

whether any otorrhoea had occurred. No attempt was made to correlate the otorrhoea to swimming activity or upper respiratory infection.

We studied 210 children (mean age 6 years). At the beginning of the summer the tubes had been in place for a mean of six months (range one to 24 months). Purulent discharge developed in 40 patients, 20 of whom had not been swimming. The incidence of otorrhoea was lower in the 142 children who had swum during the summer (13%) than in the 68 children who had not (31%) ($p=0.005$, χ^2 test). The incidence of infection in the group who had not swum was not significantly different from that in the 27 children who had swum one to five times (33%) but was significantly higher than that in the 41 children who had gone swimming six to 20 times (12%, $p=0.01$) and in the 71 children who had gone swimming more than 20 times (7%, $p<0.001$).

Our conclusions are the same as those of Pringle¹: children with grommets should be allowed to swim. Penetration of water into the ear canal is not the main factor leading to otorrhoea in patients with grommets.

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Measles, mumps, and rubella vaccination

SIR,—Notification of measles in Somerset has progressively declined from 568 cases in 1988 to 65 cases last year. Our immunisation rate for measles is currently 96%.

During the first eight weeks of 1992 there were 69 notified cases, of which 17 were in people who had been immunised. Of particular interest is the change in the age distribution (table), which has shifted towards a group that has historically lower immunisation rates: the measles immunisation rate for the cohort born in 1980 in Somerset is 79%. This shift is occurring elsewhere in the United Kingdom (H Carter and D Gorman, personal communication).

Number (percentage) of cases of measles by age in 1989 and first eight weeks of 1992

	Age (years)			
	0-4	5-9	10-14	≥15
1989	72 (51)	37 (26)	16 (11)	17 (12)
1992 (first 8 weeks)	24 (35)	18 (26)	22 (32)	5 (7)

This could be overcome by a two stage immunisation regimen for measles, mumps, and rubella for all children, with the second dose replacing the current rubella immunisation for teenage girls, as Harden Carter and Dermot Gorman suggest.¹ This is routine in Scandinavia,² has been recommended in the United States,³ and has been suggested previously in the United Kingdom.⁴ The matter

needs to be reconsidered urgently by the Joint Committee on Vaccination and Immunisation.

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Transvaginal ultrasonography

SIR,—R K Goswamy's editorial on the usefulness of transvaginal ultrasonography clearly and simply outlined the advantages of transvaginal scanning.¹ Several points, however, require clarification.

Firstly, transvaginal scanning should be used as a supplementary procedure after an initial transabdominal survey of the pelvis. Because of the inaccuracy of digital examination it is crucial to survey the area from the umbilicus to the symphysis pubis and laterally to both flanks. This survey cannot be completed with a high frequency (5.0-7.5 MHz) transvaginal probe because of the lack of penetration and small footplate.

Secondly, the limited field of view with transvaginal probes (a) cannot accommodate longitudinal measurements of the uterus, which are often needed for baseline and follow up studies; (b) means that large masses cannot be viewed; and (c) does not permit assessment of associated pathology—for example, liver metastases, ascites, lymphadenopathy, and hydronephrosis.

Thirdly, occasionally ovaries are situated high in the pelvis and cannot be viewed transvaginally.

Fourthly, acceptability to patients, especially elderly people, virgins, and people from ethnic groups, must be considered.

Most importantly, I wish to raise the issue of gynaecologists having a transvaginal scanner in their consulting rooms. Ultrasonography requires detailed academic and practical training. Subtle differences in echo patterns can be recognised only after hours of practical experience. Scanning is three dimensional, and not everyone can master the skill necessary for that. I do not believe that gynaecologists could dedicate time to learn this special technique in their overstretched schedules. In NHS hospitals it seems unrealistic, even if doctors have the ability, to expect them to perform routine scanning within clinics. Though I agree that transvaginal scanning is important in the management of ectopic pregnancies, I find it worrying that Goswamy should suggest that a laparoscopy should be performed on the basis of a negative finding by an inexperienced operator. The skills of an experienced sonographer must never be underestimated.

How much knowledge about the safety of ultrasound does a gynaecologist possess? A large part of the qualification in ultrasonography is concerned with the physics and the safety aspects of ultrasound. It is essential to minimise exposure to ultrasound and, hence, the potential hazard. Students must be closely supervised so that correct settings for power, overall gain, time gain compensation, and processing are selected. Equipment must be tested and quality assured regularly. Owing to the high power levels during Doppler studies (especially transvaginally, when the probe is close to the organs and possibly a developing fetus), cavitation, non-linear propagation, thermal effects, microstreaming, and radiation pressure can occur. Inexperienced operators should not dabble in this work. Doppler must be used only when the result of the study will be of clear benefit to the patient.

Finally, the latest view is that ovarian screening

is not cost effective or successful (study day of British Medical Ultrasound Society, London, October 1991).

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Diagnosing bronchioloalveolar carcinoma

SIR,—In their paper on the relation of bronchioloalveolar carcinoma to tobacco Alfredo Morabia and Ernst L Wynder underestimate the problem of distinguishing these tumours from other forms of adenocarcinoma.¹ They argue that the frequency of histological misclassification of these tumours is so small as to be insignificant as a source of error in their study. In fact this histological diagnosis can rarely be made with complete certainty as the same pattern can be seen in metastatic adenocarcinoma in the lung (particularly pancreatic carcinoma)² and at the periphery of conventional primary adenocarcinomas of the lung.³

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Underreporting of pedestrian accidents

SIR,—David Teanby has calculated that pedestrian accidents are underreported by 16% in the United Kingdom.¹ Figures from a comprehensive survey that Kjellstrom and I carried out in Auckland, New Zealand, over 10 years, showed that reporting ratios for pedestrian accidents decreased from 75% to 48%, with a similar decrease in underreporting of injured car drivers and passengers.² This decrease in reporting of accidents by police was partly explained by a decrease in the number of traffic police from six officers per 10 000 cars in 1975 to five per 10 000 in 1982.

A breakdown of the figures for preschool children (age 0-4 years) showed that 77% of accidents that occurred on roads were reported but only 3% of those that occurred off the road were reported (for example, a parent backing a car over a child in the driveway or a car rolling down a slope because the handbrake had not been applied). Figures for cyclists were greatly underreported (20% in 1975, decreasing to 15% in 1982).

These ratios correlated well with figures from Sweden, Denmark, and the United Kingdom. Our conclusions were that police accident figures (with the exception of figures on fatal accidents) were unreliable as many accidents were not attended by the police even when serious injury had been inflicted. The likelihood of police reporting an accident clearly depends on the type of accident: there is no legal obligation to report some accidents, and people attending to victims rarely report the accident to the police. Often the people involved may not be aware who is responsible for reporting the accident, and if they are they may not want the police to be involved.

Central registration of accidents with a merging of statistics compiled by the Ministry of Transport