PANIC IMMUNIZATION

SOME THOUGHTS ON RECENT EVENTS

BY

GUY BOUSFIELD, M.D.

Immunological Specialist, London County Council

Recently some small outbreaks of diphtheria and poliomyelitis have afforded an opportunity for excellent immunization propaganda. Radio, television, and newspapers, together with local authorities, have urged people to take advantage of the free immunization facilities now universally available. Health visitors, school authorities, and others have simultaneously joined in the chorus.

From the standpoint of the public health administrator this is superficially all very satisfactory, but it is not quite so welcome to those executives, doctors, nurses, and clinic clerks who have suddenly to try to cope with the vastly increased tempo. As the speed of work increases there is an inevitable decline in the quality of its performance. An informed medical critic who witnessed some of this rushed immunization in progress could not do otherwise than give it a condemnatory write-up.

Minimal Requirements

In the days when children and some adults were only being given injections of plain diphtheria antigens such as A.P.T., P.T.A.P., or T.A.F., affording protection against the one disease, it was possible to speed the rate of work in immunization clinics considerably, up to the powers of endurance of the doctor, nurse, and clerical staff, without material loss in the efficiency of the procedure. The introduction of whooping-cough and poliomyelitis immunization during recent years has altered the picture completely, yet it is surprising how many people do not seem to realize the extent of the change involved. It has now become essential, when using such antigens, to make certain that the patient has no allergies or constitutional peculiarities which render inoculation inadvisable or even dangerous. At a modest estimate it may be said that it takes nearly three times as long to deal with the average case properly as it did in the days of plain diphtheria prophylaxis.

At a minimum, the points to be attended to in each case are:

1. Is the child before the doctor the one whose name appears on the record card? (Few workers will dispute that mistakes have occurred or have nearly happened, especially when rush conditions obtain.)

2. In each new case for inoculation with antigen containing pertussis vaccine—for example, triple antigen of diphtheria, whooping-cough, and tetanus—the minimal inquiry should be: Has baby always been healthy; has it ever suffered from fits or convulsions, skin trouble, or eczema; has it been near any infectious disease or been ill in the last few weeks; and is there asthma, eczema, hay-fever, or history of fits in the family? (It must be realized that answers to these questions often demand considerable discussion with the parent. The queries must not be gabbled in parrot-like fashion, and the mother's answers must be considered carefully.)

3. On each visit after the first a history of any general or local reaction to the last injection must be sought, and if necessary the dosage must be reduced or pertussis immunization abandoned, with an explanation to the parent why this has been done.

4. On the final visit the purpose of the certificate or record card must be explained to the parent. This is particularly necessary in the case of children immunized against tetanus; for the object of the exercise is not to prevent tetanus—a very rare disease—but to obviate the necessity of giving serum after injuries. Thus, unless parents realize what to do with the certificate of inoculation *the whole procedure is wasted.* It is necessary to say something like this: "This card is stamped 'TETANUS' in red. If you ever take this child to a doctor or a hospital with a cut or an accident, please show this card, as it helps with the treatment. And see that your husband understands about this, and knows where the card is kept."

5. Answer questions about other immunization or vaccination and warn of the month's interval necessary between the end of one treatment and beginning of the next, giving dates when required.

6. Writing up record cards legibly and making such clinical notes as are often required.

The fact that there is a rush is no excuse for slip-shod work, and yet clearly there is a point at which the staff that endeavours to do its work properly becomes very fatigued if numbers are excessive. It must be realized that some children and other persons may be made seriously ill, or unnecessary allergies such as asthma, eczema, or even convulsions produced, if intelligent steps are not taken in deciding what procedure to adopt. In the case of poliomyelitis the undesirable results of uninspired inoculation do not seem to be very frequent, but it is highly important to avoid using ordinary poliomyelitis vaccine on a penicillin-sensitive person, and to give adequate attention to the medical history. In the case of smallpox vaccination a history must be obtained and consideration given regarding when or whether to perform the operation if there is any allergic condition—for example, infantile eczema or dermatitis—or history of possible fits or convulsions.

From the foregoing remarks it may be appreciated that the sessional time of from two to two and a half hours is fully occupied in dealing conscientiously with some 60 subjects, especially with the inclusion of matters such as filling-in international vaccination certificates, and dealing with parents whose knowledge of English is negligible; this is an ever-increasing difficulty.

The Open Clinic

A doctor who tries to work conscientiously on the lines indicated, and who suddenly finds his work doubled, is placed in a well-nigh impossible position. This is the evil of the open clinic, where all and sundry can come at will until a certain hour; for when the entrance door is closed the waiting-room may still be chock-a-block, and all those waiting must receive attention.

It may be said that parents could be given a card to read asking the questions about allergy, family history, etc., thus saving much time. Anyone who has watched a customs officer at a terminus handing out such a card of inquiry about dutiable goods will realize just how carefully such things are read! With the increasing number of foreigners at most clinics, the document might have to be printed in a dozen or more languages. In any case, we are doctors, and should sort out the medical history ourselves.

What does all this hysterical propaganda really add up to? It enables a local health authority suddenly to produce wonderful immunization figures on paper, often at the cost of great fatigue to those who try to do

their work properly, and it may result in a lot of second-rate and somewhat dangerous treatment. I have heard of a number of occasions when allergic children, or those who have experienced reactions to first injections which have been ignored, have been immunized by the hasty or ill-informed, with unpleasant or even serious results. The trouble is that the less one knows of the subject the easier it seems to be to perform. The time taken up by the injection itself is negligible, and has not even been mentioned in the list of time-consuming activities of the clinic doctor. The man who merely injects large numbers of children and scrawls something, often illegible, on a card, with hardly a word to the parent, is on a very good wicket. He can handle 100 or so children at a clinic and trot gaily away with no sense of fatigue. *The danger is that the rate of work expected of a careful and experienced doctor is apt to be based on the numbers which an inexperienced or disinterested practitioner is prepared to handle at a single session.* From the point of view of statistics, the latter individual appears, on the surface, to be the best man to put on the job. This is a fallacy.

Provision for Local Outbreaks

What, in any case, is the use of allowing the general public, who for years have been deaf to entreaties to have their children immunized, suddenly to come in their hordes and invade the ordinary clinics, swamping those parents and children who were already availing themselves of the facilities at the proper time of life? It is not as if a magic wand could suddenly be waved to bestow on the panic-mongers and their offspring immunity against the present danger. Active immunity takes a month or two to develop, and such fear as exists in an emergency comes too late for effective action, except when antiserum is thought to be essential.

Understandably, health authorities wish to avail themselves of the opportunity afforded by a local outbreak to persuade those who have not accepted immunization facilities at the proper time to seek treatment. From the point of view of sound immunization it is essential that such a situation should be met so far as possible by putting on a sufficiency of extra clinics, only requiring existing clinics to add a reasonable number of subjects to their quota, after which the staff should be instructed to refer cases to one of the special clinics.

It must be realized that the pressure on an ordinary clinic in such an emergency does not end a week or two after a panic: with the three treatments usually required, the full load is on for about three months.

There is another angle that must be borne in mind. We are dealing with human beings, who are entitled to reasonable courtesy, and the infants and children to expert and gentle handling: they are not little lumps of meat. Again, some of the waiting-rooms in these open clinics during panic times have to be seen to be believed. Long before they get near the doctor many of the children are reduced to tears and howls by the milling crowds and stuffy atmosphere of waiting-rooms that are quite unsuitable to cope with emergencies. Quite a number of mothers who have to stand for a long time with their babies are reduced to the verge of hysteria. Again, during scare periods large numbers of older children are brought for treatment for the first time. They are often of an age when they know fear, or even terror, of the treatment. Time has either to be given to gaining their confidence, if possible, or they have to be held down and inoculated forcibly. The latter procedure is reprehensible and should be avoided whenever possible. Some of these panic clinics, because of the rush involved, savour more of a concentration camp than of a civilized medical centre. One sometimes wishes that all those who beat the big propaganda drum could pay a visit to a few clinics and view the chaos they have created.

Conclusion

It would be a good thing if more doctors and health officers faced up to the fact that modern immunization is a job for the intelligent, a job in which the ability to give a decent injection is only a trivial factor.

The plea, therefore, is that panic situations should never be handled by trying to get a quart of people into a pint-sized clinic, but to provide a sufficiency of extra clinics at once to handle the major part of the horde of scared parents who have neglected their duty to their children in the past: such measures would avoid playing havoc with the existing organization. The open-clinic staff must have the right to determine when the load becomes too heavy for efficiency. The latter word must never be forgotten.

New Appliances

A RESUSCITATION MANIKIN

Dr. HENNING RUBEN and Dr. HOLGER HESSE, of Copenhagen, write: Closed-chest cardiac massage (Kouwenhoven *et al.*, 1960) is an important new technique that makes it possible to perform cardiac massage not only outside the operation room but even out in the field. Valuable time is saved because it takes only a few seconds to restart the circulation, while the thoracotomy method needs about one minute under optimal conditions. Furthermore, people not proficient in performing thoracotomy can use the closed-chest method, which in fact can be performed by almost everybody after very little training.

The technique of closed-chest cardiac massage consists in applying firm pressure 60–70 times a minute against the lower sternum of the patient, who is placed in the supine position on a firm support. Movements of the sternum 3–4 cm. toward the spine must be accomplished. It might be expected that a small respiratory exchange would be produced by the intermittent pressure exerted on the sternum. This, however, is most uncertain and cannot be relied upon, partly because each tidal volume will hardly be greater than the dead-space volume and partly because a free air passage must not be expected and is not even probable. Closed-chest cardiac massage does not constitute an effective method of artificial respiration. Therefore to produce a good exchange means that an insufflation method must be used.

Though one person by himself might produce a good result, the chances of successful resuscitation are increased if one person is doing the massage while another does the artificial respiration. Both the artificial respiration and the massage must be performed properly, and co-operation between the two persons must therefore be practised. Person-to-person training of expired-air ventilation is, however, not advisable because of the risk of transmission of infection, and cardiac massage is too painful to practise on conscious persons, and, furthermore, carries the risk of trauma—for example, fractures.

Therefore the AMBU manikin (Ruben, 1960) devised for teaching intermittent positive-pressure respiration has now been accommodated to make it suitable for training in closed-chest cardiac massage (Fig. 1). For example, one