

Health Service, wish to offer their patients the facilities of private medical care at a predetermined modest cost and to enjoy with them the freedoms traditionally associated with it."

Matters were taken a stage further at the Annual Representative Meeting in Swansea, and Dr. Jones was then able to tell the Representative Body that a sample inquiry had shown that some two-thirds of those answering were interested in using such a scheme, a proportion rising to 90% in the event of mass resignations from the N.H.S.<sup>3</sup> "Perhaps most significant in regard to immediate needs was the fact that, of those who replied, some 95% were willing to subscribe their £10, including even some doctors who would not themselves wish to operate the scheme side by side with the N.H.S." To recruit staff and get the machine moving a minimum of £80,000 is necessary, but the target of Independent Medical Services is £200,000 and more in order to give the company financial stability.

Dr. Jones's appeal for an outright gift of £10 from each general practitioner in the country is now in everyone's hands. This is not much to ask. What stands out above all else is the widespread dissatisfaction among the younger general practitioners, who to begin with were wholehearted in their welcome of the National Health Service.

If present conditions are not radically altered they will be able to show in a practical way the extent of their dissatisfaction with the terms and conditions of service in the N.H.S., and whether or not they wish to be collectively in a position to offer a real challenge to it. Dr. Jones and his committee also continue to make the point that it would be desirable to have such an alternative scheme side by side with the N.H.S. even though there is a substantial modification as the result of the work of the general practitioners' negotiators with the Minister of Health, two of whom, incidentally, are directors of the new company Independent Medical Services Ltd.—namely, Dr. Ivor Jones and Dr. J. C. Cameron.

The numbers of doctors who will pay the £10 asked for will be a real measure both of current dissatisfaction with the N.H.S. and of a determination to do something about it. Dr. Jones and his colleagues have taken a courageous step, and their colleagues in general practice should support them. If they fail to get the support, then indeed general practitioners will be in a much weaker position than before. But at least no one will be able to say after this that the British Medical Association has not done everything in its power not only to push forward progress on the Charter<sup>4</sup> but to create a practical and viable scheme for an independent service run by doctors.

Obviously the B.M.A.'s attention has been concentrated on the Charter, the independent medical service, and the enormous amount of work involved in these matters. On the assumption of a successful issue of the present appeal the B.M.A. will have the less easy task of securing the sympathetic reception of the plan by the public. The independent service is in essence parallel to the N.H.S., and it may be believed that in many areas patients would prefer to take part in a service less hedged round with restrictions and more acceptable to doctors. If this were to happen, then it would be for the public itself through Parliament to seek ways of opting out of at least part of their expenditure on the State's National Health Service.

Many influential voices have stated that the National Health Service is here to stay. The Porritt Committee spent six months discussing this matter and ended up with the conclusion that it was to stay. The same reply was given recently by the President of the B.M.A., Sir Clement Price Thomas, in his address to the World Medical Association.<sup>5</sup> Sir Clement said that many were to-day looking at the N.H.S. "somewhat anxiously and critically." Having expressed his faith in its endurance he nevertheless went on to add this: "It will, I am convinced, have to be modified considerably as time goes on. This is, of course, quite obvious, as it must change with the changes in medicine, in society, and in the outlook of doctors, patients, and politicians. If it is not a growing organism it will cease to have any meaning." In other words the country as a whole, and the medical profession with it, have reached the point when patching up is no longer good enough even though some further patching up has to be done until the N.H.S. can be radically reformed.

## Epidemic Cholera

Cholera is an ancient and dramatic scourge of mankind. Fear of this disease in Britain did much to facilitate sanitary reforms in the mid-nineteenth century, and in the international field it drove the nations to work together in the control of communicable diseases for common protection. It disappeared from America at the end of the last century, and 1923 marked the end of the last great pandemic wave.

From then on cholera declined and remained restricted to its endemic area in the basin of the Ganges and Brahmaputra deltas in West Bengal and East Pakistan. From an average of 164,000 deaths a year in the period 1945-9 the toll dropped to 11,000 deaths in 1960 and the disease seemed to be disappearing spontaneously. This did not prove to be the case, and in 1963 there were 65,157 cases with 21,735 deaths, the highest figures for five years.

*Vibrio eltor* was first isolated in 1906 and for several decades has largely been confined to an endemic area in the Celebes Islands. The infection it causes is clinically indistinguishable from typical cholera, and cholera El Tor must be regarded as being essentially identical with classical cholera.<sup>1</sup> This was recognized by the World Health Organization Quarantine and Prevention of Disease (Amendment) Ordinance (1962), which redefined cholera to include cholera El Tor.<sup>2</sup>

Since 1961 cholera El Tor has spread from the Celebes and invaded Indonesia, Sarawak, the Philippines, Sabah, Taiwan, Korea, Hong Kong and probably the Chinese mainland, Irian Barat (West New Guinea), Malaysia, Burma, Thailand, India, and Pakistan. In 1965 an epidemic broke out in Afghanistan, the eastern provinces of Iran, Bahrein, and entered Uzbekistan in the U.S.S.R. The entry of cholera El Tor into India was first detected in April 1964 in Calcutta, and before the end of the year it had spread to several districts of East Pakistan and West Bengal. In Calcutta cases of El Tor infection soon outnumbered the cases of endemic cholera, and by the end of the year there was only one case of classical cholera for every 10 cases of cholera El Tor. The latter then spread to Bihar and to Bombay and Gujarat, where its causative organism was isolated in almost equal proportions with *Vibrio cholerae*. Thus in less than one

<sup>1</sup> *Brit. med. J. Suppl.*, 1965, 1, 97.

<sup>2</sup> *Ibid.*, 1965, 1, 207.

<sup>3</sup> *Ibid.*, 1965, 2, 42.

<sup>4</sup> *Ibid.*, 1965, 1, 89.

<sup>5</sup> *Brit. med. J.*, 1965, 2, 750.

year it had caused outbreaks in both the eastern and western states of India.

Cholera El Tor spreads rapidly and extensively over much wider areas than classical cholera; it also reaches areas where classical cholera is already endemic, and in several places the new infection has displaced the old. In the *B.M.J.* this week Drs. S. Mukerjee, S. Basu, and P. Bhattacharya report (page 837) that in mixed culture *V. eltor* eliminates *V. cholerae* in a few hours both *in vitro* and *in vivo*. It may be expected that because of the lower incidence of cases and higher carrier rate of cholera El Tor the total number of clinical cholera cases in former endemic areas may decline and yet the area of infection increase. Cases of classical cholera may be diminished in number.

In 1963 14 cases of cholera El Tor were imported into Japan as ships' passengers, and for the first time the cases were detected among travellers arriving by air. Healthy carriers may excrete *V. eltor* for several months in contrast to up to three weeks for *V. cholerae*, so it is reasonable to suggest that the El Tor variety may spread further in the Middle East and possibly to the West.

Recently a controlled field trial of the effectiveness of classical and El Tor cholera vaccines has been carried out in the Philippines.<sup>3</sup> It was the first strictly controlled field trial of cholera vaccines since Ferran introduced the first one in 1885. The trial covered 584,000 people and tested an endemic *V. eltor* fluid vaccine, a *V. cholerae* vaccine, a cholera oil-adjuvant vaccine, and a monovalent typhoid vaccine.

Observations on reactions to inoculation were made in 1,000 persons selected at random. Nearly all the severe reactions that occurred were caused by the oil-adjuvant vaccine. The classical cholera vaccine accounted for only 0.8% of the total number of severe reactions, the El Tor vaccine 1.7%, and the typhoid vaccine 1.4%. Of about 146,000 persons given the oil-adjuvant vaccine 1,687 developed severe reactions, or 1 in 86. A 26-week period of surveillance was carried out and it was observed that the effectiveness of the vaccines, expressed as a percentage reduction in the incidence of cholera in immunized groups when compared with the control group, was as follows: classical cholera vaccine 26%, El Tor vaccine 42%, oil-adjuvant vaccine 56%.

There were 325 confirmed cases of cholera in the vaccinated groups, with 25 deaths. It was shown that the classical cholera and El Tor vaccines conferred better protection than the oil-adjuvant for the first 60 days; during the next 60 days the protection they gave decreased, while the oil-adjuvant vaccine maintained and showed a tendency to increase its protective capacity. At the end of six months the oil-adjuvant vaccine conferred 67% protection, the El Tor vaccine 25%, and the classical cholera vaccine none at all. At the end of nine months the protective effect of the oil-adjuvant vaccine was at the 50% level while the El Tor vaccine no longer gave protection.

An analysis of the symptoms of the 325 cases showed that the course of cholera El Tor diseases was not significantly altered by vaccination. But the overall carrier rate in the vaccinated group of 8.2% was lower than the 12.4% in the control group. It can be seen from these results that the oil-adjuvant vaccine would be preferred if it did not cause such severe reactions. This valuable trial has shown that the

effectiveness of the vaccines used is low and of short duration. Further laboratory and field investigations to improve and assess the value of different types of cholera vaccine are required if the disease is to be controlled through immunization.

The control of cholera is based on epidemiological principles of early accurate diagnosis and effective treatment, notification to national and international health authorities, isolation of contacts and detection of carriers, disinfection, immunization, environmental hygiene, and health education. Laboratories and rehydration centres may be lacking in countries threatened with cholera outbreaks, so that international assistance and the sharing of experience may be needed. Adequate supplies of effective vaccine must be available, and every assistance should be given to help countries raise standards of water supplies and sewage disposal. Modern travel enables cholera to be imported anywhere, but it can spread only when environmental hygiene is poor. Perhaps the new cholera threat will spur governments to carry out the necessary sanitary reforms. The provision of safe water supplies on a permanent basis and proper sewage disposal is an expensive undertaking, especially on a large scale. Sums of money will be required that can be provided only by full international co-operation. It is to be hoped that this will be forthcoming.

## England's Health

The Englishman's traditional preoccupation with the weather is certainly justified if the statistics of its effect on his health are any guide. Since the early months of 1964 were relatively mild the death rate for the year was distinctly lower than in recent years, being 11.3 per thousand population and the lowest since 1954. As a result the expectation of life at birth—a convenient statistical figure (or fiction if based on one year's mortality)—cheerfully rose a few points. A truer estimate of it based on the figures for several years puts it at about 68 for males and 74 for females. The Chief Medical Officer of the Ministry of Health, who provides these figures in his latest annual report,<sup>1</sup> shows that with one important exception young people up to the age of 35 have enjoyed a greater reduction in death rate over the last ten years than their elders. The exception is youths aged 15–24, whose mortality was actually 6% higher in 1964 than in 1954, mainly owing to motor-cycle accidents.

A particularly striking reduction in deaths has been achieved in those which comprise maternal mortality, the rate for which in 1964 was only two-fifths of what it was 10 years before. This is all the more creditable in view of the shortage of hospital beds and the rising birth rate. The infant mortality rate also reached a record low figure of 19.9 per thousand live births. The birth rate rose for the ninth successive year, being 18.4 per thousand population. To what extent the increase heralds a larger population is still problematical, for it is accompanied by a reduction in the average age of marriage. Consequently women are having babies at younger ages than they did formerly, and not till the final size of their families is known can the effect on the size of the population be determined exactly.

<sup>1</sup> *Brit. med. J.*, 1962, 1, 700.

<sup>2</sup> *Ibid.*, 1963, 1, 1178.

<sup>3</sup> Philippines Cholera Committee, *Bull. Wld Hlth Org.*, 1965, 32, 603.

<sup>1</sup> *Annual Report of the Chief Medical Officer of the Ministry of Health for the Year 1964, 1965.* H.M.S.O. (16s. 6d. net).