SCIENCE

VOL. 80 FRIDAY, NOVEMBER 16, 1934 No. 2081

SCIENCE: A Weekly Journal devoted to the Advancement of Science, edited by J. MCKEEN CATTELL and published every Friday by

THE SCIENCE PRESS

New York City: Grand Central Terminal

Lancaster, Pa. Garrison, N. Y.

Annual Subscription, $6.00 Single Copies, 15 Cts.

SCIENCE is the official organ of the American Association for the Advancement of Science. Information regarding membership in the Association may be secured from the office of the permanent secretary, in the Smithsonian Institution Building, Washington, D. C.

EFFICIENT SURGICAL SERVICE FOR THE WHOLE COMMUNITY[1]

By Dr. ROBERT B. GREENOUGH

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UNDER its broad charter the American College of Surgeons has brought about outstanding improvements in the practise of surgery in the twenty-two years of its existence. It has set up qualifications for fellowship to ensure that every fellow is in fact worthy and competent to practise his designated branch of the art of surgery. Through its hospital standardization department and its special committees, the quality of hospital service and of surgical service supplied to the community has been greatly improved.

Profound changes, however, have been taking place in our civilization in the past twenty years. The mechanical age, with its mass production methods and the unprecedented advances of science, have brought new problems in political economy and have forced us to discard many of our older methods and ideals and to seek new patterns on which to build our economic structure.

The medical profession, however, has resisted the attempt to extend mass-production principles to the practise of medicine. It is their belief that the peculiarly personal and fiduciary nature of the relation between physician and patient is too precious to be jeopardized by radical changes of a socialistic nature. The individual is dependent on his medical adviser for the maintenance of his health and functional efficiency. In the selection of the physician or the hospital in which he has confidence rests the first step in that relationship of trust which plays so great a part in medical practise; a trusteeship—which is safeguarded by the Hippocratic oath and the code of ethics of the medical profession.

In the past five years of depression and unemployment many of the community resources formerly available for the care of the indigent sick have broken

[1] Abstract of inaugural address, Clinical Congress, American College of Surgeons, Boston, October 15, 1934.

down. This extra burden has fallen upon the medical profession to supply this service without remuneration. To this call of humanity the profession has responded, but in so doing many physicians have themselves been brought near to the level of destitution. More effective methods of supplying medical and surgical service to the community and especially to the indigent and the lower-income groups of the population, and of providing suitable remuneration for those who give this service, is an immediate and urgent necessity. Not only is this needed for the benefit of the community, but for the preservation of the community's investment in the trained medical personnel, including all the physicians, surgeons, dentists, hospitals and laboratories, nurses and technicians who are engaged in supplying medical service to the population.

This situation is of great concern to the surgeon, for the injuries and diseases which he is called upon to treat almost invariably require expensive hospitalization which not infrequently exhausts the patient's limited resources and reduces the professional remuneration to nothing more substantial than gratitude and good-will.

To the surgeon the quality of service given to the community is of supreme importance. Few of the injuries or diseases he is called upon to treat are of the self-limited class or tend of themselves to spontaneous recovery. A great part of his work also is of an emergency character and deals with acute diseases and injuries in which delay is dangerous and the moment for efficient treatment is fleeting. What must be done, must be done not only promptly but correctly, or the patient's chances of recovery may be sacrificed.

It is for this reason that the qualifications of the surgeon for the work he is to do are of such great significance. Every graduate of a medical school and every physician licensed to practise in the different states has received instruction in the general principles of surgery—in general practise the physician must be prepared to give surgical service in emergencies. The American College of Surgeons carries some 11,000 fellows on its rolls, but it would be manifestly impossible for them to do all the surgical work of the country. The emergency surgical service supplied by the general practitioner is necessary to the community and deserves the widest recognition. For major surgical service, however, prolonged training, adequate laboratory and hospital facilities and the judgment and dexterity obtained through experience are required. These qualifications fellowship in the American College of Surgeons is designed to certify.

Several other organizations exist for the certification of specialists in other lines of medical activity, but an amalgamation of all these different agencies under some central coordinating influence is to be desired in order that the qualification and certification of specialists may be national in scope and reasonably uniform in its requirements.

The hospitals of the country supply another means for determining the qualifications of specialists in the different branches of medicine and surgery through appointments to their staffs. Hospital staffs are subdivided primarily into medical, surgical and obstetrical divisions, but in large hospitals fifteen or twenty different special clinics and services are often recognized. This classification which is provided by the hospitals may well be utilized in the preparation of any plans for providing more efficient surgical service to the community, and since the hospitals themselves are an essential part of any such projects, they may well prove to be the most convenient units out of which plans for the provision of more efficient surgical service may be constructed.

It is an accepted principle that the medical and surgical care of the indigent sick is a community obligation. Only recently, and we hope temporarily, has it been necessary to call upon the state or the Federal Government for financial support of these community responsibilities.

The machinery through which these needs are ordinarily supplied includes city physicians and city and county almshouses and community and charity hospitals with medical officers on a full-time salaried basis or giving part-time service with or without remuneration. State or local public health departments are further provided to supply the community needs in the way of health-administration, sanitation, vital statistics and quarantine measures. The institutional care of the insane and of the tuberculous is also a medical activity of the local state government.

The problem of providing efficient service to the whole community is further complicated by the deplorable ignorance of the people in regard to what efficient service really implies. The sums expended annually for patent medicines and for the services of the quacks and cultists show that it is ignorance rather than economic conditions which leads people to such a waste of their resources. Knowledge of the basic facts of medical science must be more widely published and such educational campaigns must be carried on by the great national medical organizations and by the public health services of the community or of the state.

There is need, too, for further postgraduate instruction of the medical profession and, although this need is being met by many of the state medical organiza-

tions, there is yet more to do before the demands are satisfied.

From the point of view of their ability to pay for medical and surgical service there are at least three classes of the community to be considered: (1) The indigent, who can not pay at all; (2) those of adequate means who can afford to pay for what they need; (3) the intermediate group of those of moderate means who can pay for minor medical service but can not finance unaided the expenses of serious illness or prolonged hospitalization within their restricted incomes.

The care of the indigent sick is recognized as an obligation on the community, but too often this community burden is placed on the shoulders of the physician alone and he is expected and permitted to care for the indigent sick without compensation.

The physician who serves the community should not be expected to stand in any different relation from that of other professional men, such as lawyers or engineers who qualify for the public service.

This fact has recently been recognized by the Federal Government in providing and paying for the medical care in their homes or in the doctor's office of the dependents in the FERA and the CWA. This principle should be maintained.

The medical and surgical care of the well-to-do is reasonably well organized at the present time. It is the great moderate-means class of the population, however, that fails most frequently to obtain efficient service. When serious illness comes to the moderate-means patient staggering obligations in the way of debts must be assumed or the individual must lose his independence and become a burden on the community. It is to this group of the population that it has been proposed that the prepayment insurance principle be applied.

Voluntary or compulsory measures for health insurance have been instituted in many countries in the past thirty years. Some of these plans, as in Russia, involve the complete socialization and regimentation of medicine—a condition which is abhorrent to our western civilization and a form of practise which as "state medicine" is regarded as a menace to the best interests of the medical profession and of the community as well. Other plans, such as the British Health Insurance Act, involve less revolutionary changes and to this extent are looked upon with less disfavor.

For a country so large and so diversified in population and in resources as the United States it is not to be expected that any single national health insurance project should prove everywhere satisfactory. The problem is at present essentially a local one to be studied and solved by the members of the individual communities and by trial and error, if by no other means. In these experiments the medical profession must take the lead.

The prepayment insurance principle appears to be in fact about the only way in which those of the moderate means group can be expected to pay either the hospital or the physician for the medical and surgical services they need. Such projects as have been started experimentally have been restricted to relatively small and homogeneous groups of the population. State-wide plans of this nature have not yet been put in operation. To escape the dangers of commercialism and unfair competition, plans of this sort should include all the medical and surgical agencies of the community which are qualified and willing to give this service. The college has further recommended that these plans should be "free from the intervention of commercial organizations operating for profit," in order that the maximum amount of the fund may be available for the payment of the medical, surgical and hospital service which is supplied.

The moderate-means group includes all those with incomes above the indigent class and below the "well-to-do." It would not be unreasonable, however, to make a further subdivision of this large class into two smaller groups: (1) those on the *lower level,* whose resources unaided, even on a prepayment basis, could not be expected to meet the entire cost of medical, surgical and hospital care; and (2) those of the *upper level,* who can, through periodic payments, assure themselves of sufficient resources to obtain the services they need.

The difference between the amounts which the lower-level group can pay and the actual cost of the service must be obtained from other sources. In this case, as in the case of the indigent, this responsibility must devolve first upon the community.

The upper-level group of the moderate means class can carry their own medical and surgical expenses, provided hospital accommodation and efficient medical and surgical service can be supplied to them on a minimum cost basis. Intermediate wards to provide such service have been widely developed in the last few years. Voluntary prepayment plans for hospital or even for full medical and surgical service can undoubtedly be developed in connection with such middle-rate services; but they should not be restricted to individuals or small groups. They should rather be organized as a cooperative community effort to avoid all suggestion of unfair competition.

Difficulty will be found in defining accurately the limits of these economic classes—and standards will vary in different communities. Whatever standards are adopted, however, must be rigidly enforced. Those who seek undeserved charity service at the ex-

pense of the destitute must be prevented from securing such advantages, and the enjoyment of moderate means accommodations and reduced fees should be rigidly restricted to those whose finances do not permit them to obtain the needed care in private practise.

The cooperation of other groups than the physicians is also to be desired in consideration of these plans. From the sociologists and economists much important information is to be obtained and a closer and more harmonious cooperation between these groups and the medical profession appears to be the great need of the present moment in order that each may contribute of their knowledge to the solution of perhaps the most important question which affects the physical welfare of the community in the present generation. Let us conclude, therefore, that further information must be obtained by controlled experiment in smaller communities before a wise program of action can be prepared.

The responsibility of industry to maintain adequate emergency medical and surgical service for its sick and injured employees is at present widely recognized. The Board of Industrial and Traumatic Surgery of the American College of Surgeons has contributed in no small degree to improving the quality of this service by the establishment of minimum standards for industrial surgical services, based upon the fact that proper qualifications over and above that of the state license to practise medicine must be required of those engaging in this special form of surgery.

Smaller industries and, in certain parts of the country, even those of larger size have frequently chosen to entrust the risks and expenses of industrial accidents and workmen's compensation requirements to commercial insurance companies or "carriers" organized to assume these obligations. It is not unreasonable of course to expect that the responsibility of the insurance company, under these conditions, should become precisely that of the original employer so far as goes the obligation to supply adequate and qualified surgical service in the emergency treatment of the industrial accident case, and in its subsequent supervision, to ensure that competent surgical care is given. For the moment, the most practical way to secure these qualifications is to encourage those hospitals and those surgeons who desire to do this form of surgical work to meet the minimum standard established by the Board of Industrial and Traumatic Surgery of the American College of Surgeons.

No single health insurance plan of national scope appears at present to be applicable to the conditions existing in this country. The matter is at present one for local study and experiment; in which the best medical and surgical ability in the community is needed, acting in cooperation with others qualified by their knowledge of economic conditions to join in the study of the problem.

Individuals of the lower-level income classes in the moderate-means group, for whom some support derived from the community, to supplement any possible prepayment insurance plan, may possibly be needed, are the ones for whom the provision of efficient medical and surgical service offers at this time the greatest difficulties. With further progress in health education those in the upper level of the moderate-means class may well develop an interest and a desire to participate in voluntary prepayment plans, beginning first with hospitalization alone, and extending ultimately perhaps to full medical, dental and nursing services.

It is greatly to be desired that the trial of these new methods of providing medical and surgical service to the community should be encouraged in different communities where the cooperation of the hospitals, the medical profession and others interested in the maintenance of the public health can be secured. Certain general principles which should be observed in the organization and operation of these plans have already been approved by the college. The hospital department of the college provides a ready means of securing accurate information in regard to these plans and their operation which should be utilized to accumulate facts on which future judgment may be based.

While the advantages and disadvantages of the different plans for health insurance are under investigation in this laboratory of experience, a number of other steps are immediately open to us which should be of material help in providing more efficient service.

(1) The value of the code of ethics of the medical profession in the protection of the interests of the whole population must be more widely appreciated by the public.

(2) The medical and surgical care of the indigent sick must be recognized everywhere as an obligation of the community.

(3) The segregation of hospital wards for patients of moderate means, who can and should pay minimum hospital expenses and reduced fees, should be more widely practised.

(4) Abuses of hospital charity by those who can afford to pay must be prevented.

(5) The expansion of the activities of public health departments into the clinical field should be restricted to demonstration clinics for educational purposes; and to such other activities as can be made available to the community only by the use of public funds.

(6) The education of the public in regard to health matters and the postgraduate instruction of physicians should be more widely developed, and finally

(7) The quality of service supplied to the community should be recognized both by the public and by the medical profession as the first and most important consideration in every plan for providing more efficient surgical service and making it available to all classes of the population.

SOME HIGH LIGHTS OF ASTRONOMY DURING THE PAST YEAR[1]

By Dr. HARLOW SHAPLEY

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THE year has been well illuminated astronomically. High lights appear in India, Switzerland, Austria, Italy, Germany, Princeton, Arizona, Pasadena, Cambridge, and on Mount Palomar in California.

(1) The most talked-of star in the universe at the present time is the fourth magnitude eclipsing binary Zeta Aurigae. During the past three months it has had more powerful machinery devoted to its eclipse antics than ever before in its history or ours. Guthnick of Germany called attention some months ago to the importance of the month-long eclipse which the star undergoes three times in every eight years. Nearly three thousand observations by Miss Swope on the Harvard plates have defined the light variations closely, and in a dozen observatories over the world photometric and spectroscopic measures were made from August to October of the remarkable secret-revealing phenomena that occur at the beginning and end of the eclipse of a very hot blue star by its gigantic reddish and cooler companion.

(2) Confirmation of the great antiquity of the earth's crust comes this year from Vienna through work by Miss Kroupa on the radio-active properties of ancient rocks from Canada; she confirms earlier work on related rocks of the pre-Cambrian in getting an age of 1,725,000,000 years; the forming of the crust must have been much earlier.

(3) A new theory of relativity, which takes care of Einstein's corrections to Newtonian theory, but does not abandon Newton so completely and does not demand an exploding universe, has been advanced by the chief judge of the High Court of Allahabad in India, the Honorable Sir Shah Mohamet Suleiman. The judge is also vice-president of a Moslem university and a Cambridge-trained mathematician of high ability.

(4) From Mount Wilson and Harvard come extensive contributions to knowledge of the distribution of galaxies, and from Harvard some interesting results on the diameters of galaxies and the properties of supergalaxies.

(5) Dr. Merrill of Mount Wilson has discovered a new puzzle, and thereby makes a most important contribution to knowledge of interstellar space through finding some wholly unexplained interstellar absorption lines in the spectra of stars; interstellar calcium and interstellar sodium have long been known, but this is as yet interstellar mystery.

(6) From Princeton, Harvard, Mount Hamilton, Mount Wilson, and Flagstaff come important contributions in spectrum analysis—the discovery of methane and ammonia in the atmospheres of the outer planets, sulfur in the sun, quadruply ionized neon, not only in planetary nebulae of our galaxy but in an external galaxy, triply ionized argon in the nebulae, and in the hotter stars doubly ionized neon and argon. Coupled with these observations are some brilliant interpretations of atomic and molecular structure and behavior.

(7) Wholesale aluminizing of astronomical mirrors, replacing silvering, has gone ahead this year, culminating in the aluminizing of the Lick Observatory Crossley reflector. Silvering, in a few years, will probably exist only on the historical shelf.

(8) Equipped with an aluminized mirror Cornell sent an expedition (last summer) up the San Francisco Peaks at Flagstaff and now reports on the photographing of spectra of ninety-seven stars far into the ultra-violet, using the results to get at stellar temperatures.

(9) The Pope's observatory has been moved from his garden in the shadows of Saint Peter's to his summer place, Castel Gandolfo, well out of town, and there equipped with many new instruments which make this institution, under the direction of Father Stein, perhaps the best equipped observatory in Italy.

(10) Less than two weeks ago the California Institute of Technology purchased land at an altitude of 6,126 feet on Mount Palomar, San Diego, California, nearly a hundred miles south of Pasadena, upon which will be erected the 200-inch reflector—an important step in the decade that I fancy to call a golden age in astronomy.

(11) The day before yesterday, in Cleveland, Ohio, rough grinding was begun on the 82-inch reflector for the McDonald Observatory in Texas. On Mount

[1] Abstract of remarks at the annual dinner of the American Association of Variable Star Observers, Hotel Continental, Cambridge, 9 P. M., Saturday, October 20, 1934.