

encouraging that 150 duly appointed officers from the 201 health districts in England and Wales attended a meeting in London on World Health Day. Future meetings aimed at identifying problems, methods by which they may be overcome, and exchange of ideas are planned. But success will largely be dependant on the commitment, enthusiasm, and drive of the appointed officers, many of whom are specialists in community medicine. They are busy people; will they have sufficient time to devote to improving their district's immunisation performance?

On World Health Day the chief medical officer announced that combined measles, mumps, and rubella vaccine will shortly be introduced in Britain for immunising children of both sexes in their second year of life. The aim of inducing rubella as well as measles and mumps immunity among preschool children of both sexes is to eliminate the hazard of pregnant women being infected by young children, often their own. This procedure will augment rubella vaccination of schoolgirls and susceptible adult women. An 86% uptake rate of rubella vaccination among 10-14 year old schoolgirls has now been achieved in England and Wales, and a recent study showed that only 2.8% of 72 200 pregnant women were susceptible to rubella compared with 8.5% of men in the same age group.¹⁰ Although current vaccination policy directed towards schoolgirls and rubella susceptible adult women is resulting in a considerable decrease in maternal rubella, complete vaccination of the target population is almost certainly an unrealistic goal, but vaccination of a high proportion of young children will drastically reduce the circulation of rubella virus in the community. Currently, susceptible pregnant women continue to acquire rubella: 173 cases of laboratory confirmed rubella occurring during the first 16 weeks of pregnancy were reported in 1986.¹¹ In addition to the anxiety of patients and those caring for them, considerable resources continue to be expended by laboratory investigations.

The augmented rubella vaccination policy will eventually require a "catch up" programme so that children aged 2-10 may also be protected against measles, mumps, and rubella. Incorporating rubella and mumps vaccine with measles will probably increase measles uptake rates, as occurred in Sweden.¹² The Public Health Laboratory Service is already monitoring this programme by examining the prevalence of antibodies to measles, mumps, and rubella in different age groups.

Although the augmented programme is designed eventually to eradicate infection, the United States experience suggests that it may be more difficult to achieve than had been expected. Studies with mathematical models show that poor vaccination uptake rates in preschool children may increase the proportion susceptible to rubella among older age groups.^{13,14} This caveat should not be a reason for discouraging the augmented programme but rather an incentive for ensuring that high uptake rates are obtained.

Although there may be an increased risk of mumps in adults, in whom complications such as orchitis are more likely to occur if vaccine uptake rates are poor, in the United States the combined vaccine has resulted in a decrease of 95% in the incidence of mumps from the prevaccination era.¹⁵ There has been no increase in the incidence of mumps among adults.

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Lymphoedema of the arm

Lymphoedema of the arm is rare. Most cases are caused by disease in the axillary and subclavian lymph nodes or by their surgical or radiotherapeutic destruction. Of the 2000 patients with primary lymphoedema we have seen at St Thomas's Hospital in the past 30 years, only 16 have had primary lymphoedema of the arm.¹ In nearly all of them the condition was associated with oedema of the legs and was congenital; it presented at or soon after birth and on lymphography was shown to be due to obliteration of the lymphatics.² In the arm we have not seen enlarged lymphatics (the so called megalymphatics), as may occur elsewhere in the body. Nor have we seen a patient with primary lymphoedema severe enough to warrant surgical intervention; in every case an elastic arm stocking and pneumatic compression have been sufficient to keep the limb to a manageable and functionally useful size.

Conversely, in the same period in the many more patients with secondary lymphoedema the condition has often been severe enough for us to consider surgery. Secondary lymphoedema of the arm occurs most commonly after mastectomy. Oedema caused by primary disease of the lymph nodes affecting the axillary or subclavian nodes often improves when these are treated with irradiation, but oedema caused by neoplastic infiltration, surgical excision, or radiotherapeutic destruction of the axillary lymph nodes invariably progresses.

The incidence of oedema of the arm after mastectomy varies according to the method of assessment. Kissin *et al* have suggested that a difference in the volume of the arm, measured between the tips of the fingers and a point 15 cm above the lateral epicondyle, that is over 200 ml is diagnostic of arm oedema and occurs after a quarter of mastectomies.³ The degree of oedema,³ and of the restriction of arm movements,⁴ is closely related to the damage to the lymph nodes. Thus local operations within the breast or sampling of the axillary lymph nodes rarely cause swelling of the arm; excision of the axillary nodes or radiotherapy alone causes

swelling in 7-10% of cases; whereas axillary clearance followed by radiotherapy causes swelling in 33% of cases.

Many patients develop temporary minor swelling of the arm immediately after mastectomy.⁵ If severe, swelling at this time is likely to be caused by axillary vein thrombosis because lymphoedema takes many weeks to develop.⁶ Minor swelling that is still present one month after operation and is getting worse is likely to be lymphoedema, but another cause is compression of the axillary vein by scar tissue. Oedema of the arm may also begin many years after mastectomy.^{5,6} The commonest cause is recurrent disease in the axilla causing venous or lymphatic obstruction but occasionally it is progressive obliteration of the lymphatics secondary to the surgical or radiation lymph node damage (the die back phenomenon).⁷

Lymphoedema of the arm, whether primary or secondary, is best managed by simple conservative measures. Firstly, encouraging the patient to wear a good quality arm stocking and tight elasticised glove; secondly, massaging the arm centripetally twice a day; and, thirdly, raising the arm in a sling or on pillows above heart level at night and using a pneumatic compression legging by day, and if possible throughout the night as well.

When the arm is so swollen and heavy that the shoulder joint becomes painful, clothes never fit, and flexion of the elbow is restricted the surgeon may employ the same types of reducing operation used on the leg.⁸ The only cosmetically acceptable procedure is the simple excisional (Homans's) operation. The medial side of the arm and forearm is treated

first, succeeded three months later by the same procedure on the lateral side. The size of the fingers cannot be diminished and the results of the procedure on the back of the hand are often unsatisfactory. The frequent minor complications of reducing operations such as necrosis of the edges of the skin flaps and loss of cutaneous sensation cause more trouble and distress in the arm than they do in the leg. Nevertheless, the operation often substantially improves both the symptoms and the appearance so that it is worth while in patients with gross oedema and no recurrence of their primary disease. No longer is it acceptable to tell a patient with postmastectomy oedema that she must accept the discomfort and gross disfigurement as the price of survival when the surgeon can help considerably, with both conservative treatment and surgery.

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Regular Review

Advances in managing childhood cancer

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The 1960s and early 1970s saw important advances in treating childhood malignancy, and by the late 1970s more than half of childhood cancers were curable. These cure rates were not achieved, however, without the risk of treatment causing problems in the future. The improvements did not come through any single breakthrough but rather by the cooperation of paediatric oncologists, haematologists, radiotherapists, surgeons, pathologists, and research workers supported by many paramedical professions.

As the newer more intensive multidrug treatments were used some children succumbed to infections, drug toxicity, and metabolic complications, but as supportive care improved death in remission became less common. The intensity of treatment has actually been reduced in certain groups once a good prognosis has been established—for instance, only 50-60% of all children with nephroblastoma now need radiation treatment and most children with Hodgkin's disease are cured by chemotherapy alone (even those with regional or disseminated disease).

The difficulties presented by the small numbers

These important advances could not have been achieved without the referral of patients to regional centres, where they can be entered into national and international studies of treatment regimens. The rarity of childhood cancer (1 in 10 000 children affected each year) makes multicentre studies essential as no one doctor can gain enough experience or accrue enough patients to assess accurately the impact of a new treatment. The Americans led the way with their co-operative study groups, which were imaginatively supported by major grants from government sources; they allowed the groups all over the United States to concentrate their resources on solving the problems without concern for the costs to the patients.

These groups have recruited most cases of childhood cancer into nationally conducted controlled trials since the 1960s, and the success of this policy has been clearly shown in the paper of Miller and McKay on reductions in childhood