



Yolo County's Early MDs

By Fred H. Fairchild, MD

Practicing medicine in the horse and buggy era was very challenging — especially in winter when a narrow strip of high ground became an island in a sea of flood waters.

Dr. Fairchild, who was born in 1875 on the family farm two miles southwest of Knights Landing, was one of the founders of the Woodland Clinic. He began a history of the Clinic in 1941, according to a foreword, only to be interrupted by World War II, which brought him out of retirement and back into practice. He resumed writing in 1952 and died seven years later. Following are excerpts from his history.

WITHIN THE PERIOD OF my memory, which certainly is very clear as far back as 1885, Knights Landing has changed little as to size, but radically as to characteristics. As first remembered it was a typical river port, perhaps as important as any on the water way excepting only Sacramento. The steamboats, with their barges, were still seen passing the town or anchored at the wharf in front of Snowball's warehouse, taking on thousands of bags of grain. This warehouse, a very large wooden building, was constructed before my earliest memory. It was on the bank of the river two or three hundred yards east of the railroad. In this warehouse was stores, and from it was shipped to San Francisco a great part of the grain from central and western Yolo County. Particularly was this the shipping point for the famous Hungry Hollow barley, conceded at this time to be the finest brewing barley to be secured from any part of the world. Practically its total output was taken by England and at a premium price. This barley was used only for the brewing of beer....

Instead of highways there were dirt roads, some of which were made passable in wet weather by a thin surfacing of gravel, some of which were only graded, and most of which were entirely unimproved. In the rainy season the mud was deep and could be negotiated only with one's horse proceeding at a walk. The experience of being completely "mired down" was frequent. In the hot summer months the roads were inches deep in dust, hiding "chuck holes" so formidable that any attempt at speed frequently resulted in disaster. A linen duster to cover the clothes and a part of wire-screen goggles were standard equipment for the well dressed physician.

Roads always followed section lines.... One now goes from Woodland to Dunnigan in twenty minutes. Then, under favorable weather conditions and with a good team, the trip (one way) could be made in two hours. In the season of bad roads, the time consumed was doubled.

One would suppose that home calls would have been much less numerous than they are at the present time. Exactly the opposite was true and for very obvious reasons.

Telephone service, except as to towns, existed almost not at all, and for all except the larger centers, was not available at night, for each village had as its central station a private phone in a store which usually closed promptly at 6 P.M. when the merchant's business was over for the day. At the present time, the doctor's slumbers may be temporarily disturbed by a phone call from a patient with what may prove to be a minor complaint. He gets information relating to it and directs treatment for it, without leaving his warm bed.

Then, he was awakened by the ringing of his doorbell, to admit some neighbor acting as messenger from a similar patient. He had only the information that Mrs. So-and-so was "awful sick" and requested the doctor to "please come at once." The doctor had nothing on which to form a judgment as to whether Mrs. So-and-so was, indeed, "awful sick," or whether, as was more frequently the case with night calls, she had become panicky from some trivial condition that could as well have been cared for on the following day at his office. The doctor had to go, perhaps, to Capay, Guinda, or Dunnigan, and perhaps in midwinter under the almost impossible road conditions...

There were no hospitals in the county. (The County Hospital, so-called, was a poor farm. It had no hospital facilities.) People became sick at home and were treated through this illness in the same place. Babies were not born in maternity wards or in hospital rooms....

In 1897, during my junior year in the University of California, Professor Slate in the physics class told us of Wilhelm von Roentgen's accidental discovery in 1895 of a ray, emitted from a tube of high vacuum, which had the faculty of penetrating opaque substances. Perhaps I should have forgotten all about this lecture except for the fact that, while discoursing on this ray, called x, the professor accidentally contacted a charged Leyden jar - the forerunner of the storage battery - permitting the current to pass through his body. His resulting contortions so amused the students that it fixed the lecture in my mind so that the story of the first recognized x-ray was remembered when, in the following year, I experienced the practical application of the discovery.

In 1898 I sailed for Honolulu for a year's experience as a teacher. On the ship I slipped and injured my right foot so that on arriving I went ashore by the aid of crutches. A physician was consulted. My injured right foot was placed on a yellow envelope and over the foot was suspended a peculiar shaped tube which for several minutes emitted a greenish light. Sometime later the doctor showed to me a wet photographic plate plainly outlining the bones of the foot and with one metatarsal broken. This experience caused me to consider, for the first time, medicine and surgery as a career....

Dr. H.D. Lawhead, with whom I became associated in 1904 had offices in the rear of the Corner Drug Store on Main and First Streets. This is mentioned only because in one of the offices he had his x-ray apparatus, the first and only one in Woodland. The general appearance of the machine I can describe, and how it behaved when certain things were done to it I can state. Why it did them I did not know.

The machine was of the static type as all such machines were at this time. In a glass case were suspended two or more circular plates each about 30 inches in diameter. These discs were mounted on a common axis and were placed very close together. They looked as though they were made of glass, but of this I am not sure. By turning a crank the discs were made to rotate in opposite directions. By rapid turning a static current was generated, sufficient to cause a spark to jump between the electric terminal over an air space of some inches. These terminals attached to the two poles of the vacuum tube completed the circuit...

So little was it understood, that the dangers incident to its use were not appreciated. We had no means of satisfactorily estimating the amount of exposure even to secure a satisfactory film. Early in its use, the cumulative effect of the x-ray was not recognized. That repeated exposure, from what we called a "soft" tube, was very apt to result in serious burns, we did not know.

Through the use of the x-ray in diagnosis, with no appreciation of the danger attending it, many physicians paid heavy penalties. Burns on the hands resulted in loss of fingers, of hands, and sometimes after many years, in loss of life where the chronic irritation was followed by malignancy.

The little fluoroscope was so convenient when the hand was placed before it as an instrument in estimating the "hardness" or "softness" of a tube, that often the hand was

exposed many times a day. Understanding the cumulative effect of repeated exposures as we do now, the results of such techniques are appreciated as inevitable. Most of you are close enough to this period in roentgenology to recall seeing in some of your older medical friends, a scaly, roughened hand, a hand minus one or more fingers, or possibly the absence of a hand. The writer has known many such and can name several no longer with us who died as the result of pioneering the use of an instrument seemingly harmless, but having potential power for evil not then recognized.

How did I escape with only minor damage? By being young and vigorous and therefore, logically, the motive power attached to the crank when the static current was being generated. Being inexperienced, I was not placed at the business end of the machine. Also, by the fact that very soon after my association with Dr. Lawhead, we began to hear of x-ray burns and to discontinue the use of the hand as the instrument in measuring the "hardness" or "softness" of the tube....

Typhoid fever, during the early years of the writer's medical experience, was so prevalent that if a period came when a doctor did not have under his care at least one or two patients so afflicted, his confreres were apt to suspect either that his popularity was waning in the community or that his diagnostic acumen was not all that it might be....

For long years it had been observed that perforation of a typhoid ulcer in the lower ileum was a complication to be expected only late in the course of the disease. This period of time coincided with that in which the patient was permitted to eat more heartily. The deduction was that the perforation was caused by the increased peristalsis consequent on an increase in diet. In an attempt to avoid this almost always fatal complication, it became the routine to permit the typhoid victim nothing in the way of food except milk from the time of the diagnosis was made until complete recession of the fever. Since typhoid was a self-limiting disease with fever persisting from six to ten weeks and since an exclusive milk diet often became so obnoxious as to be refused, the experience was that the patient, at the end of his febrile course, was little more than a skeleton. One now wonders whether the greater number of fatalities was on the basis of complications relating directly to the disease or as a result of reduced resistance from actual starvation....

Malaria was perhaps, of all complaints, the most prevalent. At the present time identification of malarial plasmodia in the blood affords a spectacle of sufficient rarity to excite the interest of young physicians. Fifty years ago, in certain seasons, such slides were seen almost daily.

An interesting observation concerning this disease in relation to surgical patients was the fact that, frequently, three or four days after the operation, post-operative progress would be complicated by the onset of chills and fever. These symptoms naturally gave rise to fear of some type of wound infection. But clinical and laboratory studies offered no evidence of this accident. Microscopic studies did, with suggestive frequency, establish the diagnosis of a co-existing malaria. The patient had not, as a rule, had any pre-operative symptom of the disease. They did respond promptly to vigorous anti-malarial medication.

It has always been our belief that, at the time of which we are writing, most persons in this part of the Sacramento Valley were victims of a chronic malarial infection, but that the majority of them had sufficient resistance to remain free from classical symptoms. We have felt that by reason of the lowered resistance, consequent on surgery, and the condition necessitating it, the latent infection became active and the classical symptoms associated with malaria appeared....

Diphtheria, now rarely seen, was then, during certain seasons, prevalent. By parents and physicians, it was of all diseases the most dreaded. The mortality rate was very high and death sometimes came quickly, but not infrequently, some days after apparent recovery. Panic stricken parents demanded - and who could blame them - the presence of the

physician often several times in twenty-four hours. True, we were beginning the use of antitoxins, and with results that often seemed miraculous in comparison with the previous methods of treatment, methods which, in retrospect, we feel were entirely without virtue. The accepted procedure was to swab the diphtheritic membrane several times in 24 hours with tincture of chloride of iron. At best, this indicated that the doctor was trying. At the worst, it did no harm.

But there were difficulties in the use of the new serums. We were afraid in the beginning to use what we later learned to be not only a safe but the necessary dosage. Very often the patient was not seen until he was overwhelmed by the toxins. He was already fatally poisoned. Antitoxins, even at this late state, would promptly arrest the spread of the membrane, would cause it to dissolve and disappear, but it would not prevent an occasional subsequent sudden death from cardiac or respiratory paralysis, or guard against the complete, though temporary, paralysis so frequently seen attacking certain muscle groups. Should sudden death occur, or should the patient lose the ability to swallow or to walk for a period of days or weeks, the natural conclusion on the part of the laity was that the doctor with his little needle was responsible for the disaster. Nor did the not-too-infrequent and not-then-understood serum reactions add either to the doctor's or the parents' feeling of security....

Sutter Basin was, as its name implies, literally a basin, full to overflowing each winter and a swamp with tules and marsh vegetation fifteen feet high in summer. The present site of Robbins was the center of a sea fifteen or twenty feet deep in all periods of high water. Neither Marysville nor Sacramento could be reached by team except during one, two or three months in late summer when roads were cut through the high vegetation. At other times the trip could usually be made via the S.P.R.R. but not always, for frequently the floods would wash out sections of the road bed.

You must be able to visualize the conditions usually experienced in time of floods, when all of the area west of Knights Landing, extending as far south to, and in places over, the road to Zamora and much farther north than the eye could see, was an ocean of water. Knights Landing was frequently on the edge of this ocean. The road running south from the town is on top of what was then and now known as the Knights Landing ridge. Do not picture this as a ridge of high, dry land. In the flood season it was the pass for flood water running from the "Colusa Basin" to the "Yolo Basin." The current of water, running from west to east, was often so deep and swift that it could be negotiated only on horseback, and then not always....

The only ground adjacent to the Sacramento River not subject to occasional complete flooding was that slightly higher land which formed the banks of the stream. This had been made still higher by the crude levees. Also the soil extending out for some distance was still relatively high and extremely fertile. In consequence of these facts, all houses, barns, and corrals were concentrated on the levees which were on the narrow strips of land on either side of the river. These home sites were many. If you will ride along these roads, even today, you will see the evidence of homes now gone, at least one, sometimes more, for every mile. You have perhaps already anticipated that the only possible road must have been on the levee and you may have already visualized this road as passing through innumerable stock corrals deep in mud and muck, each corral being enclosed by at least two gates which, in passing, had to be opened and closed. All this was bad and a test of the doctor's fortitude, but it was the most favorable condition under which he could hope to work in periods of high water.

You need not strain your imaginations to have the levee break. This was the rule and not the exception. Now the entire surrounding country became a great inland sea and the accident that made it a sea also made the road impassable, due to the breaks in the levee. But people calling for the doctor, often for children with diphtheria were beyond the break. There was no alternative but to go to them on water by rowing. There were then no motor boats, as this was before the time of gas or internal combustion engines.

It was not only the doctor's fortitude that was now tested, but, in addition, his courage. If you had ever been out on the tule water at night or in a wind in a row boat, you would understand. If you had tried on the river to row past the draw of water, rushing through a break in the levee, you would understand even better. I have had these experiences, not from necessity, but in the foolhardiness of youth, just for the thrill. Now in retrospect, I gladly stand to honor the memory of these medical men, Dr. Lawhead with his frail body in first place, who gladly accepted not only hardships but real danger that their duty to their patients should be fulfilled....

You have all heard the story of a famous cook who began his dissertation on the making of a rabbit stew with the admonition, "First catch your rabbit." I must begin my story of the difficulties experienced in doing surgery in the early nineteen hundreds by stating that the surgeon had first to catch his patient.... To get the consent of the patient, or of the patient's family, to accept a surgical operation in the first decade of this century, was the most difficult step in the whole procedure. This was true, even in those situations where the physician and his consultants could be sure that there was no safer course to be followed. The reasons for this attitude, on the part of the laity, are easily understood.

Previous to this time, a truly alarming proportion of rural patients subjected to abdominal surgery died. This was due in small measure to incompetent surgeons, but only in small measure. Indeed, the experience had been much the same for those attended by the best surgeons and in the accepted hospitals of the larger cities. The reasons are not hard to understand. Previous to this time, major surgery, particularly in the country, had been done only as a last resort. The majority of country practitioners would not recommend it otherwise, and certainly patients without the urgent recommendation would not accept it. This meant that the majority of operations were performed only on those already in a critical or even a moribund condition. Always, in a family where a surgical patient failed to recover the operation was credited with being the cause of death, when in fact the fatality was due, more commonly, to delay than to the operation. It taxed all of a physician's persuasion powers, even in an early appendicitis, to get a mother or a father to consider treatment by surgery. After they did begin to consider it, one might be sure that the advice would not be accepted without the concurrence of several consultants entailing often the lapse of one, two or three days, to see if the patient would not, without surgery, improve. Sometimes such improvement would follow, in which event it seemed clearly evident to the family that the doctor in having advised an operation had been in error. If improvement did not follow and death seemed imminent, the advice for surgery might be accepted. Under such conditions only too often death followed, in spite of surgical effort. Again, the doctor was held to be wrong. The operation was dramatic and was considered to be the cause of death. Delay was not dramatic, it was not even thought of as the main factor in the fatality....

Ether and chloroform were the drugs used almost exclusively. The "drop method" for giving ether had not yet come into use. Commonly the doctor administering the ether used an "ether cone." This he constructed from a newspaper which he rolled into the shape of a cone, the larger end being of a size to fit over the patient's face. The smaller end he cut across to permit air to pass through the resulting window which was about one inch in diameter. The interior of the cone was filled with cotton. The cotton was saturated with ether. In inspiration the patient drew the air through this ether-soaked cotton. Crude as this method may appear, it was efficient and generally satisfactory. The "drop method" for ether was not to come until some time later, and with it came added comfort and safety for the patient.

Chloroform was used by many physicians as the drug of choice. It was then as now given by the drop method. It was then, and still would be, the ideal anesthetic except for one obstacle so great that its use can, even for simple procedures, hardly be justified. Its use was attended with great hazard to the life of the patient. With susceptible individuals it struck with little warning and the resulting paralysis of the cardiac center could usually not be overcome before the patient was dead. Perhaps the writer is unduly impressed, having, as an intern, lost the first patient to whom he administered chloroform.

From what has been written, it will be understood that the reactions relating to the anesthetic were considered with as much concern, as were the problems more closely tied to the surgical procedure. Every effort was made to obviate the expected persistent post operative nausea and vomiting. These symptoms were conceived to be the direct cause for some fatalities following operations, otherwise uncomplicated. Through inadequate knowledge of physiological functions, it was believed that the alimentary tract should be completely empty at the time of surgery. An effort to secure this supposedly desirable condition, was made by administering vigorous purges and enemas the day preceding the operation and by withholding food and water for the same period. And this routine was followed even for those patients who had already reached a stage of dehydration and undernourishment by reason of their illness....

We will assume that the kitchen has been selected [for the surgery]. It was usually the most convenient, having adjacent water and a wood stove available. By adjacent water is meant at least a pump on the back porch. Water piped into the kitchen was too rare a luxury at this time to permit the assumption of such a convenience of this description. Kitchens were much larger than they are now in modern homes.

All draperies, hangings and loose articles were removed. Walls, floors and shelves were thoroughly scrubbed, then washed again with a weak lysol or carbolic solution. Was this final washing necessary or even an advantage? One cannot say. It certainly did no harm and, since we were then one half as far removed from Dr. Lister's antiseptic teaching as we are at the present time, it seemed necessary and it did give a sense of added security. One now wonders if that room, so prepared, and, probably having had in it no pathogenic microorganisms to begin with, was not more nearly free from dangerous microorganisms than is the present modern surgery. Is this not, almost certainly, the explanation for such success as we had in home surgery? The room used, and the materials employed, were certainly not rendered aseptic by our earnest, but handicapped, efforts. One wonders whether such infection as we did experience, was not more probably introduced by the doctor or the nurse or the materials supplied by them, rather than by contact with anything primarily in the room or with any of the things commandeered from the home.

The room having been prepared, provision was next made for a table on which to operate. For the usual case, demanding no more than a horizontal position of the patient, this was no great problem. A narrow kitchen table, made sufficiently long by boards placed on its top, served very well. In those instances where a complicated position of the patient's body had to be effected, it was necessary either to build certain additional supports or to bring one of the old fashioned coffee tables to the home....

The problem of lighting was a serious one. It was a rare privilege to operate in a room wired for electricity. Flashlights had not been invented. We had the light from windows which were always too small and usually not properly placed. It was possible to get a little additional light from the old fashioned and very inefficient kerosene lamps. The nearest to any satisfactory solution of the difficulty, was found in the use of white sheets, so suspended as to reflect the light that came from the window on to the operative field.... Now that the operating room had been prepared and the necessary tables placed in position, the nurse had to devise some way to sterilize sheets and towels, that the tables might be properly covered. I purposely emphasize "the nurse must devise." To her goes all the credit (and incidentally the work). No doctor would have known how then, and it is doubtful any would know now how to accomplish it.

We will speak of sterilizing materials, utensils and instruments, under one heading. There is no reason why we should do otherwise in describing the procedure as it was effected at that time. We shall not be required to speak of sterilization by steam under pounds of pressure, or of drying by partial vacuum in the same machine and before the sterilized articles have been removed from the sterilizer. It will not be necessary to discuss the type of sterilizer used for instruments, nor to speak of the different techniques required for blunt or edged tools. We need not even mention chemical sterilization, for the more delicate mirrored instruments. These are all omitted, for we had no sterilizers as we know

them now. It will be necessary only to write of sterilization by boiling; to speak of sterilizers only in terms of wash boilers and dishpans; to speak of drying only on the basis of our nurse's ingenuity, for beyond those things we had no facilities.

So far as the technique employed by the nurse in trying to secure an aseptic setting for an operation is remembered, it will be described. For those points in which memory has failed please use your imaginations as I shall have to use mine.

It is clearly recalled that the wood stove, the wash boiler and the dishpan were family utensils of paramount importance to us. Into the wash boiler went all cloth material - sheets, towels, gown, sponges, etc. for a long period of boiling. It was appreciated that certain pathogenic microorganisms were not killed by a short exposure to a temperature of 212 degrees fahrenheit. These materials were subjected to continuous boiling for one hour. The boiling water was then poured off, and the contents of the improvised sterilizer was permitted to cool. The nurse, presumably in sterilized regalia, then removed the excess water in the articles by wringing them with her presumably chemically sterilized hands. As to the next step, memory is not definite, but the impression remains that partial drying was accomplished by passing a very hot iron over the material which was placed on an ironing board. The sheets thus prepared were placed over the tables, in the operating room. The towels to be used for final draping after the patient was in the operating room and the sponges to be used in the operative wound, then as now, were protected by being wrapped in presumably sterile cloth.

Not always in emergency conditions did time permit the drying process. It is recalled that, in some instances, wet sterile material had to be used.

The dishpan was the improvised instrument sterilizer. There is need for little comment in relation to this for, after all, the result of boiling is the same whether the water is in a dishpan or in a fancy copper container covered by a lid which can be raised by foot instead of hand power....

There was no unanimity of opinion as to which antiseptic solution was the most efficient. Lysol, carbolic acid, bichloride of mercury, cyanide of mercury, permanganate of potash, 60% alcohol, etc., all had their advocates. At one time or another in our experience, each was used. One was discarded and another taken up, not because of diminishing faith in the efficiency of the first, but because of unpleasant skin reactions from its repeated use of the one, compelled us to select another. For example, carbolic and lysol solutions had a cumulative effect in making the skin increasingly rough, harsh and dry. Bichloride of mercury had a similar effect and in addition caused the nails to become increasingly dark and brittle. Permanganate of potash was used in strong solution. The resulting black stain on arms and hands had to be removed by decolorizing with an oxalic acid solution. The skin would not tolerate these insults too often repeated and a petechial dermatitis often developed on the arms, this certainly not making for a skin field easily kept aseptic. Sixty percent alcohol was conceived to be very efficient. After very vigorous soap and water scrubbing, it caused a burning too great to be repeatedly tolerated and it did not become popular. Cyanide of mercury had the longest run in popularity. I cannot speak authoritatively of its antiseptic virtues, but it was pleasant to use and so far as we could see was quite as effective as an antiseptic as any of the others. The virtue attributed to all of them probably was, in fact, largely due to the thorough preliminary use of soap and water. In any case the cyanide solution remained popular until it was superseded by the introduction of rubber gloves after the hands had been rinsed in a 60% alcohol solution....



The horse and buggy was as much a part of the rural physician of fifty or sixty years ago as was his little black bag or his whiskers. And of the outfit the doctor usually had reason to be justly proud. Well-bred horses to him were a necessity, for the miles to be covered each day were often many over roads already described to you that

were difficult. Only horses of breeding, spirit and stamina could meet the requirements. The buggy or carriage likewise had to be of the best to withstand the wear and tear of unimproved roads.

It is still with pride and affection that I recall a span of bays that Dr. Lawhead and I owned. They had what it took to make a great team: looks, spirit, speed and endurance. One always felt that he owed them an apology when, in the occasion, they were required to draw the "Gospel Chariot." This was a closed carriage of old but excellent design. What it lacked in style and beauty was more than compensated for in comfort when, on cold and stormy nights, we were required to make trips not infrequently, covering several hours. Since the driver's seat was separated from the passenger's compartment, it was often possible to get needed rest and sleep en route. Why it was called Gospel Chariot I do not know, but as such Dr. Lawhead always referred to it and as such it was generally spoken of in Woodland.

As to the advent of the automobile. You will naturally assume that the doctor's transportation problem was by their introduction largely solved. How wrong....

The great grandfather of your machine was a "one lugger." The single cylinder gas engine was located under the seat. You started it - or tried to - by turning a crank, inserted through a hole in the side of the body. It did not turn easily. The cylinder was large, and your strength and endurance was tested to the limit. During the procedure you were subjected to the danger of injury from a "kick back." This, you will observe, was only one of its similarities to a mule. So frequent were these injuries that we came to refer to fractures of the lower ulna and radius as "kick back" fractures. They were bad, I know, for my "Red Rambler" in 1905 presented me with one.

With good luck, after five or fifty minutes of effort, the engine started. Without the luck, the engine remained dead and the alternative to cranking was adopted. With chagrin and a the called for apology, you harnessed up your prematurely retired horse - hitched him to the monster (for you were so classifying it by this time) dragged it about with clutch engaged until the engine came to life.

Thus, by one means or another you had the engine running. You seated yourself behind the steering stick (not wheel), seized the clutch lever, and attempted to ease the huge clutch cone, leather faced, into its seat within the rapidly revolving, one hundred and fifty pound, fly wheel. Several things might happen, the right thing rarely did. There might be oil on the clutch - one would expect that there would be, for it was everywhere else - even on the seat. If so, the engine would still run but the machine would not move - a mule again. If the clutch was too dry it would grab. The machine would make a great lunge forward, cough and die. Then you began all over again.

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