unduly if there is not a daily bowel action. When constipation is present (and the presenting symptom may be alleged diarrhoea due to retention of faeces with overflow), the regular use of roughage in the diet and sufficient fluid intake should not be overlooked in giving advice on the subject.

In choosing an aperient it is wise to consult the patient, as many know what suits them best and may be very sensitive to dosage.

In addition to senna, cascara, and saline aperients, which form a good basis for treatment, two other preparations may prove useful: (1) methyl cellulose, which acts by increasing the bulk of the faeces and so stimulating peristalsis; and (2) dioctyl sodium sulphosuccinate ("dioctyl-medo"), a drug which acts by penetrating and making the faeces flocculent—a useful treatment for impacted faeces.

In combination with aperients or as an alternative many elderly patients favour the use of suppositories. Enemata should not normally be needed except for an emergency and for patients who are permanently incontinent of faeces.

Anorexia

This may be due to many conditions, physical or psychological or both, and is often associated with loss of morale or even with the presence of mild depression. Morale is essential to good health in elderly patients, and diet normally plays an important part in maintaining a sense of well-being.

Consequently, when there is loss of appetite, all factors likely to be responsible should be considered, and prescribing bitters or tonics to improve the appetite may be found appropriate.

Conclusion

In treating old people the following principles must be remembered:

1. Drug therapy should be as "streamlined" as possible, limited to the fewest drugs and ordered in the simplest way.

2. Treatment should be adequate and given with as little delay as possible.

3. Psychologically it is always better to avoid injections if oral preparations are satisfactory, as patients quickly become dependent upon the "prick."

4. The frailties of old people should be considered in the following ways and special precautions taken when prescribing for them:

- (a) Be sure that an elderly patient has heard and understood instructions.

- (b) Warn the patient of possible side-effects, and advise him what to do if these occur.

- (c) Be sure that eyesight is good enough to read the directions.

5. Ascertain that the patient is mentally reliable to take what has been prescribed, and that he understands the importance of doing so.

6. Arrange that he is able to reach the surgery or hospital when his drugs are finished, or alternatively that he has someone interested who will.

I wish to acknowledge my thanks to D. G. Wood, Chief Pharmacist, West Middlesex Hospital, for his help in reading through this paper.

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A VISIT TO THE U.S.A.

BY

J. O. F. DAVIES, M.D., D.P.H.

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The purpose of my visit to the U.S.A. was to study schemes of patient care and to note the developments in design and planning of hospitals. I spent over seven weeks in the U.S.A., and 10 days in Puerto Rico, where an interesting experiment in regionalization of hospitals is taking place. The visit was made possible by a grant from the Rockefeller Foundation.

Hospital Development

It is not generally realized that the population of the United States increased by 35m. over the years 1940–55. Three times as many persons were admitted to hospital in 1955 as were admitted in 1935. How have the hospitals kept up with such increased utilization?

Under the Hill Burton Programme the Federal Government has assisted in the building of between 3,000 and 4,000 new hospitals since the end of the war, providing over 135,000 beds; 1,200 projects which will add a further 52,000 beds are under construction, and others in the pre-construction stage will provide nearly another 11,000 beds. Financial assistance has been provided by means of a "matching contribution," which varies from one-third to two-thirds of the total cost of the hospital. The local sponsoring body may be public or private, but the hospital must be non-profit-making and provide a community service. The plans must reach certain minimum standards laid down by the United States Public Health Service, and to that end they are examined by officers of the department. This examination also provides opportunities for suggestions to be made to the sponsoring body, but every scope is given for local preference. The United States Public Health Department, as a general guide to hospital planning, has issued a large number of important publications in the form of "guide material" which covers every aspect of hospital planning and construction. They range from "A Prototype Study—600-bed hospital" through "The Hospital Laboratory—Equipment and Supply Lists," to "Recommended Lighting Practices," and are freely available and contain mines of information.

More than half the new hospitals have fewer than 50 beds, 20% have from 50 to 99 beds, and the remaining 22% have 100 beds or more. Half the projects are located in communities with a population under 5,000. Not all the new hospitals in the United States are provided under the Hill Burton Programme, however. Some of the most interesting examples of those which have been built privately are the 10 hospitals of the United Mineworkers in West Virginia and Kentucky, and the Permanente Hospitals of San Francisco and Los Angeles, originally provided in association with the Kaiser Foundation.

The deficit of beds in the United States hospitals is still thought to be great, and estimates suggest that about 850,000 more are required to meet the nation's peace-time needs. Though nearly 200,000 beds are now being provided under the Hill Burton Programme, progress in remedying this shortage is said to be slow because of

population increases and obsolescence of existing facilities. The standard to which the United States Public Health Department has worked so far as general beds are concerned is 4.5 per thousand of the population.

Hospital Staffing

It is, of course, difficult to generalize about hospitals in the United States, but in the voluntary non-profit-making hospitals, as opposed to state, municipal, veteran, or federal, the medical staffing differs considerably from that in this country. In addition to specialists on the staff of a hospital most of the general practitioners of the area also hold hospital appointments and are able to admit fee-paying patients under their care. A hospital of 300 beds may well have between 150 and 200 attached doctors. This large number of doctors results in the number of operating theatres in America being far in excess of those in this country. Many doctors undertake surgical lists which are much shorter than those seen in English hospitals, and may attend to operate on one case only.

The Health Information Foundation of New York, in a survey in 1955, ascertained that 52% of surgery in America was undertaken by general practitioners, not all of whom had passed the American Board specialty examinations. The American Joint Commission on the Accreditation of Hospitals is doing a great deal to stimulate the control of the standard of professional care by the medical staffs of hospitals by requiring the establishment of medical records committees, tissue committees (which comment critically on the justifiability or otherwise of surgical procedures undertaken), and credentials committees (which examine the qualifications of applicants to the hospital staff).

American non-teaching hospitals are experiencing increasing difficulty in staffing hospitals at "intern" and "resident" levels. There are 5,000 more approved internships than there are graduates to fill them. The hospitals that succeed in attracting residents provide married quarters and set themselves out to make available an adequate postgraduate training, even in some cases going to the length of appointing a whole-time director of medical education for this purpose. An interesting idea for the British observer is the "chief of service" system. In some hospitals one clinician in medicine and one in surgery is designated "chief of service." He is the medical administrator responsible for the whole of the medical or surgical side of the hospital and co-ordinates the efforts of the surgeons. It seems that he has a not unimportant part in determining the level of clinical care which the hospital provides.

Hospital Design

One of the features that has influenced ward design is the prepayment insurance schemes. These provide varying standards of benefit, resulting in almost universal provision of private or semi-private accommodation in single rooms or rooms where three or four, or at most six, patients share accommodation. These rooms may open off a single corridor centrally or off a double corridor (the race-track design). The size of the ward unit is usually about 30 beds, though in one of the United Mineworkers' Hospitals there were 70 beds to a floor, and in the Herbert Moffatt Hospital, San Francisco, there were 50 beds to a ward.

The use of air-conditioning allows more internal rooms than in this country. Generous provision of lavatories, even to single rooms, makes it possible to deal with men and women on the same nursing unit and makes for flexibility in admitting men or women according to demand. The space in the rectangle of the race-track is large, and includes a nursing station with clean and "dirty" utility rooms, and treatment rooms. There is nothing makeshift about some of these nursing stations, which are equipped with telephones, call systems, pneumatic-tube delivery service, and medicine- and chart-rooms. A room is provided in which doctors may dictate letters and interview patients and relatives. The nursing station is also the location of the ward clerk, who is in constant attendance during office hours. Nearly all the planned nursing units seen are devised with the idea of making the nurses' journeys shorter, so that they tend to be placed at the centre of the area served.

Another interesting ward pattern is the Y-shaped ward, with the service rooms in the stem of the Y, the wards being entered centrally.

Central Sterilization

No hospital is without its central sterilization and supply department. This means there is one central supply distributing agency in each hospital, responsible for providing the nurse and the doctor with their needs. While central sterilization departments vary in their lay-out, all undertake the preparation and sterilization of instruments, syringes, dressings, gowns, gloves, and sterile solutions. Sterilizing no longer takes place in the various departments of the hospital, and there is no sterilizing in the wards. The time of the nurse in the ward is thus saved. Some of the workers in central supply departments make up standard packs for every sterile procedure or operation carried out in the hospital. The packs are labelled so that the contents are clear to the user. They are wrapped in linen or paper, and have the merit of being sterile. The number of British hospitals which have in recent years shown that their sterilizing procedures do not result in the preparation of sterile dressings and utensils makes it clear that the central sterilizing department is much needed in this country.

An interesting feature observed in the United States is the increasing use of disposable equipment. Paper cloths, paper bags to line containers, and paper covers, even to the cover of the cotton sheet on the examination couch, changed with each patient, are widely in evidence. Wax carton medicine-cups and drinking-vessels and plastic enema sets are in general use. A number of hospitals are using disposable syringes and needles, though these are at the moment relatively expensive. Nevertheless, these hospitals still claim that on balance the savings on the use of disposable syringes make them an economic proposition.

One of the likely developments of central sterilization is the preparation of packs for standard procedures, not by the central supply department but by the manufacturer. The use of cobalt for sterilizing may make it possible for these packs to be provided sterile and ready for use. The central supply department to be developed in hospitals in this country may well as a consequence be much smaller than those seen in America, as it may be possible to introduce sterile or unsterile pre-packaged

goods at various stages of the central supply production line.

The materials provided for operating theatres generally come from the central supply department, but to some extent theatres in the United States have elected to remain outside the central supply system. There seems to be no good reason for this. There may, however, be a need for a small, very rapid sterilizer in operating theatres to deal with the occasional dropped instrument.

Operating Theatres

Most hospitals have a centralized operating department with a generous supply of rather smaller theatres than are seen in England. There are no separate anaesthetic rooms. Despite the fact that some operating theatres continue to look after their own sterilization, central supply of materials tends to allow the structure to be more compact. Nearly all the larger hospitals provide rooms adjoining the theatre in which patients remain until they have recovered from the anaesthetic.

Recovery Rooms and Intensive Nursing-care Units

Recovery rooms vary in size and in the duration of the patients' stay in hours. These post-operative units are highly equipped and well staffed. In some instances they have been expanded into what are called "intensive nursing-care units." This development appears to be the result of the shortage of trained nurses. Some intensive nursing care units admit any seriously ill patient, not necessarily after operation; and patients with active gastro-intestinal bleeding or severe burns, for example, may be admitted to these special care units. Another development on which there is much discussion is "progressive patient care." The objective is stated to be the tailoring of services to the individual nursing needs of the patient. Three grades of care are generally envisaged—intensive, intermediate, and minimum or self-care. Whilst a number of hospitals claim to be undertaking progressive care, few in fact appear to be doing so. Segregation of patients according to their nursing needs, instead of sex, age, and type of illness, whether medical or surgical, is an interesting experiment in making the maximum use of skilled nursing care, but it is doubtful whether the Americans themselves have yet come to any final conclusions on this experiment.

Catering

Throughout the United States meals for all staff are provided on the cafeteria system. In this way the number of catering staff is reduced to a minimum. The food is wide in variety, and is attractively prepared. The cafeteria is under the control of the catering department, as is the service of meals to the wards. An interesting method of serving meals to the wards is the "tray-veyor" system. A moving belt in the kitchen conveys the tray between two lines of personnel—one serving hot foods, the other serving cold. The trays are checked at the end of the conveyor belt with the menu card before passing into a lift which carries the food to a point near the nursing station of the ward concerned. The distribution and serving of the food is the concern of the catering staff, not the nursing staff. The food arrives at the patient's bedside quickly, and is according to the patient's choice, a menu having been shown to

them beforehand. Another method is delivery of food in electrically heated containers, as in England. With the tray-veyor system the machinery is put into reverse at the end of the meal and the trays are automatically unloaded into the dish-washing machine in the kitchen.

Other Departments of the Hospital

X-ray departments of hospitals of any size are very well equipped. Automatic bulk-processing units are common in radiodiagnostic departments, and are said to economize in staff. On the radiotherapy side many hospitals possess modern equipment in the shape of cobalt units and linear accelerators. Laboratories are generous in size, and in many instances have provision for research. Equipment is plentiful, and benches and sinks are of a very high quality. Nearly all hospitals have emergency rooms or casualty departments. Many of these are supplied with beds so that anxious casualty officers are not confronted with the choice of sending a patient home or admitting him to a ward in the hospital. The patient can be watched under the control of the casualty officer for a period of hours or, if need be, days. This useful facility also avoids the disturbing effect of admitting a patient to a ward at night.

Out-patient departments in non-teaching hospitals are as a rule not comparable with those seen in this country. The nearest approach to the English out-patient department is that seen in the United Mineworkers' and the Permanente Hospitals. Many hospitals provide consulting rooms on a rental basis for consultants on the staff of the hospital. The clinician provides his own receptionist or nurse, and technical investigations are undertaken in the hospital x-ray departments or laboratories on a payment basis. In many instances the out-patient department is so constructed as to be suitable for private consulting practice.

Nursing

It was of great interest to find that the problems of nursing in the United States are very similar to those in England. There is a relative shortage of nurses, though the numbers of trained personnel per thousand of the population are higher than in England. The Americans are much concerned with methods of determining the requirements of nursing establishments, and some very interesting work is being undertaken by way of operational research at Johns Hopkins Hospital under the direction of Dr. Charles Flagle, a doctor of engineering at the university. Hospital administrators, conscious of rising hospital costs, are increasingly interested in determining the number of nurses that must be employed. This is a problem which affects us in England also.

Nurse-training is undertaken by university schools (15%), hospital schools of nursing and junior colleges—the latter corresponding to technical schools in England. In some hospitals there is a clear division between the nursing service under the director of nursing and nurse-training, over which the director of nurse education presides. In others the matron or director of nursing has the responsibility for both sides, discharged through assistant directors. As already mentioned, catering is not the responsibility of the nursing staff in American hospitals, nor is housekeeping, the department which is responsible for cleaning everywhere.

American nurses have a 40-hour week, and tend to work a three-shift system. The shortage of professional nurses has resulted in the recruitment of practical nurses and nursing aides. Practical nurses have a training period of from 12 to 15 months' duration and carry a State recognition (a licensed practical nurse is roughly the equivalent of the State-enrolled assistant nurse in this country). The training of the nursing aide (equivalent to our nursing auxiliary) varies from one to six months.

Nearly all American ward units have two-way loud-speaker systems which enable the patient to speak to the nursing station, in which there is a ward clerk if not a nurse. The ward clerk relieves the pressure on nursing personnel, and has been introduced generally in the United States. She deals with telephone inquiries, writes out requisitions of all kinds, enters up charts, and undertakes a large number of non-nursing duties. Patients appear to be well satisfied with the two-way loud-speaker system, though nurses with whom it was discussed did not regard it as a substitute for visiting the patient.

Payment for Medical Care

The Americans pay for their medical care mainly by voluntary health insurance, and 75% of the insurable population have some protection in this way. Even people so insured have, however, far less than complete protection against medical costs, and a recent study (Health Information Foundation, vol. VI, No. 6) suggests that most prevalent forms of health insurance cover only about one-third of the total costs of illness and health care to insured families. Nevertheless, health insurance, as underwritten by Blue Cross (doctors' fees), Blue Shield (hospital costs), and more recently commercial insurance companies, has increased enormously over the past few years. Indeed, health insurance forms a "fringe benefit" in many contracts between workers and employers. Increasingly the big unions enter into group arrangements with insurance companies to cover their members. Employee groups form the backbone of growth of insurance. In the mining and manufacturing industries 90% of workers and their dependants are covered by voluntary health insurance. Other industries vary from 33% in agriculture to 75% in transport and public utilities. In West Virginia the mineworkers have gone further and built 10 new hospitals in this rugged country. They are staffed by whole-time specialists and administered from Washington.

Commercial insurance appears to be gaining at the expense of the older non-profit forms of insurance and offers special contracts to low-risk populations. This may result, of course, in contracts being more difficult to make for high-risk groups of the population, such as old people. This is the one group needing adequate coverage, with their reduced incomes and high utilization rates for medical and hospital care; and voluntary health insurance of the population aged 65 and over has increased from 26% in 1952 to 39% in 1959. A recent survey conducted by the University of Chicago into voluntary health insurance among the aged showed that two-thirds of those aged 65 and over wished for an insurance which would cover all medical expenses, and half favoured Government insurance that would pay doctors' and hospital bills.

An interesting study sponsored by the Health Information is that of the Windsor (Ontario) Medical Services Plan. This contract covers all medical and surgical services, x-ray and special services, fees of consultants, services of anaesthetists and assistants at operations, preventive medical examinations and refractions, confinements, including antenatal and post-natal care, and consultations in the "office," home, or hospital. Tuberculosis, mental illness, drug addiction, and acute venereal disease are excluded and there is a waiting period before treatment of various conditions can begin. The Windsor plan is something which does not exist in quite this form in the United States. There is ample evidence that the American public is interested in having voluntary health insurance to cover a broader range of medical expenses than that designed to cover hospital expenses and doctors' fees for care in hospital.

Many sizable medical expenses occur outside hospital, and it is estimated that 20% of the total medical costs relate to care provided by doctors in the home and consulting-room.

In maternity care the trend is very much towards hospitalization. In 1935 63% of all babies were born outside hospitals. By 1956 95% of all babies were delivered in hospital and 97% of all registered births were attended by physicians, with an average of nine consultations for antenatal care. The duration of stay in hospital is between four and five days, the higher income groups staying longer. The average cost of physicians' service, hospital care, drugs, etc., in maternity hospitals was 75 guineas.

The cost of treatment in hospitals of all kinds is high, going up to \$50 (about £18) a day, without doctors' fees or many of the extras like operating-room charges or costs of radiological or pathological investigations. The average duration of stay in hospital is short, and it is by this means in part that the hospital beds available have been able to cope with the tremendous demand for hospitalization which has occurred over the past 20 years.

General Practice

One of the most interesting features of American medicine is the tendency to group practice. The groups include general practitioners and specialists working often in centralized clinics indistinguishable from the health centres which were conceived under the National Health Service Act but which have never come into being. Some of these groups, like the Hospital Insurance Plan of New York, are prepayment schemes, the practitioners being wholly or partly in the plan. The premises of H.I.P. are modern and efficient, and provide complete investigatory and treatment facilities for out-patients. Most of the doctors in the partnerships hold hospital appointments and arrange in-patient treatment, for which separate payments are made. The quality of care under H.I.P. appeared to be high and hospitalization rates relatively low. Every attempt is made to avoid home calls and bring patients to the office or clinic. It is conceivable that the difficulty of parking cars—a national problem—may be in part responsible for this. In San Francisco, the Permanente plan "health visitors" on the hospital staff pay home visits first and the hospital doctor goes to the home only on the request of the health visitor.

The number of doctors as revealed by a study made in 1955 was such that a family doctor sees about 26 patients a day, most of them in his office: 17% of all doctors see more than 40 patients a day and 36% see more than 30. The average family doctor puts in about six hours a day on office calls and about an additional two hours a day on house calls. It appears that when allowance is made for hospital visits the estimated median working week comes to roughly 60 hours.

Two interesting experiments in the United States are the Montefiore Medical Group and the group practice at the Rip Van Winkle Clinic. The former is based on the Montefiore Hospital, New York, which was originally a hospital for chronic sick. It provides a comprehensive medical-care system based on the hospital. The practitioners are in fact specialist-trained in internal medicine and they are responsible for patients in the home, in the office, and in the hospital. Each full-time practitioner has between 1,200 and 1,500 patients over the age of 9 years. Children under 9 are looked after by paediatricians, and the maximum allocated to a paediatrician is 800. The family physician in the medical group practices only "adult medicine" and does not undertake paediatrics, minor surgery, obstetrics, orthopaedics, dermatology, or ophthalmology. For each of these an appropriate consultant is available. Another interesting feature of this medical group, which is financed by the Hospital Insurance Plan of New York, is the association as a team of a doctor, a social worker, and a public-health nurse. The team is supported by two groups of consultants—on the one hand the surgeons, obstetricians, ophthalmologists, and so on, who are part of the Montefiore Medical Group; and on the other hand a psychiatrist, a psychologist, a health educator, and a social scientist.

The Rip Van Winkle Clinic, in Columbia County, is a remarkably interesting experiment for providing diagnostic and treatment services in a relatively poor rural community. The staff of the clinic is made up of 17 specialists who are paid, on a salaried basis, from a pool created from fees charged on a fee-for-service basis. It should perhaps be mentioned that patients are increasingly coming in to the Rip Van Winkle scheme on a prepayment insurance plan, though this currently represents a very small percentage of the practice income. The group have a number of clinics scattered throughout the county, with one centrally, equipped adequately for physical diagnosis, x-ray and laboratory examination, physiotherapy, and dentistry.

The Rip Van Winkle Clinic has opened a cancer-detection centre which offers a complete examination for "the forgotten man in medicine, the so-called symptom-free adult." "This examination consists of the following procedures: complete history and physical examination; laboratory study (blood count, sedimentation rate, blood serologic test, urinalysis, and examination of stool for blood, ova, and parasites); x-ray films of chest abdomen and gall-bladder, gastro-intestinal series, and barium enema; oral examination by a dentist, including full-mouth and x-ray films; electrocardiogram, proctoscopy, Papanicolaou smear of cervix; laryngoscopy (indirect); visual examination with Orthorater; Cornell psychologic screening; and a conference with a psychiatrist (optional)."

The clinic also provides a mental health service with a staff of a psychiatrist, child psychiatrist, clinical psychologist, and psychiatric social worker, in an attempt to give comprehensive medical care.

General practitioners in the United States are said to be more specialized than in this country, but a random sample covering the whole of the States in 1956 showed that 73% of physicians interviewed declared that theirs was a general practice. It is true, nevertheless, that less than half the profession classified itself as practitioners without certification or special interest in a specialty.

One of the criticisms I heard most frequently was that we had divorced general practitioners from hospitals. This is true only in part, but it does mean that surgery in Great Britain, taken by and large, is no longer undertaken by general practitioners.

Medical Research

One of the most impressive things in the United States is the amount of money devoted to medical research. In 1957 this was in the order of \$330,000,000, of which the Federal Government provided \$186,000,000, involving the employment of about 20,000 professional research workers. There are indications that this sum will rise to \$1,000,000,000 by 1970. Of this amount it is expected that the Federal Government will provide half and private philanthropy, industry, and endowments the remainder. These are, of course, astronomical figures compared with those for this country.

A most interesting place to visit is the National Institutes of Health in Washington. These are, in effect, seven hospitals within one curtilage. The institutes are devoted to the study of heart disease, metabolic disorders, cancer, mental health, neurological diseases, allergy and infectious diseases, and dental research. The 500 beds are served by a thousand laboratory rooms, and admission to hospital is secured only by patients suffering from the clinical conditions which the various institutes want to study. There is no charge for treatment, which must be very costly.

The budget of the National Institutes of Health for the year 1958 was \$211,000,000. Of this amount, \$147,000,000 was for extramural programmes, including research grants, training grants and fellowships, and grants to States for disease control and field investigations.

Visit to Puerto Rico

My trip ended with a visit to Puerto Rico. The population of this island, with a birth rate of 32 per thousand, increased by 18% between 1940 and 1950 and is now 2 million. Puerto Rico is rapidly becoming industrialized, and step by step with this development is endeavouring to regionalize its health and welfare agencies. The needs of the island have been surveyed and hospital and other medical facilities have been planned on a regional basis. There will be a teaching hospital in San Juan, with which will be closely associated a mental hospital and a hospital for chronic sick. The main specialist services will be located at San Juan in what will be known as the Medical Centre. Numbers of smaller health centres will provide limited

hospital care, public health and welfare services. These smaller health centres will send their major surgery, difficult midwifery cases, and patients requiring special diagnostic or treatment services to the district hospital. The district hospitals will have recourse to the Medical Centre teaching unit as needs be.

This is a fascinating experiment which could lead to a comprehensive system of medical care. There is great enthusiasm, but many have difficulties to be overcome, one of the chief of which is the provision of the necessary medical and ancillary personnel. Nevertheless, the start has been made, and here curative and preventive medicine, public health, and social services are being co-ordinated into a single system. This experiment, associated as it is with the American continent, where organized medicine is still an anathema, will be closely followed by all those interested in co-ordinated comprehensive medical care.

I am indebted to many doctors and administrators who gave me freely of their time, but particularly to Dr. Osler Petersen, then of the Rockefeller Foundation, for his wise guidance.

MEDICAL BIRTHDAY HONOURS

The names of the following members of the medical profession were included in a Birthday Honours List published in *Supplements to the London Gazette* on June 11.

K.C.M.G.

ALEXANDER MONTGOMERY WILSON RAE, C.M.G., M.D. Medical Adviser to the Secretary of State for the Colonies.

K.B.E. (Military Division)

CAMPION AUBREY RUMBALL, C.B.E., F.R.C.P., L.D.S., D.T.M.&H., D.P.M. Air Vice-Marshal, R.A.F. Honorary Physician to the Queen.

D.B.E. (Civil Division)

Lady MARY RANKEN HERRING, M.B., B.S. For social welfare services, especially in connexion with nursing organizations, in the State of Victoria, Australia.

Knighthood

ROBERT STEVENSON AITKEN, M.D., D.Phil., LL.D., F.R.C.P., F.R.C.P.Ed., F.R.A.C.P. Vice-Chancellor, University of Birmingham.

WALTER ERIC CHIESMAN, C.B., M.D., F.R.C.P. Medical Adviser, H.M. Treasury.

JOHN SAMUEL RICHARDSON, M.V.O., M.D., F.R.C.P. Physician, St. Thomas's Hospital.

GEORGE DOUGLAS ROBB, C.M.G., M.D., Ch.M., F.R.C.S., F.R.A.C.S. Consulting Surgeon, Green Lane Hospital, Auckland, New Zealand. Member, New Zealand Medical Council and New Zealand Medical Research Council. Nominated President-elect of the British Medical Association for the year 1961-2.

BENJAMIN WILLIAM RYCROFT, O.B.E., M.D., F.R.C.S., D.O.M.S. Oculist to H.R.H. the Princess Royal. Consulting Ophthalmic Surgeon to Corneo-plastic Unit, Queen Victoria Hospital, East Grinstead; the Plastic Unit of the Kent County Ophthalmic and Aural Hospital; and the Sussex Eye Hospital.

C.B. (Military Division)

GILBERT THOMAS LANCELOT ARCHER, M.B., B.Ch., F.R.C.P.I. Major-General, late R.A.M.C. Honorary Surgeon to the Queen.

WILLIAM DILLON HUGHES, C.B.E., M.D., F.R.C.P.I., D.T.M.&H. Major-General, late R.A.M.C. Honorary Physician to the Queen.

WILLIAM ROBERT SILVESTER PANCRIDGE, M.R.C.S., L.R.C.P. Surgeon Vice-Admiral. Honorary Physician to the Queen.

DERMOT FRANCIS WALSH, O.B.E., M.B., B.Ch., F.R.C.S.Ed. Surgeon Rear-Admiral. Honorary Surgeon to the Queen.

C.B.E. (Military Division)

LESLIE REGINALD HEBER KEATINGE, O.B.E., M.B., B.Ch. Brigadier, late R.A.M.C.

GERARD WARD MCALEER, M.B., B.Ch., D.T.M.&H. Air Commodore, R.A.F. Honorary Physician to the Queen.

JOHN GEORGE GLYN WHITE, O.B.E., E.D., M.B., B.S. Colonel, Royal Australian Army Medical Corps.

C.B.E. (Civil Division)

DAVID BROWN, M.B., Ch.B. For political and public services in Borneo.

LAWRENCE JOHN CLAPHAM, M.D., D.P.H., D.T.M.&H. Director of Medical Services, North Borneo.

JAMES GRAHAM, M.B., Ch.B. Senior Administrative Medical Officer, North-East Metropolitan Regional Hospital Board.

IAN DINGWALL GRANT, M.D. Lately President, College of General Practitioners. Vice-President, British Medical Association.

LUDWIG GUTTMANN, O.B.E., M.D., F.R.C.P. Director, National Spinal Injuries Centre, Stoke Mandeville Hospital, Aylesbury.

HENRY MCLORINAN, M.B., B.S., F.R.A.C.P., of Fairfield, Victoria, Australia. In recognition of his work in the field of preventive medicine.

MARTIN AMSLER RUSHTON, M.D., F.D.S.R.C.S., F.D.S. R.C.S.Ed. Professor of Dental Medicine in the University of London.

M.V.O. (Fourth Class)

HERBERT BRIAN KELLY, M.D., M.R.C.P. Wing Commander, R.A.F.

O.B.E. (Military Division)

CLIFFORD VIVIAN HARRIES, M.R.C.S., L.R.C.P., L.D.S., D.P.H., D.I.H. Surgeon Commander, R.N.

ROBERT ADAMS MCKEOWN, M.B., B.Ch. Surgeon Commander, R.N.R.

JOHN ERSKINE MALCOLM, M.B., Ch.B., F.R.C.S. Wing Commander, R.A.F.

O.B.E. (Civil Division)

JOHN ADAM, M.B., Ch.B. Regional Medical Officer, Ministry of Health.

WLADISLAW DERING, M.D. Senior Medical Officer (Surgical), Somaliland Protectorate.

JOHN DIXON, L.R.C.P.&S.Ed., L.R.F.P.S.Glasg. Chairman, St. Albans Medical Board.

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