

Kaiser shipyards pioneered use of wonder drug penicillin

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During World War II, Permanente Health Plan physician Morris Collen experimented with the treatment of pneumonia as he managed a large number of cases in the Kaiser Richmond shipyards. Many of the workers were in poor health to begin with, and the round-the-clock ship production in all sorts of weather exacerbated the situation. Dr. Collen reflected on that challenging period:[i]

When we first started there was no treatment for lobar pneumonia, pneumococcal type, except horse serum, and the people almost always got sick with serum sickness. It was a terrible treatment, but was all we had. Then... came sulfanilamide, and then sulfathiazole and sulfadiazine, and a series of sulfa drugs, and we began to treat pneumonias with them. That's where we began, I would say, our first clinical research, evaluating different treatments for pneumonia.

Among those experimental treatments was a new drug, penicillin.



Vial of new "wonder drug" penicillin, published in Richmond Shipyard newsletter *Fore 'n' Aft*, 5/19/1944 But this was wartime, and supplies were limited. Ninety percent went to servicemen fighting overseas, and only the remainder was allocated for distribution in the United States. Collen:

We had so many pneumonias and we had reported already in a journal that we were treating large series of pneumonias. So we got the first dose of penicillin in California, and treated a young man with a very severe lobar pneumonia, type 7. They all died from that, and this poor fellow was going to die. So we gave him this one shot of 15,000 units, and to this day I keep saying it was a miracle. He recovered.

The Richmond shipyard newsletter *Fore 'n' Aft* proudly announced the availability of this "wonder drug" in its May 19, 1944, issue:

Early this year a young shipyard worker developed a growth of pneumonia germs on his heart valves. At the Permanente Foundation Hospital he was given all the standard modern treatments that are regularly dispensed there to members of the shipyards' Health Plan. Even with sulfa drugs he showed no improvement. The rare new drug, penicillin, was finally used. He recovered quickly.

Later a 15-year-old boy developed a blood clot on his brain, following a case of severe sinusitis. Death results in nearly 100 per cent of such cases. This time penicillin was used.

The hospital record reads, "Patient completely recovered. Discharged from hospital."

Until few months ago, the Army and Navy took the whole production of penicillin. When military stockpiles had been built, the National Research Council began to release penicillin for civilian needs. It is still difficult to obtain. Only three hospitals in this area are allowed a supply. They are the three hospitals in the area which treat the largest number of patients. The Permanente Foundation is one of the institutions which is allowed to buy it.

The use of penicillin is made possible here by the financial support of the members of the Health Plan. Science's new wonder-cure is now at the service of shipyard employees.

While the war raged on two fronts, Collen published the seminal article on his civilian treatment experiences. His summary showed remarkable results:[ii] "A series of 646 consecutive patients with pneumococccic pneumonia were treated with combined sulfadiazine and penicillin therapy with a resulting mortality rate of 1.1 percent."

A subsequent *Fore ?n' Aft* article on the benefits of medical research boasted: "By using the facilities provided for doctors under prepaid, group medical practice ? to wit, the Health Plan -they evolved a complex treatment involving a combination of sulfa drugs and penicillin that is making medical history. Payoff: Human lives." [iii]

Dr. Collen's wartime use of penicillin not only saved lives, it provided sound medical evidence for future treatment methods.

Short link to this article: <http://bit.ly/1kcifjc>

Also see: "[The History of WWII Medicine](#)"

[i]"Morris Collen, Kaiser Permanente Medical Care Oral History Project II, Year 1 Theme: Evidence-Based Medicine," conducted by Martin Meeker in 2005, Regional Oral History Office, The Bancroft Library, University of California, Berkeley, 2007.

[ii] Morris F. Collen, M.D. and Alvin L. Sellers, M.D. "Penicillin Therapy of Pneumococcic Pneumonia ? A Preliminary Report." *Permanente Foundation Medical Bulletin*, April 1945.

[iii] "Research is Good Doctoring," *Fore ?n' Aft* 10/19/1045.