CORRESPONDENCE

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Measles, mumps, and rubella vaccine: time for a two stage policy?

SIR,—We believe that there may be a need to change the present national immunisation policy for measles, mumps, and rubella vaccine. Since Fife Health Board's initial involvement in piloting the vaccine in 1987 we have achieved an extremely high uptake, with 96% of all 2 year olds at the end of 1991 having received the vaccine. Despite this a major outbreak of measles occurred recently in part of the health board's area. This outbreak started early last November and is continuing, with a total of 176 cases notified up to 21 February. The table shows that the disease has occurred mainly in older children, particularly those aged 9 and over. These children should have received measles immunisation in the early 1980s, but many did not as uptake then was just above 50%.[1]

The introduction of measles, mumps, and rubella vaccine into the United Kingdom's childhood immunisation schedule has been an undoubted success with high uptakes and a consequent substantial decline in notifications of measles, mumps, and rubella.[2] Despite this, outbreaks of measles among older children have also recently been reported in north Wales[3] and Somerset (A Hill, personal communication). We are aware of data from the antibody surveillance study in England, which show that susceptibility to measles has generally declined in childhood, particularly in 1-4 year old children (consistent with the improved vaccine coverage being achieved).[4] Despite this we are convinced that the current one stage policy of giving measles, mumps, and rubella vaccine at 15 months with continuation of the rubella programme among schoolgirls is still not sufficient if we are serious about eliminating measles. Because of the small percentage who fail to seroconvert after immunisation and failure to immunise all young children, outbreaks of measles can still occur, especially in older age groups.

The World Health Organisation has set a target of eliminating indigenous measles and congenital rubella in Europe by 2000.[5] We do not think that this can be achieved in the United Kingdom with existing policy. Other countries in Europe have shown that a two stage vaccination policy for measles, mumps, and rubella can rapidly reduce the incidence of the disease, leading to the possibility of eventual elimination.[6,7] As we have argued previously, such a policy would be administratively straightforward to implement, simply meaning the continuation of the current programme of giving measles, mumps, and rubella vaccine at 15 months and replacing rubella immunisation among school girls with measles, mumps, and rubella vaccine for both boys and girls.[8] The time for such a change now exists, otherwise outbreaks such as we have recently experienced will continue to occur. We would be interested to hear the views of others.

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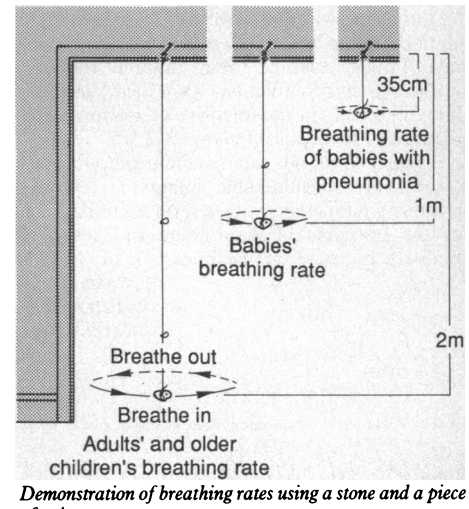
Breathing rate and pneumonia

SIR,—Pneumonia, which is usually bacterial, is the number one cause of death in most developing countries. The recent meeting in Washington suggests that there may be four million such deaths each year.[1] Suitable antibiotics and antibacterials and the knowledge how to use them are now available near the homes of most children. However, a major problem arises in the recognition of both the disease and the need for urgent action by the family if the life of the child is to be saved.

The World Health Organisation suggested that rapid breathing is the single most important sign of pneumonia. This has led to some controversy, because the respiratory rate of babies is so variable and also as to what rate provides the highest sensitivity with an acceptable simplicity for use in a clinic.[2,3] In detecting pneumonia in the community, simplicity is essential. Thus for the mother and the family the combination of the baby being unwell and breathing rapidly is the main sign.

Discussion with colleagues concerned with primary school education led to an appropriate indicator: a metronome made of a stone and a piece of string. The size of the stone and the size of the swing are unimportant. The stone is attached to the string and loops made at 35 cm, 1 m, and 2 m (figure). The metronome is usually demonstrated in front of parents or older children by standing on a chair and swinging the stone.



Demonstration of breathing rates using a stone and a piece of string

The stone is first swung at 2 m, and the onlookers are encouraged to breathe at this rate. They are then told that this is the rate at which adults and older children breathe (21 breaths/min). The demonstration is then repeated with the stone at 1 m (30 breaths/min), the rate of a normal small baby, and 35 cm (50 breaths/min), the rate of a baby with pneumonia. The group is then impressed with the need to rush to a clinic all babies who are unwell and breathe like this persistently over 10 minutes. A member of the group is then asked to repeat the demonstration.

This technique has been used with doctors, nurses, and those responsible for organising primary school education, all of whom believed it could be useful. One of us (RB) had an opportunity while on a student elective to try it out in rural schools in Ghana. The children's knowledge was tested by asking them to complete a simple story about a small child with pneumonia. The number who recognised the importance of fast breathing in a child who had not been running or crying increased threefold after the demonstration.

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Age of children with measles during current outbreak

Age (years):	<1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	>18
No:	10	9	2	2		8	5	2	5	9	7	10	34	37	4	14	5	2	3	8