the malnourished patient and excessive amounts of uranium in drinking water. They represented only 1% of the total number of papers. From these figures I believe that eventually the program of the college will not contain one paper dealing with the beneficial or adverse effects of good or bad nutrition.

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Erythema multiforme in children taking amoxicillin after vaccination

To the editor: I would like to report to *CMAJ* readers two cases of erythema multiforme occurring in children taking amoxicillin after receiving measles, mumps and rubella (MMR) vaccine.

In both cases the children, after receiving the vaccine, were attended by on-call physicians, who diagnosed otitis media and prescribed amoxicillin. The first child was seen 4 days after vaccination. He had not had adverse reactions to amoxicillin before, but this time markedly swollen joints and typical erythema multiforme developed on the 10th day. He was seen by a consultant pediatrician and admitted to hospital. The amoxicillin therapy was stopped, and the symptoms subsided after 3 days.

In the second case a child received amoxicillin for a "suspicious" middle ear infection on the 11th day after vaccination. After taking amoxicillin for 9 days erythema multiforme developed. The rash subsided 24 hours after the drug was discontinued.

The Ontario Medical Association's committee on drugs and pharmacotherapy, under Chairman Dr. Michael Brennan, gathers information from physicians and other health care providers regarding adverse drug reactions. With their cooperation I was able to obtain a print-out of all reported adverse reactions to amoxicillin from the health protection branch of the Department of National Health and Welfare, which maintains the computer file on the adverse drug reaction program. This information is regarded as raw data and has not been scientifically verified for cause–effect relations by scientists at the health protection branch. Data from Jan. 1, 1970 to Dec. 31, 1981 revealed one further case of erythema multiforme occurring in an infant receiving amoxicillin after an MMR vaccination. There were also two other cases in which nonspecific rashes developed in the same sequence. Furthermore, there were 2 cases of erythema multiforme and 24 of nonspecific rashes in children in the age category in which MMR vaccine is

For prescribing information see page 868→

normally given (12 to 15 months). It would be reasonable to expect that in at least some of these individuals the rash developed after vaccination.

The incidence of rashes in response to amoxicillin is reported by one manufacturer (Ayerst Laboratories) as 2%. This is considerably less than the reported 9% frequency seen with ampicillin, which is chemically similar to amoxicillin.[1] It has been suggested that this difference will not stand the test of time and that the higher figure may more accurately reflect the incidence of rashes due to amoxicillin (*Medical Times*, February 1975).

The manufacturers of MMR vaccine (Merck Sharp & Dohme Canada Limited) reported only two cases of erythema multiforme in children receiving the vaccine up to the end of 1981 (J. Mailloux: personal communication, 1982). The product literature indicates that rash occurs infrequently, is usually minimal and is not generalized.

It may be that the cases I have reported were simply reactions to amoxicillin and had nothing to do with the preceding vaccinations; however, I suspect that this is not so. I would appreciate hearing of similar cases from *CMAJ* readers.

If this sequence of events is more than coincidental it raises some interesting questions. First, does MMR vaccination sensitize an individual to subsequent doses of amoxicillin? The mechanism could be similar to that causing increased sensitivity to ampicillin in patients with infectious mononucleosis, with lymphatic leukemia and hyperuricemia, or with cytomegalovirus mononucleosis; this phenomenon is thought not to be allergic.[2] Second, is amoxicillin being prescribed unnecessarily for the problem labelled as "suspicious ears", which is in fact a normal side effect of the vaccination? Third, does MMR vaccination cause an increased incidence of otitis media that is appropriately treated with antibiotics but in which there is a greater risk of reaction to the medication?

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Hepatitis B markers in Indochinese refugees

To the editor: In a letter to the editor in the June 15, 1982 issue of *CMAJ* Drs. White and Mathias question the validity of our findings regarding the prevalence of hepatitis B markers in Indochinese refugees (*Can Med Assoc J* 1981; 125: 1243–1246). In particular, they were concerned that compliance with the testing program may have been low and therefore that the data obtained may not have been representative of the population as a whole. This question arises because they were only able to verify testing for 42% of the refugees destined for British Columbia.

We did not mention compliance simply because we did not consider it an issue. We studied a mass screening program that reached most of the refugees (Table I). More specifically, our published data were obtained from the Montreal group, of which 97.5% were tested.

Table I—Numbers of Indochinese refugees tested for serologic markers of hepatitis B between November 1979 and November 1980

Point of entry	No. tested	% of total no. admitted
Edmonton	15 091	85.5
Montreal	25 755	97.5
Total	40 846	92.7