormous expenditure of time and money on routine child health surveillance. He did not say that such surveillance is valueless; only that it has yet to be proved valuable.

I have carried out some 500 developmental assessments annually for nine years in our group practice. I have similarly felt uncomfortable about the time spent on this task, which has not been shown in careful, unbiased studies to be useful. Your correspondents seem to fall into two groups: those who feel that the philosophical value of such clinics is measureless, and those who offer inadequately controlled statistics purporting to show such a value.

Surely, we should ask the following questions of our clinic doctors and general practitioners: (1) How many children do you see each year for assessment? (2) What percentage do you find have abnormalities (physical or emotional)? (3) What percentage of the abnormalities were not previously recognised by the parents? (4) What treatment or advice can you give them? Only when a reasonable series of published papers answers these questions can we form a judgment as to the value of such clinics.

Meanwhile, I intend to continue providing such a service, as I suspect the evidence will support this decision—but it is not available yet.

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## Case clustering in pityriasis rosea: support for role of an infective agent

SIR,—It is of interest that Dr A G Messenger and others (6 February, p 371) give further evidence supporting an infective aetiology for pityriasis rosea. We have investigated this hypothesis by examining skin biopsies obtained from 10 cases of clinically diagnosed pityriasis rosea. A biopsy was carried out with the patient's fully informed consent. In all cases a biopsy of a generalised lesion was obtained accompanied, in one case, by a biopsy of a herald patch. The possible presence of a microbial antigen within the lesion was determined by using the patient's convalescent serum on the assumption that an antibody response to any infecting organism would have occurred. These sera were collected between four and six weeks after the onset of the generalised rash.

Briefly, cryostat sections of the skin biopsy were cut, incubated with a 1:10 dilution of the patient's convalescent serum, and the presence of bound immunoglobulin determined by the addition of fluorescein-labelled antihuman immunoglobulin. No fluorescence was seen when using the patient's own convalescent serum or serum from other patients with pityriasis rosea.

If, as seems likely, pityriasis rosea has an infective aetiology, our negative findings have two possible explanations. Firstly, detectable microbial antigen may not be present in the

lesions of the generalised rash, the pathogenesis of which is related to immunologically mediated events. The negative findings in the biopsy of the herald patch are particularly disappointing in this respect. Secondly, it is possible that there is only a weak antibody response to the causative agent so that the patient's convalescent sera do not provide suitable reagents for immunofluorescence. To further investigate the possible infective aetiology of pityriasis rosea it seems essential to investigate patients as early as possible during the disease—that is, at the time of onset of the herald patch. Unfortunately most patients do not present until a later stage.

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SIR,—I am sure that many general practitioners would be interested in the article on pityriasis rosea from the department of dermatology, North Staffordshire Hospital Centre (6 February, p 371).

Many years ago when I went to the Antarctic as doctor to a whaling ship (a closed community if ever there was one) I remember having two patients with herpes zoster followed in less than a month by four cases of pityriasis. This was in a group of approximately 300 men who were out of touch with land for some three months. I thought at the time that this was highly suggestive of an infective agent, known in the first instance, but not accepted in the second. At a later date at the London Hospital I made this point to Lord Brain, but was dismissed summarily from the presence with my tail between my legs. The relationship between the two diseases I found interesting in as much as the distribution of pityriasis rosea seems to bear some relationship to dermatomes.

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## Effect of rubella vaccination programme in schools on rubella immunity in a general practice population

SIR,—The paper by Dr David Gilmore and others (27 February, p 628) on the effect of the present British rubella vaccination programme—that is, to vaccinate young adolescent girls-is another demonstration of the lack of the long-term success of such a programme. Also the vaccination policy of the United States—that is, to vaccinate both male and female preschool children-will fail in the long run.1 In both countries there are now discussions on a more intensive individual serological screening before adulthood, but such an approach is expensive, and it is doubtful whether it will reach the whole population. At the suggestion of the Reference Group for Vaccinations of the Swedish Pediatric Association, Sweden has now decided to combine the two approaches in a vaccination programme not only for rubella but also for measles and mumps.

In January 1982 a new vaccination pro-

gramme began in Sweden. The aim is to eradicate measles, mumps, and rubella in 10 years. A combined vaccine against the three diseases will be given to both boys and girls at two ages—at 18 months at child health centres, and at 12 years at school health clinics. The vaccine will be given free of charge, and the vaccination is not compulsory. On both occasions the combined vaccine will be given to a child whether or not it has had any or all three diseases and irrespective of earlier vaccinations against these diseases.

The aim is to vaccinate at least 90% of the child population on each occasion. If the efficacy of the vaccine is calculated to be 90% -which is a more realistic rate of seroconversion in general practice than those reported in research studies-about 80% of the preschool population will be immune after the first vaccination. If 90% of the remaining 20% non-immune children—that is, children not vaccinated at 18 months or vaccinated without seroconversion—are vaccinated at the age of 12 years with a 90% efficient vaccine, less than 5% of the population will be nonimmune as adults. As judged from epidemiological data of the prevaccination society2 this will suffice not only to break the ongoing chain of transmission of the various viruses but also to prevent the successive build-up of a sufficient number of non-immune adults, among whom an epidemic might begin.

The Swedish programme—that is, to give a second shot against measles, mumps, and rubella to the whole population instead of performing individual serological screening—is more cost-efficient for the society and more convenient for the individual. The crucial point is to vaccinate at least 90% on both occasions, since otherwise there will be a risk of having deferred the diseases to adulthood -a phenomenon noticed for both measles and rubella in the United States during the last few years.1 I believe that this aim can be accomplished in Sweden. Without compulsory vaccination we have managed to give 97% of the preschool population three injections of a tetanus-diphtheria vaccine and four injections of a killed polio vaccine. Ninety per cent of 12-year-old girls have had one injection of rubella vaccine. When contacted informally about two months after the initiation of the new vaccination programme, county child health officers in various parts of Sweden stated that doctors and nurses working in preventive care are enthusiastic about the new programme and that almost all parents have had their children vaccinated. The local press, radio, and television have also reacted positively.

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SIR,—Two recent articles have highlighted the difficulty of obtaining a satisfactorily high immune rate to rubella following schoolgirl immunisation. The aim of any scheme to prevent rubella deformities must, however, be to stop women of childbearing age from getting or even coming into contact with the disease and must not merely aim at producing immunity in schoolgirls.

As Dr David Gilmore and others remark (27 February, p 628), the present scheme, if

<sup>&</sup>lt;sup>1</sup> Cherry JD. *Hospital Practice* 1980;15:49-57. <sup>2</sup> Hedrich AW. *Am J Hyg* 1933;17:613-36.