

500 Physicians a Week Are Asking For Penicillin; Many Turned Down

By John G. Rogers

Boston.—Six months ago an average of 250 civilian doctors applied each week for permission to treat civilian patients with the infection-killing penicillin. Today the average is well over 500 a week and increasing steadily.

Many of these applications still have to be denied or deferred because of the comparative scarcity of penicillin.

Although 17 American plants are now making the drug and turning out each month 100 times the entire output for the first half of 1943, there still is not enough penicillin for all civilian needs.

Before the end of this year—nobody can predict the date for certain because the Army and Navy get first call and now are amassing huge stocks for the treatment of invasion wounds—penicillin probably will be available for civilians in most American hospitals or even in drug stores.

Must Be Rationed

But, for the present, it must be rationed to civilians and the Government's ration director, 46-year-old Dr. Chester S. Keefer of Boston is so busy at that job that he has relatively little time for his regular work as head of the medical department of Boston University and director of Evans Memorial Hospital, on Boston's South Side.

When Dr. Keefer started the rationing project two years ago, he handled it with one assistant and one desk.

Today he has a staff of 11 persons working exclusively on the allocation of penicillin for civilians and compilation of reports on the drug's performance.

The project that started in one desk now occupies three large rooms at Evans, and the telegraphic correspondence alone is so heavy that a direct teletype system with Western Union has been set up in the hospital to handle nothing but penicillin messages.

Hundreds of additional messages, especially the more urgent ones, are handled each week by telephone. Dr. Keefer is proud of the speed his rationing system can take on in a crisis.

How to Apply for It

Recently, a man with a chronic bone infection was undergoing an operation in a New York hospital. It developed that penicillin was needed immediately. The New York doctor telephoned Dr. Keefer in Boston. Dr. Keefer telephoned a New York plant producing pen-

icillin. A stock of the drug was delivered at the hospital before the patient left the operating room.

That case illustrates the proper manner of requesting penicillin for a civilian. The application must be made by the doctor in charge, and he must contract with Dr. Keefer to supply a full dossier on the performance of the drug. Frantic requests often are sent in by relatives, but they are always denied.

Six months ago Dr. Keefer could respond to only a small portion of the requests, and in nearly all cases a life hung in the balance.

Today, because of the improved penicillin supply, he can honor all urgent cases and many which are not critical, but which might be helped by penicillin, such as cases of chronic infections.

Six months ago Dr. Keefer had on hand only 500 complete case records of penicillin performance. Today he has several thousand complete records, with several thousand more in the process of being completed.

Out of these records, and the records of hospitals and Army and Navy doctors conducting independent research with penicillin, is emerging the documentation of penicillin's powers and failures.

Complement to Sulfa

Many persons think that penicillin, a derivative of common mold, has pushed or will push the sulfa drugs out of the picture. This is not the case. Where it works, penicillin seems to be a tougher bacteria killer than sulfa agents, but it fails in some cases where sulfa succeeds. Actually, the two complement each other.

Sulfa drugs, for example, are good for intestinal infections. Penicillin is useless in such cases. It cannot be taken orally because the gastric juices destroy it. But in checking staphylococcus—the bacteria causing 90 per cent of infection in open wounds—penicillin surpasses sulfa drugs by far. That is why the Army and Navy have first call.

In some types of pneumonia penicillin is a life-saver. In others it is useless. In treating gonorrhea penicillin can cure probably 90 per cent of cases in one day. Sulfa drugs' record is about 75 per cent of cases in five days. Penicillin also is credited with an eight-day syphilis cure.

Research in penicillin versus venereal disease is not under Dr. Keefer's control; the armed services and some hospitals are doing that independently.

There is one small indication that penicillin may some day play a part in halting cancer, but it is far too early to predict anything. In Philadelphia recently a research man discovered that penicillin could kill certain types of mouse cancer cells growing in a test tube. But there is a vast difference between that and stopping cancer in a human body.

One baffling thing about penicillin is that chemists are unable to produce it synthetically, as they do the sulfa drugs.

To date they have not been able to determine its form and structure so that they can make it simply by mixing chemicals in a laboratory. In this respect it may turn out to be like quinine, which cannot be made synthetically.

Penicillin, a yellowish-white powder which usually is injected into veins and muscles in saline solution, is now being made in seventeen American plants—eight more than were producing it six months ago.

The manufacturing process is long and complex and expensive, though the cost is being reduced all the time. Two years ago 100,000 penicillin units sold below cost at \$20. Now the same amount costs \$3.25.

A St. Louis doctor has reported that he makes a crude but useful form of penicillin for external application at a cost of 5 cents a plateful in his kitchen, using a corn-starch mixture as the mold producer.

However, the production of penicillin in any form by any one but an expert is regarded as dangerous, because there are several varying strains of penicillin, some of which will kill not only bacteria but also human cells. In the extreme, such strains of the drug would kill the patient's infection and also the patient.

Racial Dental Deficiencies

Eight times more cavities were found in the teeth of nearly 3000 young white children than in an equal number of Negro children of the same age, the difference arising probably from inherited factors, Dr. Carl L. Sebelius of Nashville, Tenn., reported at the recent convention of the American Dental Association. Among the children of an older age group the Negro children, however, had just as many permanent teeth missing as did the white children.