

Heartbeats of the City

The Short, Lost History of Dr. Jaffin's Big Ideas in Medicine

- by Ricka McNaughton

In the 1920's a practical-minded family doctor was credited with a medical first when he designed a device to transmit his patient's cardiac signals over a phone line to an EKG machine blocks away. When resurrected, this "Watson Come Here" moment proved fascinating to modern medical historians. But it also laid on the examining table some of Dr. Jaffin's other groundbreaking work, from his global efforts to eradicate disease to his desire for a local version of universal health care. In these pursuits the straight-arrowed Dr. Jaffin found an angel in a notoriously crooked character of his day.

Dr. A.E. Jaffin, as he preferred to be noted in print, would often find his medical services needed in two different places at the same time. At the age of 46, he virtually contrived a way to do it.

His idea was regarded as the first telemedicine breakthrough of its kind. The year was 1926. The place was Jersey City, New Jersey. Modern medical history took no note of this -- until a fragile, darkly-yellowed newspaper clipping surfaced many years later in a box of old documents, leading to a great deal more worth knowing about Dr. Jaffin.

Abraham Ezra Jaffin immigrated to the U.S. with his parents as a very young boy and became a near-fanatically busy and studious man. He published medical papers in professional journals and was widely invited to give lectures. He sat on boards. At home he was a husband and solicitous father of two daughters. He was a family physician with a bustling in-home medical practice. His daughter Helene recalled that patients sometimes overflowed in the front room of their house, but in an orderly way, waiting for their appointments.



Abraham. E. Jaffin

Dr. Jaffin had a strong interest in cardio-pulmonary medicine but operated as a primary care physician, prepared to treat anything and everyone. His clientele ranged from the well-off and the well-known to the unwell masses of the city's poor whose health issues especially concerned him. When in too poor a state to come the office, patients would call for Dr. Jaffin to come to them. He'd stride off black bag in hand. Sometimes in the middle of the night.

Wouldn't It Be Something

Among those wishing bedside calls were some patients who, more often than others, just needed reassurance that the fluttery sensations they were feeling weren't dire. Dr. Jaffin went to make sure they were not. Non-judgmental listening and reassurance are vital elements of a doctor's

care. But it gave Dr. Jaffin an idea. Wouldn't it be something if he could diagnose a patient's heart rhythms without leaving his office.

In 1926, stethoscopes already carried heartbeats. Wires already carried the human voice and doctors commonly used the telephone for diagnostic consultation. EKG's had existed for some time. What Dr. Jaffin had in mind was a portable device that would transmit a home-bound patient's cardiac signals by phone with enough registration at the other end for an EKG to read them remotely.

Hold that thought for a bit of interesting comparison to the invention of the telephone itself.

When Alexander Graham Bell first pursued the idea, he, too, had a kind of medical application in mind. Bell was a part-time professor of vocal physiology at the then-new Boston University. Notably he had no related degree or formal training. What he did have was earfuls of knowledge about people with person-to-person communication challenges.

His mother was hearing impaired, his father was a noted speech instructor. As he was thinking up the telephone, Bell wanted an aid for the hard of hearing. His new device was a clever merge of existing technologies others were fast experimenting with. The significant practical advance of Bell's telephone, in its first form, was amplification.

The modifications that saw the telephone transform civilization took yet more fiddling. For a while, it was considered a mere novelty. The telephone's first in-home design offered something less than practicality to a household. In order to know if anyone was calling you, you had to remind yourself to go to the phone now and then and see if someone was actually there, busy wondering when you'd figure that out.

Dr. Jaffin's breakthrough, too, was a clever merge of existing technologies. He likely wasn't schooled in audio science. But he was fiddler enough to sketch out his device for transmitting heart sounds by telephone and smartly took it to people who knew a lot about telephones. In its first trial, the device worked.



All Dr. Jaffin needed to do was have an assistant visit the patient, hook up the device and send the patient's cardiac story by phone line back to the EKG machine sitting in his office. In this way, Dr. Jaffin could promptly analyze the results without having to go somewhere else, and it made life easier for his patients, too. That's as practical as it gets, right out the gate. *[The moment is described in the attached newspaper article.]*

In the race to patent the telephone, Bell beat out a competitor by a matter of hours. But no other innovator seemed to be hot on Dr. Jaffin's heels. Several decades passed before similar technology came calling.

Perhaps America would not have had the first patented telephone, had not Alexander Bell's family left Scotland in some part due to the death of his two brothers from tuberculosis (TB). This is a bit of a poetic thread. That's because, in his time, Dr. Jaffin was vastly more concerned with eradicating tuberculosis than tinkering with telephones.

He drove himself to learn all he could about TB. He wrote papers about the disease. He gave talks world-wide. At home, the city's poorer citizens were among the most ravaged by the illness and had the least access to care, fanning the spread of the disease. Dr. Jaffin worked to establish a string of what were then called chest clinics in Jersey City. In the furtherance of his medical goals to bring health care to all in need -- in other words, everyone -- Dr. Jaffin had an ally in Frank Hague.

Frank "I am the Law" Hague, as he was called by the media, served as mayor of Jersey City for 30 years. The tough Irishman arose from a squalid ward of the city known as The Horseshoe, a huddle of immigrants, taverns and tenements. He was expelled from public school in the sixth grade. On the streets, he matriculated through the alternative schools of thuggery and organized corruption. In time he was recruited to provide creative voter delivery and deterrent services to local political party bosses. Eventually he became The Boss.



Frank Hague

It's been alleged that Hague wouldn't hesitate to have you beaten or worse if you got in his way. The preponderance of these accounts may excuse a need to verify them. He was said to have pocketsful of public officials. He didn't seem to fear the long arm of the law because it was often draped in a friendly way around his shoulders. History does concede that politician Frank Hague was an unparalleled Democratic party organizer. His machinery helped deliver victory-making votes not just locally but at national levels as well.

Fair is Foul and Foul is Fair

As mayor of Jersey City, Hague sometimes used his powers of irresistible persuasion for social good, a practice which generally fell one of two ways. Some constituents worshipped him as a champion of the common man. Others charged him with meting out selective aid for calculated political and personal gain, and what's more, failing to be the least bit subtle about it. This was before our current national standard of no subtly whatsoever.

It's interesting to think about Dr. Jaffin, a man so principally dedicated to the welfare of others, pairing up with His Honor, Frank Hague, ever the self-serving public official -- except, sometimes, when he sincerely wished to do good in his world. The relationship no doubt asked much of each man's better angels.

But in this alliance of medicine and muscle, the two had their eye on the same prize, and that prize was a system of modern, high quality, clinics and hospital facilities that would offer free care to every citizen of Jersey City,

rich or poor.

In the 1920's Hague launched a push for a large hospital campus that eventually spawned a series of towering new additions to an 1880's hospital site. Hague got his vision going with fistfuls of federal dollars in return, some insist, for his vote-delivering prowess. Whatever Dr. Jaffin's hand in this was, it was likely more medically focused than mechanistic.

On October 2, 1936, President Franklin D. Roosevelt laid the cornerstone of Jersey City Medical Center's new facility at McGinley Square. One reliable account gauged it to be the third largest health care facility in the world. Another said it was *the* largest.

No way to know what comparative measures were used. Either way, generations of residents who received care there never received a medical bill.

One of Hague's first new campus builds was the Margaret Hague Maternity Hospital, named after his mother. In the desperately poor tenements of his youth, deaths from pregnancy or child-birth related complications numbered far above the average.

Hague's motives appeared honestly altruistic. He built his maternity hospital for all women and children in his city in honor of those whose suffering personally touched him. Hague next added towering new surgical units, quarters for nurses and the Pollack Hospital for chest diseases where Dr. Jaffin would come to serve as director.

Several years ago I was able to speak by phone with a then-91-year old woman who had been employed in Dr. Jaffin's time at the Jersey City Medical Center. She knew of Dr. Jaffin's work but did not recall meeting him. Of Hague she spoke reverently.

"His own first love was that medical center," she said, and while she worked there he came to the hospital almost every day and spoke in a friendly, familiar manner to everyone, including her. "He never passed you by without saying something," she reminisced. "It tickled me...the mayor talking to *me*. You didn't have to have a penny and they'd take care of you there."

In that era, Hague himself was looked after by Dr. Jaffin, who was his personal physician. This must have been an interesting match of wills since the doctor also carried himself as One Who Must Be Obeyed and could be lion-like about it.

One story comes from Dr. Jaffin's daughter Helene. She recalled that her father had a sharp eye for any sub-par quality of care he saw on his hospital rounds, whether for his patients or their surroundings. Should he perceive an infraction, roaring could follow. And therefore, when nurses saw Dr. Jaffin approaching down the hallway, they would hide in the linen closets.

I've long had a wealth of fond anecdotes about Dr. Jaffin from Helene. She was my mother.

An Influence Felt through Generations

I never knew my grandfather. He died not long after I was born. But his work, character and oft-recounted wisdom whispered through my early life, mostly through my mother, her stories and her example of usefulness.



Dr. A. E. Jaffin and daughter Helene

While my father worked in New York City, Helene raised her three children and volunteered part time as an administrative aide in the Medical Education department at a teaching hospital in our commuter suburb, starting as a volunteer. Wherever she saw a need she could fill, she did. For example, she brought home taped medical lectures to transcribe for publication on her own time. She knew the lingo, and was a whiz at repairing the fragmented speech and other missteps of the live presenters.

Her resume at that time lacked any medical focus. She had graduated from college, served adventurously in the Women's Army Corps and attended the Yale School of Drama. She became an actress. She had well-reviewed supporting roles on the New York stage and in regional summer theater. She thrived on that mix of glamour, sweat and group adrenaline. She gave it up to marry my father and raise a family in the burbs. She loved that life far less. But gave it her all.

Shortly after she began having babies, she found herself called to hospital volunteer work. And her beloved father died. Her memory of his character did not.

She liked the idea of doing something to advance medical education, however small. She believed in the worth of supporting roles. Helene became invested in the well-being of the hospital's fledgling doctors, and on weekends and holidays our small dining room in our small house packed in a United Nations of foreign medical interns and residents from the teaching hospital. Helene felt they required an escape from the institutional grind.

These were people living far from home, lonely in some cases for family and appreciative of home cooked meals. Some of our guests were grappling with English at the same time they were getting a medical education. Hanging with an American family provided a kind of immersion learning.

There was a young Iranian so shy he would barely speak to strangers and badly needed the practice. My mother went to work on him, settling his nerves and improving his conversational skills. There was a German resident who regularly mispronounced a particular English word. It came out, unwittingly, as a common profanity. He was not a man who took well to correction and thus rarely got outside of the workplace. But when he misspoke the word at our dinner table once, my brothers thought it was fall-off-your-chair hilarious. Literally. And that fixed it.

These doctors in training often were dead on their feet from the strenuous hours they kept. My mother would often instruct them in Dr. Jaffin's art of the 15-minute snooze. He had famously taught himself to close his eyes and induce a short shot of restorative sleep. He was push-button efficient at this. When keeping long hours he might nap several times a day, wherever he might be. Mostly sitting up. Sometimes in public view, with no great care for the impression it might have made.

It bears noting that, by her own choice, Dr. Jaffin's wife Matilda, my grandmother, devoted most of her waking hours to her husband's household and professional needs. It's a tad curious that, before marriage, as an impassioned speechwriter, she publicly argued for a woman's need to be seen and act as an individual. She campaigned for a woman's right to vote and make other legal decisions in her own best interest.

Thus, over her life, Matilda Jaffin capably wore many large hats. (Including the one in her portrait.) Her story is assuredly a good part of Dr. Jaffin's. But in many ways his story – the whole range of free professional motion he enjoyed then -- would not be possible today.



Mathilda S. Jaffin

For one thing, his wife would probably be the mayor – or running for president. For another, gone is the solo practitioner. Corporate conglomerates now hold the reins to large numbers of physician practices and hospitals.

Dr. Jaffin might see the advantages therein of easier patient access to diverse services. There might be the benefits of shared access to specialization and high tech medicine. But he'd condemn the failure to provide inclusive health care.

The free market sector relies on choice to drive competition and lower prices. Choice is for people with money. Many average wage earners – ineligible for financial help - can't afford the health care they do have.

Now, too, even if you have insurance, sometimes you don't. Through policy limits and denials of care, providers of health insurance can largely govern what doctors may do and not do for their patients. Hear Dr. Jaffin roar.

Dr. Jaffin and Mayor Hague found synergies as disruptive innovators. Maybe, too, as different kinds of rogue spirits. To the extent that Hague relied on bare-knuckled coercion and worse to attain his ends, he doesn't constitute a model for needed health care reform today. But it's never a good thing when the rogues we do have in power want to dismantle what health care reform we've managed to achieve.

Still, if I could see Dr. Jaffin flourishing in a different era, the present is as good a time as any. He'd geek out on the gloriously searchable digital world

of medical knowledge. He'd revel in the possibilities for professional connectivity.

Maybe he'd be treating a patient one day and suddenly hit on a new idea for a life-saving medical app for mobile phones. □

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Relevant Author Info:

As a freelance writer since escaping the nine-to-five world, I produce feature articles for an assortment of newspapers not one of which is The New York Times. I love a good, lesser-told story behind an innovative discovery, from blockbuster inventions to obscure adventures in tinkering.

For over a decade I was head of external communications for a state government agency charged with regulating the financial services industry, a span that included banking, insurance, securities and, for a time, a division called the Health Care Administration (HCA). Part of my job was to explain the regulatory actions of these varied divisions to consumers and the media. The HCA engaged in turbulent and sometimes groundbreaking efforts to advance health insurance reform, contain consumer costs and increase access to care. If you have anything you'd like to say to me about this account of Dr. Jaffin's work, I'd be delighted to hear from you. Contact: [rickamcn \(at\) gmail.com](mailto:rickamcn@gmail.com)

Attachments follow:

- (1) Jersey Journal news article, 1926;
- (2) End notes, including a few shockers

Doctor In Office Here Listens To Heart of Patient Blocks Away

New Instruments and 'Phone Lines Enable Dr. Jaffin in Emory Street to Listen to Heart of Patient on Bentley Avenue—Thought First Distant Diagnosis of Kind.

Photographs have been sent across seas by radio and only the other day a check was likewise transmitted from Europe to America by the same means, but it has remained for a Jersey City doctor, Dr. A. E. Jaffin to sit in his home, 41 Emory Street, and listen to the heart beats of a woman patient a few blocks away. As in the case of the radio pictures from overseas, the land telephone line was brought into play in this Jersey City case the first, so far as known, where a physician has been able to make such a diagnosis, he in his office and the patient at home in bed.

For reasons that are obvious—not the least of which is the ethical one—the name of the patient concerned in this innovation in medical science are withheld for the present. The patient is a woman living on Bentley Avenue. She has been ill and at first, heart complications were suspected. The physician instead of resorting to the well known stethoscope to detect

the cardiacal flutterings utilized a new device which is known as the electrocardiograph. This device is a very sensitive instrument which records every pulsation of the heart, no matter how slight. In its operation two wires leading from it are connected with the patient's body—one wire on the leg and the other on arm. Electrical current being brought into play, every movement of the heart makes a record on the electrocardiograph, that is as unmistakable to the physician as the device to record blood pressure and which is familiar to most people.

Being unable to spend as much time as he would like at the bedside of his patient to make a satisfactory diagnosis, Dr. Jaffin hit upon the plan of calling in the local telephone officials in the experiment which he decided to undertake. He explained to them that he wanted the electrocardiograph

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HEARS HEART BLOCKS AWAY

(Continued)

in his office connected over the telephone lines with the bedroom of the patient. The telephone officials entered into the plan with the greatest enthusiasm confident that their part of the experiment, at least, would succeed.

The necessary telephonic connections were made and the two appliances, or wires, as described, attached to the patient's body. The doctor waiting expectantly in his Emory Street office, was overjoyed to find the electrocardiograph making a record as perfectly as though it had been alongside the patient as formerly. Every pulsation of the heart of the woman in the house on Bentley Avenue registered completely and satisfactorily in the office of the physician on Emory Street.

This experiment in which the telephone played a brand new part was continued over a period sufficiently long to enable the physician to make a thorough diagnosis, which, fortunately for the patient, negated the heart trouble theory completely. This unique accomplishment will, in due course, be the subject of a special paper at a meeting of the Hudson County Medical Society.

It was a demonstration of the possibilities of conducting a diagnosis over the telephone lines, not only from the standpoint of the convenience of the physician, but also from the standpoint of possible life and death, where time may be essential. Instead of "calling on" his patient, the physician may possibly do just as well by calling on the telephone.

End Notes, Including a Few Research Shockers

I don't pretend to have the honed skills and valuable insights of a professional historian. I just wanted to tell this story in a narrative fashion, in a thoughtful context, for anyone interested in medical history. But, also to conserve an interesting family story for future generations. I allowed myself to wander, chasing and including details that arguably led away from the main theme but that helpfully called into question what the more writerly heart of the story actually was. I'm still thinking about that. Meanwhile, there's something to read.

I went some distance to try to answer my own questions concerning the accuracy of the information included in the story. First up:

How do we know that Dr. Jaffin's innovation was a medical first, other than the thought expressed by the writer of a 1926 newspaper feature, who was probably not a medical historian either.

It's certainly possible that around that period, somewhere in the world, others independently noodled out similar technology. I didn't find any exact dates or attributions. Most accounts refer to the first telemedicine of this kind in the 1950's-60's in academic/lab settings. I did find a reference to experiments with heart data transmission via phone lines in the Netherlands in the "early 1900's." When, exactly, and whether similarly successful, was not stated.

Nothing in my family papers suggests that Dr. Jaffin's device was ever patented. In that time it would have entailed a great deal of money, travel and bother for him. There is no simple look-up. A known patent number and assigned classification are required to search the U.S. Patent and Trademark Office online database covering Dr. Jaffin's time period.

The handed-down photocopy of the newspaper article didn't include the name and date of the publication. What is the date based on?

I want to acknowledge the key player who finally solved this dilemma. It played out in an interesting way.

Before she died my mother had jotted down that she thought the year was 1930. Eight years ago I enlisted the help of **Cynthia T. Harris, Manager of the New Jersey Room at the Jersey City Free Public Library** to try to source the article. I so appreciated her enthusiastic stab, but, as she explained at the time, not including the New York papers based just across the Hudson River, there were three area New Jersey papers of the period, each with two or three different editions a day. Two papers had since folded so could be of no archival help themselves. Microfilm existed but lacked a searchable digitized index other than by date. Plus, there were significant time gaps in the record. I would need to go there -- a day's travel -- and sift blindly through thousands of film images. I didn't go.

Finally, eight years later, a big find:

I came across the original chewed-edge, yellowed newsclipping telling of Dr. Jaffin's invention pasted tight to a piece of backing paper. It, too lacked a date and source. But I was able to shine a flashlight through it and just make out some material on the back of the clipping that might offer a clue at least to the date.

To my delight, I found that Cynthia Harris still worked at the Jersey City Library. She said that, since we'd last spoken eight years before, the library had better databases to search. She went immediately to work. And she scored. She tracked the article to an edition of the *Jersey Journal* dated not 1930, but November 23, 1926.

Interestingly, **Cynthia Harris** dug up other alarming family history I'd never heard about from anyone,. One clipping she shared reported that Dr. Jaffin's cousin was found dead from hanging in the back of his Jersey City coffee business. My uncle Ralph Morrison discovered the body and called Dr. Jaffin to the scene. Police were called. A note was found. Its contents were never publicly reported.

Another news clip revealed that the Jaffin's Jersey City home was broken into and ransacked while the family was traveling together in Europe where Dr. Jaffin was attending medical conferences. Had Dr. Jaffin's alliance with Frank Hague somehow put them in danger from Hague's enemies? Did the two events -- the ransacking and the death of a close family member -- have any connection to one another? A case of over-imaginative thinking? Fodder for a period mystery novel?

I also want to acknowledge respected medical historian and author **Karen Reeds (Ph.D., Harvard, History of Science)**. I reached out to her several years ago and she kindly got back to me. She was fascinated to learn of Dr. Jaffin's story. She emailed: "I dearly wish I'd known about your grandfather when I was working on [her book] *A State of Health: New Jersey's Medical Heritage*. No question he belonged in it."

She'd done some digging and found she had previously met Dr. Carroll Moton Leevy, Dr. Jaffin's younger co-author of a 1946 paper in the Journal of the American Medical Association [August 3, 1946/FLUIDS IN CONGESTIVE HEART FAILURE CARROLL MOTON LEEVY, M.D.; JOHN A. STRAZZA, M.D.; ABRAHAM E. JAFFIN, MD.]

Here Karen discovered something that she felt spoke to Dr. Jaffin's character. She wrote:

"The Journal's note on the authors' affiliation reads: 'From the medical services of the Jersey City Medical Center: Dr. Leevy is assistant medical resident, Dr. Strazza is medical resident and Dr. Jaffin is attending physician.' That order of the authors' names sheds light on Dr. Jaffin's character. Ordinarily, the lead author would have been the doctor with the highest rank -- the supervisor, who might not have done any of the actual work but still got the most credit. Here, however, the authors were listed in reverse-order of their positions at the Jersey City Medical Center (the closest thing New Jersey had to a medical school at the time). Even more interesting -- although it would not have been obvious from the names -- the lead author was African-American. (For quick sketches

of Dr. Carroll Moton Leery's life and distinguished career in hepatology, see <http://www.scencyclopedia.org/sce/entries/leery-carroll-moton/> and <https://www.encyclopedia.com/education/news-wires-white-papers-and-books/leery-carroll-m-1920>.) All this suggests that Dr. Jaffin was remarkably generous, modest, and free from the racial bigotry that Dr. Leery encountered so often."

Karen Reeds also generously referred me to a past interview subject of her own, Miss Eileen Quirk (as she wished to be called), who had worked at the Jersey City Medical Center of this story. I reached her by phone and she provided me the firsthand observations I included in this tale about Hague's love for his hospital and its people.

In the Hague/Jaffin alliance, what documentation is there that Dr. Jaffin had a part in the creation of the Jersey City Medical Center hospital and clinics?

Looking for more detailed written accounts of the hospital's history than what I could find on the web, I got hold of what appears to be a self-published book called ***The Jersey City Medical Center* by Leonard F. Vernon**. In it I found no mention of Dr. Jaffin's hand. I don't know the author's scope or method of research for this book. It's an interesting but album-like patchwork of photos and trivia, little of which focuses on the hospital's origins. Well then.

I know about Dr. Jaffin's involvement only as a matter of family lore. I could speculate that he may have had more than one reason to let the spotlight shine on others, especially the pivotal and presumed mastermind of record, Frank Hague, who deftly leveraged truckloads of government dollars and who knows what else -- or who else -- for permitting and construction.

According to family, Dr. Jaffin's framed picture hung on a public wall in the hospital. Shortly after his death in 1952, the hospital dedicated a new clinic in his name. At the dedication ceremony, a speaker made much of Dr. Jaffin's character and worthiness for the honor. I have a transcript of that speech.

I want to say that the otherwise-confidential fact of the doctor-patient relationship between Dr. Jaffin and Frank Hague may be mentioned because it was noted in newspapers from time to time when Hague became ill. All else relating to this connection, ethically, is sealed.

According to numerous accounts, the charitable Jersey City Medical Center's era came to a close due to mountains of financial problems. As time went on it saw far more outgo than income -- whether due to mismanagement, escalating costs, political machinations, a growingly untenable concept or a combination thereof. By the time it folded, the economics of running a hospital became governed by very different forces and large numbers of formerly thriving hospitals were going down like dominoes. Around 2004, some of the Jersey City Medical Center's structures, which had then stood empty for several years, were turned into high-end condos. □