The Global Health CHRONICLES
MALARIA CONTROL: CDC BEGINNINGS

Steele, James H., DVM, MPH

Date of Interview November 12, 2011

Link to Interview:

Summary of Interview:

Dr. James Steele, born April 3, 1913 describes his role in the incorporation of veterinary medicine into public health at the Centers for Disease Control and throughout the world. He relates stories on his early life, education, experiences during World War II, and eventual pathway to public health. Included in the discussion are descriptions of his encounters and relationships with many of public health's 20th century leaders.

Notable Quotations from Interview

"Dr. Mountin, I just can't recruit the kind of people I want to offer them commissions as scientists or sanitarians. They want to be veterinarians and I want them to be veterinarians." …And I get to Ted Badger and I say, "They want to set up a veterinary category officer, you have M.D.s, you have dentists, you have sanitarian engineers, now I want … the fourth [to be veterinarians]." …And I said, "Would you endorse such a move on my part?"

"Look, there's a new category. We can be scientists now. We don't have to be sanitarians under the direction of the sanitarian engineer."

"So when we looked to the [public health] challenges of the future, we've got to look to what the problems may be among our neighbors and this is the big responsibility of helping our neighbors…"

"It makes you feel good that you lived long enough to see the expansion of creation. It's just like everything else that exists. Everything that can reproduce itself is constantly growing, constantly changing."

Key Terms in Interview:

Typhoid; pasteurization; milk protection program; staphylococcus; penicillin; veterinary public health; pneumonia; NIH; American Veterinary Association; rabies control program; vaccine; Department of Agriculture; brucellosis; rabies isolates; trichina; radiation; psittacosis.

Key People Mentioned in Interview:

Anderson, John
Anderson, Otis
Badger, Ted
Baer, (DVM) George
Blankenship, Dr. Fred
Bower, Ted
Carter, Phil
Cole, [General]
Dean, Joe
Drecker, _____
Dyer, Dr. Gene
Eisenhower, President Dwight
Gallba, Mali (?)
George, Walter
Gilbertson, _____
Gilmer, _____
Glover, Harry
Habel, Carl
Hansen, _____
Helvig, Ray
Hollick, Henry
Hollis, Mark
Hubner, Bob
Huddleston, J.M.
Hutchings, Pat
Jensen, Dr. _____
Johnson, Harold
Keiser, General
Kissling, Bob
Kissling, Martha
Larson, Carl
Lennette, Ed
McCarthy, Senator Joseph
McGill, Ralph
Meriwether, Frank
Meyer, Dr. Carl
Mountin, Joe
Parran, Dr. Thomas
Perkins, Frances
Pratt, Dr. Harry
Pratt, Dr./Mrs. _____
Roosevelt, President Franklin
Rupprecht, Chuck
Schultz, Mike
Sellers, Tom
Shaw, Betsy
Sheeley, Carlton H.
Siegel, _____
Smith, Larry
Stafseth, Dr. [Henrik]
Stewart, Bill
Terry, Luther
Thornton, William Steele
Tirkle, Earnest
Topping, Norman
Tugwell, Governor _____
Vonderlehr, Dr. [Raymond A.]
Watt, Tim
Whitt, Earnest
Williams, Dr. Charlie
Wolf, Art

MALARIA: CDC BEGINNINGS INTERVIEW

James Steele, DVM, MPH 1947

This is Karen Torghele and I'm with James Steele in Houston, Texas on November 12th, 2011. We are talking about the beginnings of the Centers for Disease Control and some of Dr. Steele's experiences. Is it all right that we record our conversation, Dr. Steele?

Steele: Yeah, sure.

Pre Introduction Discussion:

Surgeon General Thomas Parran was part of the early pasteurization studies and the man that did the job, I can't think of his name right now, he went on to be dean at North Carolina, at Harvard and died a decade ago. And the big outbreak of typhoid fever in D.C., Roosevelt turned to the Surgeon General and said, "How are you coming along, why are you allowing this to occur?" Well, they didn't have pasteurization yet. And he said, "Why don't you put it in, why don't you put it in?" And they had some other excuse, the Surgeon General.

But then the Surgeon General said, "I'm assigning one of our top men to develop a milk protection program," and that's where the original code of the United States Public Health Service came from and that's how I came to the public health to expand that code in World War II.

At first I was under the sanitary engineer and then I met Joe Mountin and he asked me what I was doing. I said, "I want to find out why the staphylococcus organism is surviving in the milk but we're killing all the strep with penicillin."

And he said, "Good go. Tell me about it." And from then on Mountin knew who I was. I was the guy who was milking cows to find out how antibiotics were working in the cows.

Then after the war, a year later or something, Joe Dean set it up that I sit down and visit with Mountin and then Mountin, after a few exchanges, said, "Alright, what are you veterinarians gonna do for the public health now that the war is over?"

And I never thought in those terms. I just thought, "Well, maybe I'll get a good assignment and do something worthwhile or above that, go back to teaching, go to… someplace."

But he heard me out and he said, "Give me a white paper."

I thought, "White paper? I've been hearing about that during the war, a summary of what you'd done." So I checked with Joe Dean and Joe Dean said to make it extensive, cover everything I ever knew. And Joe Dean got his sister-in-law, Betsy Shaw, to type that whole thing for me, some 20-30 pages, and gave that to Mountin six weeks later and that started me on this path.

It sounds like he must have been very impressed with that.

Well, I got the book here. I started reading all his papers and every time I saw the word brucellosis or staphylococcus or any of the food-borne organisms, I said, "That's from Joe reading my paper." And he used those terms.

We'll get to it later on. I've got the most amusing stories. I won't embarrass you, I'll just say, "Well, this is the way it was."

One day he called me, I guess it must have been two or three months maybe after he set me up, I don't know. He said, "Steele, do you drive a car?"

I said, "Yes sir, yes sir."

He said, "I want to go over to Baltimore." I said that was fine.

He said, "I'm going to the hospital over there."

And I responded, I said, "I hope it's nothing serious."

"No," he said, "just one of those problems that come to all of us guys when we get old enough." I guessed prostate. Yeah. And he turned to me and said, "Steele, what do you veterinarians do about prostate in animals?"

And I started checking it off, I said, "Horses don't have it, bulls have very small... and, oh yes, dogs have..."

And he said, "Well, what do you do?"

I said, "We castrate them."

And he replied to me immediately, he said, "Hell I've gotta a lot left yet!"

I tell you I laughed and I told that story over and over. And the stories go on like that. He wanted to know everything I ever did. I was his return to the farm. See, he came from a farm family in Southern Wisconsin and how he got to the university to get a medical degree I never have found out; I never heard from anybody. But I heard from his wife he liked to come home and tell her, "Oh this veterinarian of mine, he's doing a good job." He emphasized that.

When acute fever broke in the press in Texas, two cowboys died. He hauled back from Japan where he was there with the PHS Mission in '46, '47 whichever it was and he said, "What's Steele doing?"

I was able to call back to Washington and said, "I'm up here where the cowboys died, we're trying to figure out what kind of disease these cows had," because they didn't have any disease, they weren't showing any symptoms of anything being wrong. But they had a viral agent that killed people with pneumonia and they tested everybody for pneumonia and suddenly all I was was a bystander.

But suddenly people said, "Well you're an expert, you were there."

That's where I had my first run in with NIH [National Institute of Health] because they said I was stealing the ground from under them. It was their mission to go out and investigate new disease, and Bob Hubner was out there and Bob and I got along fine. Bob wanted to borrow some veterinarians when the disease moved down to southern California. I said, "Bob, don't we have to clear this at some level?"

He said, "I'll take care of it."

And that's the first time I really got a step down hard by the state health officer that I didn't have enough sense to ask permission to send in a veterinarian. Well, it's those kinds of things people say you're supposed to do this, you're supposed to do that, no come here. And Vonderlehr, my [CDC] director, said, "At times you've gotta do things you don't want to do."

So all this was new and things were working out as you went along?

It was all new, a brand new disease. It had been reported as a war-time disease, as a big secret, and it ravished the American troops in Italy and then we learned it ravished the German troops in Greece with pneumonia. Pneumonia in the summertime. They were sleeping in the barns where the cattle were.

Those sound like challenges of early veterinary public health. Now tell me about how you and Dr. Mountin worked out that veterinarians should be included in public health.

Let's start out with the end of the war.

World War II.

I was called—I guess we can start over and give you the tragic end of it, too. My interest in public health began at Michigan State University in the late 1930s. I graduated from high school in 1930 seven years earlier, and every year I thought it would be better and I could get back to college and make something of myself. And I became a great enthusiast for the environment. In those days we didn't use the term, "environment," it was just to say that the landscape saved the forest, saved the wilderness.

The church, I went to one of these citizen or open churches where they talked about current events and my first wife, Aina, and I went to that and we'd leave that Sunday night and say, "Gosh, I wish I could get into being an environmentalist." (Not that we used the term environmentalist, just somebody that could protect the public health).

My mother died in 1937. I had gone off to college in '36 with the hopes that I could make it and that she could take care of herself. But it didn't work out that way. I had to come home. I didn't even register. I just got up there, saw my cousin and he said, "You gotta go home." And I did, and fortunately I got my old job back so I could help support her, and she went downhill for the whole year and she died.

The operation, second operation by purely an amateur that was recommended by somebody in the neighborhood and said, "You know, Dr. ... will do it cheap, $50, or something." Anyway, he operated and left the tissue open and got circulating tissue, blocked her brain and she died in the hospital.

Immediately I said to Aina, "I think I'm relieved of any responsibility. I'm gonna turn the house—(we owned a house)—over to my brother and he can manage it, collect what rent we can (because that's what we'd been living off of), rent from one apartment," and I went off to school and registered in forestry because it was as close as I could see to what I wanted to be. After the first quarter, Michigan State operated on quarters, took algebra, English and botany, something in forestry, and at the end of the quarter I said to myself, "This isn't what I came here for, to cut out trees and make boards out of them."

So I took it up with my cousin, who was a veterinarian a year younger than me, born in '14 instead of '13, Bill Thornton, William Steele Thornton, and Bill—I was standing in front of the pathology building with him and I can remember so vividly in the middle of the sidewalk. It was a nice comfortable day, it wasn't extremely cold, it wasn't spring yet and he said, "Why don't you take up veterinary medicine? You'll be in public health, you can be a practitioner, have a practice in a small town, be the town veterinarian, supervise the dogs, vaccinate, do the meat inspection, milk supervision and an investigator, and it relates to animals."

I kind of nodded and I said, "Well, let me think about it."

So I came back to him in a day or two after I talked with Aina and I said, "Well, what do I do to get in veterinarian medicine?"

"Well, you better go see the dean. He's a tough guy, he'll quiz you."

And he was what you call 'vernacular cocky.' He had a chip on his shoulder. He welcomes me in. Half my size and he sits me down and says, "You want to be a veterinarian. Tell me why."

And I was very candid about it. I said, "I want to make a good living and do something for the public health."

He said, "That sounds interesting. I suppose if you heard there was a good living in homemaking you'd sign up for home economics."

I said, "Yes, sir. I'm out of Chicago where I've had a tough seven years trying to make a living and I want to do better for myself." I just laid it on the line.

He kind of looked up and said, "Well, let me hear from you."

What's that mean, 'hear from you'? So I went around to find out what I have to do to register and they said I had to show evidence that I completed pre-vet. What is pre-vet?

"You've gotta have two years of pre-vet education towards a B.S."

And I said, "Good Lord, you mean I gotta wait two years?"

They calculated some courses I'd taken the year before, or the quarter before and some I had left over from night school in Chicago at Northwestern and it came up that if I continued my botany, continued my English and chemistry that I would be eligible. So I took those that quarter and I found myself eligible to get into veterinary medicine.

Now the competition—no prejudice on my part, I'm wide open—was mainly the Northeast. The bright young Jewish boys had been reading government reports that veterinary medicine had less unemployment than any other profession. And why? Because Roosevelt had been influenced by Harry—what was his advisor? Harry Glover? Anyway, one of his advisors said there was a big push to get rid of tuberculosis in the animals and Roosevelt thought we should support that, anything to reduce the population so prices go up. They had read that there was a demand for veterinarians to do field work for doing testing of cattle for tuberculosis and there was a foreseeable shortage of veterinarians. And I dare say more than a half, maybe two-thirds of the entry class had high academic standing. I didn't. All I could say is that I made a good impression on the dean.

I started that summer taking histology, looking into a microscope at tissues that I had no idea where they came from because I hadn't taken gross anatomy. I was up at six o'clock in the morning in a class until noon wondering what I'm looking at. After six weeks of that, finally it caught on. Then in the fall I started my real gross anatomy. And my cousin helped me get a job cleaning glassware in the laboratory. So I got 35¢ an hour. I had classes 29 hours a week and I guess I had some time for sleeping. I paid $40 a week for my room and I got situated in the attic where I had a room. I had liver tissue left over from the calves and after I drained all the blood out of it, I would put it in the autoclave and then cut it up and make liver paste out of it and that was my lunch everyday. People said, "You eat that stuff?"

I said, "Gosh, it's nourishing. High in vitamins A and D." I did that for the next three years. Besides eating chicken once in a while after some chicken autopsy, (it had no disease -- I cut out the parts that were inflicted-- this was all neurological diseases), and I put it in the cooker and had chicken soup for days.

My girlfriend came up and watched me do that and she said, "Look, I'll send you money. Don't do that." But we got through it.

I got to know the dean well. He came to trust me. Somehow the student body got to know me—not that I had much to do with them. They elected me secretary of the class and president of the class and the last year I was making all kind of arrangements for speakers and I told the dean I wanted to make it the best year I ever had and he said, "Do you want to take over my office too?"

We were on that kind of relation. And another time he had me in for a brief discussion and he was finishing up and he said, "Steele, why are southern writers so much better at putting novels together?"

I hesitated for a moment to say what had I been reading. I said, "They got good stories to tell. They had a big war, a tragic war."

He looks up and he says, "You read too?"

"I do, sir, yes."

He must have wondered how you had the time.

Yeah, yeah, I read. Anyway, I made a good impression. When I was taking bacteriology, the guy who I dedicated another book to that I wrote about his life, came back from a visit to Harvard in 1936. I was taking the class a couple of years later and he was telling the class about why Harvard was a great institution for—at that time 300 years—what is it, 1536 to 1936, 300 years there, 400 years. Harvard is 1636. Three hundred years. And he said while he was there he met the dean of public health. And I asked him what his course was, and it was set up for medical people. He asked him [the dean] if he would take someone trained in veterinary medicine.

And the dean replies to him and says, "I see no reason why not. Let's try it." And staff says—comes back and tells that story to the class I was sitting in.

And this goes beyond my imagination of getting a graduate degree in public health. So I stay after class to tell him I'm interested in what he had to say. And I said, "What do I have to do?"

And he said, "Well, let me take it up with the dean." (Gilmer again).

So Gilmer takes over the whole thing and Gilmer has me in and says, "Anything in your closet I should know about?" And I really don't know what he's driving at, anything in my closet except to say do I have any bad habits, have I raped anybody, have I gotten in a fight or something? Doesn't turn out to be that at all. He wants to know where I stand politically. I'm not pro-communist or that, which there was a lot of activity around the college with the automobile union and for reasons I can't tell you I stayed away from it. I was liberal I thought but my liberal attitude was 'how do you do things for people? How do you get them done?' So that put me on the right side there.

And then the dean took over and as I came to my last year the dean calls me in and he said, "I'm gonna send you out to the state health department to do your large animal surgery."

Well, they did a small amount of large animal surgery out there and making antiserum for diphtheria and other diseases that you use antiserum, lockjaw, all these things preceded medication. So the justification was there of me learning about this in public health, but there was something else in the application of Harvard; "How much time have you spent in the health department?"

This is what they wanted there. So I became a student in the health department so they can put in a year or more and that satisfied somebody.

So to your knowledge, were you the first veterinarian to get an MPH?

The first civilian. The army had sent one two or three years earlier. His name was Phil Carter, and I got to know him. Phil had great admiration for me I must say, and he only died I think 2-3 years ago. And he came back and told the army about me and when the war broke, the army immediately tracked me down and said General Keiser wanted me for his staff—the highest compliment I could get, but that's another story.

It sounds like you developed that interest before even talking to your veterinarian cousin, but one of the choices he mentioned seemed to strikE a chord with you.

I was selling insurance. I was an insurance clerk. I was selling anything that I could make a dollar from.

And then you went to college.

Yes, I went up there with the intent of being an environmentalist. The word hadn't been invented then, and registered in forestry. Working out there and doing everything. Rabies examination was just coming into being. They were using a microscope. The mouse test was coming in instead of just the microscope. And polio, I was learning about polio, and was there an animal reservoir. Some guy in Ohio claimed that the milk was carrying it and another one up at Mayo said there was an outside source that we hadn't identified. I heard all this. Not that it made any real hard impression on me except to say these are challenging problems. The problem I kept repeating to myself was tuberculosis, brucellosis, rabies and foodborne diseases—foodborne carrying a lot of parasitic diseases.

But coming towards graduation I'm getting a little impatient. My wife-to-be was impatient likewise. She wanted to get married the year before and I said, "No, my senior year I'm gonna be occupied here and I don't want to get off on the wrong foot and say I've got a meeting to go to, I've gotta do this." And I just held her off and I said, "The day I graduate we're going to get married that evening and we're going to invite the class and the dean."

And I did. I invited—there was what, 60 graduated—maybe half of them showed up or something. But the dean was there in the front row and I remember he was talking around. People were quoting him saying, "Well, it's the first time I ever heard Steele so quiet."

Anyway, word had come through. I got my fellowship and I got an internship at the same time because I put everything aside and hadn't applied for an internship. And everything that was worthwhile was filled except for one guy up at Petoskey Resort in Northern Michigan, what you call a gold plate assignment, a deal with the well-to-do people that came to Northern Michigan from New York, Cincinnati, and Chicago. I get the internship up there.

So my wife of one week and I went off to my internship and naturally all the skut work, everything, "You do this, you do that," and I did it.

The worse one I had was taking quills out of the dog's mouth where he had bit into a big skunk that had a back full of quills. The pressure had to be constant not to break them off because then you get a festering around where you break them off.

I learned so many things. But then to top it all off we had a case where a dog came in from a well-off Jewish New York family and he was just in pain. Dr. Jensen had to examine it and he said, "I don't find any cause for this. Will you take it over and work her over this evening? That is, after the clients have gone and you just sit there by yourself and see what you can remember what you should find."

Within an hour I had palpated a small mushy ball, a small rubber ball that if you squeeze hard on the outside of the nipples of the animal, you wouldn't feel it. You had to get

behind the nipple and there I palpated it. And I called Jensen to tell him I thought I had found the impaction. He comes down and we operate at midnight or whatever it was, and there was a lot of gangrene set in and dead tissue.

I was saying to myself, "God, I'm glad I'm not guilty of this one." Anyway, the dog dies within hours or a day.

And Jenson said, "This is a hard one for me to take, would you handle the owners?" So I did.

I called the local undertaker who I'd gotten to know maybe over a lunch or something. I said, "I got a patient here that's expired and I want to do it up right so they got something to talk about when they go home. Can you make a small casket, embalm the dog? Not that it has to be embalmed but just so it looks very natural." And he does all this for me and we worked it out. Then the owner comes by to pick it up and I write up a bill. It comes to some $200 plus. And Jenson looks at me, because we handed out bills for $20, $40—maybe something approaching $100. This was still the end of the Great Depression.

And I said, "These people have got to have something to talk about. These are well to do people."

The next day they look at the bill and smile at me and say, "Doctor, we so appreciate what you have done."

It's just a great summer because I can talk to everybody about public health and what this means and why we're protecting our animals. When it came time for me to leave in the fall, the Danish fellow that employed me said, "I'll make you my general partner if you want to stay." Well, there it was. Could I be an important guy in a small town or can I find something bigger? What was bigger at Harvard I didn't know except to say it's a bigger challenge.

You had a goal in mind and it started when you were very young.

My Scandinavian origins. They were the first to think of what you do for the poor people. They wrote books on it in the 1880s, 1890s, and I used to hear my grandmother from Sweden talk about people that walk the countryside with no food, tighten your belt. I learned all that in Swedish in the language and it made an impression on me.

I don't like to talk about myself but my home was a mess. My father was an alcoholic, beat my mother. I saw the worst part of a well-to-do man, a well-educated man destroy himself with alcohol. All these things came together. And what was the conclusion to a lot of people? "Oh, that son of his isn't gonna be worth a dime." They didn't realize what the hell I was going through. I was out there screaming and screaming and screaming. I was late every night screaming. Did I have to come home and tell

everybody what I was doing? No. You touched a very sensitive spot when you asked me that. I just don't like it.

Anyway, getting back to Boston. We both come into Boston on a train from Montreal. In Montreal we had taken a bus up to the top of Mount Royal which is what the city is named after. And we were taking the bus and then thinking we'd walk down, it's easy. And my wife says no. She and I had hiked all over Chicago and the Midwest, the state parks and it was the first time that she had expressed something that disturbed me. She said, "I just can't go on."

I said something about getting the bus. She said, "Get a taxi, I want to get back to the hotel," and she beds down and feels better in 24 hours. And I had a cold so [I thought it was because of the] change of climate.

We went out to visit with a classmate of mine, Siegel. He's still alive and I still correspond with him. He was the youngest in the class; he was not quite 21 so he couldn't take his state boards until he was 21. I was one of the oldest. Anyway, my wife is still showing signs of discomfort and Mrs. Siegel said, "Oh she's pregnant, you better be careful."

So for the time being I take it as it is. And then we start school and Aina is feeling better. She goes by the university union, Harvard Union, a famous name for books and everything; asked for a job and she gets it with a smile on her face. And she comes home and tells me about the boys trying to make her and say, "How about a date, how about having a soda with me?" And she's just living it up having a great time. And on one occasion she comes home and says, "I've got a date for the weekend."

I kind of swallow hard and say, "What's happening now?"

She said, "I've been invited to an outing where we're going to raise some money and I'll be away over night."

"You're gonna be away overnight? What's this business about, the liberalization of Harvard?"

Well, anyway everything worked out well and she goes from one job to another because she knows typing, she knows how to manage things and then everything goes along smoothly except this persistent fatigue at the end of the day. One evening she staggers down the hall, just bouncing off the wall, and I said, "We've gotta go to the clinic right now, right now."

I didn't know if I had enough money to pay a taxi to get over there. It was only a short distance. I dare say we walked but I can't swear to it. And they look at her and they say, "We've gotta hold her overnight, we can't figure out what it is. The fever is there." The next afternoon they called me and said she has tracheal bronchial tuberculosis. The trachea, the bronchus, not down in the lungs, up in the upper part. That is

dangerous. You're swallowing that stuff all the time. I'm being exposed, heavily exposed. Anybody freshly married you get exposed in a way that you never imagined. I remember walking away from the lying-in hospital. I cried all the way home. Job in the bible came back to me. I said, "Job, Job, is there no end to my troubles?" I just couldn't believe it. The days that followed….but I was at the best institution. Everybody knew something.

I read about your wife's tuberculosis in the book you wrote and how finally they developed streptomycin and she became well.

Channing Home. It was Harvard set that up, Dean of Harvard.

She was there for a long time, wasn't she? Then after she got well, you had your first child?

And was warned against even having the first. The M.D. at the TB [clinic] said she should have an abortion. The second time around another doctor who had helped her deliver in Atlanta, Harry Pratt's [entomologist at MCWA and later CDC] first wife, the one that drowned, she was taking care of Aina that whole experience and everything went so well with her help. She really did everything. It was motherly help of the type that you can't describe.

Dr. Pratt's first wife was a physician.

Yeah. She was just wonderful. And it came off well and at Channing Home I would walk from the school, it was like maybe a thousand meters at the most, a short walk. And I learned how to cook. Being economy-minded, I remember buying a pack, p-a-c-k, an old time term of food, a pack of fish, herring in the spring run and getting instructions from Aina how to fry spring herring, and I got so good at it I invited people in the class to come and have herring with me—if you bring the beer.

During that short interval I had other people that needed a room that were in school sleeping with me. These are pull down beds, not separate beds. I remember I slept with a black doctor. Did it bother me? No. It just made me feel better that I didn't have any prejudice of any kind except for dishonesty.

Anyway, the dean's wife, Dean Drecker, she was an M.D. likewise and she one time went over to visit with Aina and she came back and said to me something to the effect, "Why do big men like you pick such small women?" To me, I didn't think Aina was small, 5'8" and shoulder height. Yeah, I could say I'm a head taller but that wasn't any big difference. And everything was going well.

Then I'd seen the bulletin board with all these physicians, small town health officer, time to practice, and every one of them I saw "M.D. required." So I let it be known around the class, "Do I have to have an M.D. to be a health officer?"

This was New England. And the dean heard about it and finally he calls me in and he says, "Steele," or whatever he called me, "I know you're having a difficult time and I want you to know that you have my complete support. I don't want you working," (because I'd found a job at night at a veterinary clinic that wanted somebody from six to ten). "You're here to go to school. Any time you need money there are signed checks with my secretary for you. You tell me what you need and she'll give it to you." I never needed it. I got by.

Then he called me in another time and he'd heard about all this—I was having more trouble, and I said, "Dean, do I have to stay here and get a medical degree to be a health officer?"

He said, "I think we can correct that. Why don't you apply under one flag?" and checks off my positives, good appearance, good voice, good learning, etc., good idea. And this is why I have contributed annually to the Harvard Fund to help students and I got the nicest letter someplace here thanking me saying they want to run a story for me coming January that will go out to their 5,000 alumni around the world of how I got through public health school as the first veterinarian because they want to use the term "first veterinarian".

I said [to] use the term among veterinarians because somebody's gonna say, "Well, I know there was an army doctor who was a veterinarian that was there."

See, the army had no difference between their MDs and DVMs in their Medical Corps. That pretty much settled it. He said, "Go out and fly under one flag."

That changed your direction?

I could take off. I didn't need any propulsion, I could just wave my hands and say, "I applied, I applied." But then another bad and good—need balances—and as the semester comes to an end a famous microbiologist from the University of California, Carl F. Meyer, M-e-y-e-r, comes to the school to give a lecture on exploring new frontier in public health. And what's the new frontiers? Zoonoses. And I've heard the name, people had told me he's one of the best lecturers you'll ever listen to, and he did.

But then I thought I'll show off a little bit and I had the audacity to say, "Is the pathology of brucellosis in all animals the same or does it vary from species to species?" Well, this was a big opening for him to take it either way he wanted it. When you plant a question like it's opening, and he went on for 15-20 minutes explaining to the class what brucellosis was and how it affected different people in different ways.

A day or so later I get a note from one of the faculty: "Dr. Meyer would like to invite you to have tea with him."

I said, "Tea? Gosh, the first time anybody…" Well, the dean asked me to have tea, so it wasn't something new.

But anyway, he has me in and says some nice things and he said, "You made a good impression around here, I may have an opening this summer. Would you be interested in coming to San Francisco?"

I hesitated a little bit. I said, "Well, I have a sick wife I have to be concerned with. I'm from Michigan and Michigan has TB care for their ill, it's one of the first states to have it."

He says, "Oh, we can take care of that, we have a wonderful service and you can either get your Ph.D. or get an M.D., whichever you want." I don't think there was much hesitation except to go back and tell Aina that another opportunity—I say opportunities are expanding making up for all the trouble we've had. There's hope, the sun is coming up, it will shine again. And we close out the year and graduation comes and everybody good wishes, good wishes, you'll do it, and so on. I didn't stay for the formal graduation.

Anyway, we get down to the graduation, take a train to New York, walk up the steps in Penn Station so we can say we've been to New York, we saw all the buildings and some hours later I'm on my way to Penn State College, where all the fuss is now, and that's where my cousin, Bill, who had finished veterinary medicine and then got his master's in pathology was. They had pathology there and we were going to spend a long weekend with him. Anyway, I wanted to tell him how much I owed him, hug him and say, "Bill I couldn't have done this without you." He and I boxed as kids and had competitions climbing trees. He and I [had the] competition of boys. And we had a great time and Aina was feeling good. And we take the train to Chicago and we want to get her to her family and then I can go back up to Michigan and thank everybody in Michigan saying things are going well.

Then Joe comes back. I get a telegram and it's Chicago. "Army contracts not fulfilled, do not have opening, do not come to San Francisco."

I said, "Have they castrated me standing?" (That's a term we use in veterinary medicine).

When I get mad at somebody, "I'll castrate you standing."

Honest to God I just said, "It can't be, it can't be, it just can't be. Who's testing who here?"

I remember Aina was staying with her family because we needed separate beds and I was staying with my brother. There wasn't much we could say to each other except I had to get on the phone and find out where I am—what's happening. The people in Michigan immediately say, "We've got a job for you, we've got an opening for you, don't worry about it, join us whenever you can." That's the Michigan Health Department.

I had some ideas that I wanted to do some teaching so I let Dr. Stafseth know when it happened—not completely saying that things aren't working out as well, I may have to return to Michigan until other things develop... something of that nature. And I get to thinking to myself, "You're not gonna sit here and say you have to go back to your old job because you couldn't find anything better." That's indirect thinking of myself.

Maybe I was approaching another way and saying, "Is there something I can do for myself that will make me look better?" I even went to the University of Chicago to find out if they had any opportunities there for completing my 'medical training' as I called it. No, nothing.

Then the thought came to me and I said, "Gosh, the public health service sends me a check from Chicago every month when I was at Harvard. I better find out who they are and what they are."

So I make it my business to look through the telephone books where the public health services offices and I walk in—I suppose you've gotta have more nerve than a salesman selling a lot prohibited products—and I say, "I'm one of your graduates." And the girl looks at me in a strange way, graduate?

I said, "Yes, I'm a veterinarian who you supported in getting a master's degree in public health," or words to that effect. And she's flustered. She just can't figure out why I'm there.

And a fellow my size walks up behind her and hears a few words and says, "Can I help?"

And I said, "Yes, I'm a doctor of veterinary medicine, I just finished my MPH at Harvard with your support and I'm looking for a position that will match my training," words to that effect.

And he says, "That sounds interesting, tell me more." So I tell him I got this fellowship through the university at the state health department. And he said, "Well, you're one of a kind. Let's go in and see the boss."

And we go in and a tall slender fellow, the first fellow was quite husky but also a six-footer and we're standing, the three of us all looking at each other eye level and I'm saying to myself, "Gosh these public health guys are big guys."

And I can't think of his name, he says, "Tell me more." And after 10 or 15 minutes of conversation they said, "We better call Washington and find out what we can do. We don't want to let you loose, we don't want to lose you."

So they call Washington and bounce my name and credentials around and the sanitary engineer came back and said they had a request for a veterinary training at *new* public health—not training in *public health* but *new public health*—for an assignment overseas.

Naturally I'm interested. They relayed this to me and I said, "Well, I must say I'm prepared to do what I can for our country in the public health service and how this fits in with doing something for our cause." We were well into the war, you know.

So the people in Washington have sent out a paper or had one paper to find, and most important: to find evidence that I've had six years of training. I haven't. I've had four by doubling up taking a summer. I said, "Well, we had a term that said, 'The cow is upset. It swallowed its cud.'" It applies to a bull likewise. I swallowed my cud.

I said, "What the hell more can go wrong?" They said to come back tomorrow, they'll work this out, they're gonna do something, they're not gonna lose me. This is Henry Hollick and the other fellow that's in the book.

And the next day they say, "They give you commission as a first lieutenant but not a captain."

So you got it.

I got something, I got something, I got my foot on the ladder. And well, then they called back and said they can't do it. I have to have another year. But they have a caveat. They got their supporting internship in both Ohio and Indiana for a young person that has some qualifications but not all, and I could choose between Ohio and Indiana. That was the beginning. The ladder was in place. I could put my foot on it.

And I turned out a good record in Ohio. But I also had a problem in Ohio, overreaching I guess, people being kind to me. Not me overreaching but people—it was a great experience because I was the only veterinarian around. They had all kinds of problems because they didn't even have enough MD's. The MD's were all going off to war or tied up with a practice supporting war industry. You couldn't hire an MD.

There was an outbreak of smallpox, human cases: "Could you go out and investigate?" A man dies of rabies: "Will you go out and investigate?" The Ohio River is overflowing: "People are being destitute, go and see what they need."

So you got lots of experience.

Experience that you couldn't put on paper. I came out smelling clean. We got things done. We didn't cause any trouble except at the end. I get a letter from my draft board in Lansing, Michigan that they'd gone two classes ahead of me and now they're calling on the third class because I had been number six to begin with. That's how close I was to being inducted while I was still in school. So I reply, I said, "The military army has offered me a commission of first lieutenant," and so forth. I confirmed that.

So I called Washington and said I was available, and they sent papers to me. During the time I'd been in Columbus I'd gone by the Army headquarters there to coordinate

my work with the military, feeling that's one way I can do something directly for the services.

And I met a man by the name of Frank Meriwether, either way it's in the book. He was the senior medical officer of the public health service and had wonderful stories to tell me about being assigned to Berlin and under-seeing the Nazi takeover. Naturally, my liberal thinking was with the people that were being persecuted be they Roman Catholic or Lutherans or Jews. My sympathy was completely with liberalization because, I may not have mentioned earlier, when I was still a young man in high school that one of the neighbor businessmen, an undertaker, had been to Germany and came back and said he was offered all kinds of monies and souvenirs by the rebellious people to Jews—they referred to them all as Jews—and asked him to carry this to their family and so forth. And he said, and pointed to me, "You're a big blond blue eyed [man]. You belong to the new movement. You shall be a leader for the new Reich!"

God, that guy preached to me in the drugstore, and I was at the tobacco counter and I said, "I've gotta look out for these guys, I can't express myself too strongly." And that's another story.

Anyway, I get to Ohio and I have all these opportunities. They all play out quite nicely and when it comes down to the end, I tell the Lansing Army Board I'm available. And then I go to a luncheon honoring Meriwether who was leaving the district and everybody was there to say a few nice words. And Meriwether, after the business and the army people had said some nice things, he gets up and talks about the public health service and what we're doing at his PHS, and he says, "There's a young man in the back of the room [Jim Steele] here that I want to stand up and show you this is the kind of people we're looking for in the public health service to carry the message forward."

Well, naturally I'm elated and people come around and say, "Gosh, glad to hear you're the new [generation] of public health."

But inside I'm saying to myself, "God, I told the army I'd accept a commission." I come up for air. How do I breathe now? I swallow hard and I corner Meriwether and say, "Dr. Meriwether, you've done everything for me and I appreciate it but I'm in trouble. I told the army I would accept their commission."

He said, "What's done can be undone. Let's get some letters." And within days they had letters moving from Dr. Meriwether to Washington, Washington to the Veterinary Headquarters, the army, back and forth, and they release me to the public health service for a commission at the same level: first lieutenant and a sanitarian.

Not as a vet?

No. This is my challenge to recognize veterinary medicine. That comes 2-3 years later.

And how did that come about? This was in the mid-'40s, right?

Joe Mountin. (Pictured below)

Well, let's get to the public health service. I did a reasonable record, reasonable, did everything right except the man that filled out my efficiency report said that I was disloyal. Now what does disloyal mean in a time of war? I had no idea and I protested, and all I get back is, "Oh, somebody wasn't invited to your promotion party."

I think to myself, "Is this a society of promotional people? A lot of hens looking after each other? I don't want to be in a people like that." I couldn't believe it.

I challenged the person that made it and he said, "Oh somebody higher up told me that they wanted something in there that wasn't too good."

I said to myself, "Damn weak excuse."

I carried all this back to Washington. I told Joe Dean I was gonna protest this and he says, "You're locked up and you can't."

So thinking of the services that veterinarians can provide, I had become notable in Puerto Rico through my top man, Vonderlehr, a four striper medical man in charge of the whole unit and he told Governor Tugwell that he had a bright new veterinarian on his staff and he just wanted the governor to know about it because they had been providing him, the governor and his staff, with medical services that they thought were better than they could get from the University of Puerto Rico. So within days I start getting calls from the governor's office and the guy sitting above me says, "Who are these people?"

I said something to the effect, "They heard that they have a veterinarian in the public health service and they want to ask me some questions." Well, it turned out to be vaccines or something. Anyway, minor things.

Then one day a call comes in and says that a dog is bleeding from the vulva. Well, that's serious. That indicates a wound or a disease, there's something going on that

shouldn't be happening. I examined myself and maybe I had some textbooks or I had the Army Veterinary Corps there that I could get some of their books from and look it up as causes, and the main cause was granular material of unknown origin. Well, that doesn't tell you a hell of a lot. And I called some of my other veterinary friends, I said, "What do they mean unknown causes?"

Well, they like to use the word 'sand' but I said, "Hell the sand can't get into the urine by licking it. It can do the opposite, they lick sand and then turn around and lick their genitalia." I'd never heard of that business…in my training I never had.

But anyway, I accepted that and said, "All right, if they got sand, why are they bleeding?"

They can't give me a complete answer except to say, "We don't know how small particles can work their way up the urinary tract or the large intestine."

Anyway, I have a problem so I say, "I've got to operate and find out what's going on." So I make arrangements and to have that much confidence in myself, here I've only had like four or five months of internship, but I had done everything and felt I could do it and I did it, and I knew my surgery well enough, you don't use a blade on a bladder you only use the opening and you spread them. All these things come back to you when you start doing things. And I did everything right and found that there was really no cause. It must have been something external.

Anyway, we repair everything, put everything back together and I turned to the army enlisted man, the nurse, the veterinary nurse and I say, "Well, I think we got it all done."

And he says, "Sir, I think we should remove the needle."

I said, "Yes, I think so, too. We don't need to send it back with a needle on it." I used Nembutal for my anesthesia because I control that easier than any gas or any other fluid, and sent the patient home with a nice prescription, everything went well.

"At six o'clock, nine o'clock, you may start to see some movement, ten o'clock more movement, eleven, but by midnight the dog should be staggering around."

All those hours come and nothing changes. I'm gasping. I'm gasping! Have I done something wrong? Have I used too much Nembutal? And finally I had the courage to say, "Why don't you go to bed and have the night watchman to call me if there's any problems; problems meaning staggering and getting out of bed and hurting itself."

At around 5:00 or 6:00 a.m. the telephone call came from the night watchman. He said, "The animal is up and staggering around."

"Aargh!" I said, "Aargh! Wake Mr.—(I forget his name)—and tell him."

He comes to the phone and he said, "Oh doctor, everything looks perfect, everything is fine, we want you to come down so we can tell everybody about your wonderful work." Breathe deeply. Breathe deeply.

Then I did, I went down and had the attention of everybody I guess, and then to my embarrassment the owner of the dog says, "Well here's one of our top-flight politicians here in Puerto Rico, she'd like to have supper with you."

I said, "Gosh, I don't think I'm available for supper because I told some people out at the military that I was going to describe this case to them." So I floated out of that one. I didn't want to be entertained by any young female that would tempt me too much. So I stayed away.

Then Tugwell from then on invited me down every Sunday night for his review of the American scene. I would interject periodically and say, "This is going on in West Virginia, Michigan…"

One night he turned to me and said, "Are you in politics?"

"No, I'm just interested in liberal causes," I said.

He says, "You're in the right place," or something to that effect. And that was the end of it. Then we go through this disloyalty procedure. That thing is straightened out eventually.

Then Joe Mountin talked to the sanitary engineer people and made arrangements for me to be assigned to Kansas City to a medical health officer who had a real interest in me. Her name again is in the book. She was a very fine lady, had served in Russia during the first war with the Hoover commission. Just a wonderful person. She and I hit it off very well.

Then Joe Mountin gets me under his tent and as I went home one evening I said to Joe Dean where I was staying, I said, "Joe, Mountin's got me in his office now."

And he said, "Jim, he'll never let you loose." Meaning I was going to be there.

Within days Mountin said something to me, he said, "You ought to spend some time at NIH [National Institute of Health], see what they're doing over there."

Well, as I analyzed it to myself in a hurry, "These guys know a hell of a lot more than I do, who's analyzing who?" And that's what it turned out to be. Carl Larson was working on brucellosis. His associate and a young M.D. who also had a veterinarian degree was working with him. Then there was a third person and I had a veterinarian from Peru working with me, Mali Gallba(?).

So we all got together and Mountin had come back to me after I'd been at NIH a couple of weeks, maybe three weeks. He said, "I want you to do something about this situation in Indiana."

Well, I really didn't know what the situation in Indiana was. So I had to inquire and I had to telephone out to Indiana to find somebody that could tell me what the problem in Indiana was that the public health service is getting exercised over. And people were picking their heads. Finally, I got down to the congressman, a big fellow, there's a wonderful story on him later on. He said, "They're having an outbreak of human brucellosis in the packing house workers."

Well, I leaned back and I think to myself, "Well, that's not uncommon." And then I dig into it further and it's pork, where they're slaughtering big pigs, big boars with testicles on them the size of footballs. And this is where the contamination is coming from. Somebody is castrating or removing the testicles spraying airborne particles and they had severe cases of brucellosis.

So I don't know if I told Mountin all this or not but it must have been because I got approval to go. And I turned to my NIH conferees, I said, "This looks explosive. I've never heard of a situation like this." We did later on in other states where we learned to look for it. And Larson and his associates and Mali Gallba, five of us all go out in sleeping cars going to Indianapolis. And naturally it was a rowdy time in the sleeping car. Nobody's gonna let anybody sleep. Blame it all on Steele getting us running around chasing wild gooses.

Anyway, we get out there and we learn all about it and I think to myself, "How in Hell am I gonna get a program going for castrating all these big boars before the senate meets, or prohibit marketing and salvaging them for just fat and protein?" So this is where my conferees of the Department of Agriculture step forward and said they would take care of that, they'd buy those pigs and slaughter them on the farm and bury them on the farm.

We said, "Should we report all that back to Mountin?" All I could do is say we went out there and saw they had quite a problem. We had to get rid of some animals that were spreading it and two colleague friends, we got the job done. Not mentioning agriculture because I wasn't quite sure how he would accept the idea that I was going to somebody else to get help. Anyway we got that done. When that was, I can't tell you any more—it had to be late '43.

Then Mountin comes up—this other story I told you about what you do about enlarged prostate. And shortly thereafter he said to me, "I want you to take me out to the Midwest and show me what you're doing." And that was Michigan and Indiana and I was going to include Illinois or Ohio but he said two would be enough. So we did that and I took him to Michigan to meet my dean, meet Stafseth, the health department. Hell, he couldn't pile it on high enough because I was getting buried under good wishes and good going, and he never commented.

We did some very good things in Michigan of uncovering a brucella outbreak that was tied up with nurses handling raw meat materials and another one was foodborne organisms. A fellow named Art Wolf did a masterly job of just being curious. The health department had his reports lying around and nobody investigated them. That's what it had come down to. Again, you're running into M.D.s that can't get a commission and can't carry on a practice because they're married to the bottle. Alcohol. Alcohol across the board. Every time I had an opportunity to get a veterinarian in there, God! Anyway we came out of Michigan smelling like roses but you couldn't feel any better.

We get down to Indiana, Purdue and Lafayette which is just about a hundred miles southeast of Chicago and associate dean was a classmate of mine, what was it '53 where his …? Twelve years earlier. Pat Hutchings. He's a dean now. Gosh, rub my back, I'll rub yours. And we go in to hear more about this problem that I had uncovered—or I identified, I can't say I uncovered it, I identified—earlier about the boars having brucellosis and the infection localizing in the testicles. And he said, "We're having a real problem with that." This is months later, but we get to talking about not only the packing house but the farm and how semen is being splashed all over.

Mountin turns to another doctor, Fred Blankenship, and turns to me and said, "What are they saying? Semen is being splashed all over?"

And then Mountin said, "Pardon me, what did you say? Semen being splashed all over?"

And Hutchings comes back, "Yeah, normal ejaculation is 200-300cc."

Mountin turns and he says, "What did I hear?"

And another person said, "400? Who will bid higher?"

I'm retreating from all this. I'm shrinking. I said, "I didn't say a word. I didn't have a damn thing to do with it." They're all embarrassing each other, and that's true.

I shouldn't embarrass myself by telling you this but sometimes somebody's got a look on their face and they look like a boar that's satisfied. Honest to God. Mountin left that place and Fred Blankenship said, as they drove from Indianapolis to Cincinnati, Mountin tips his hat every time they pull past a farm where they had some pigs. And Mountin came back and told that story around NIH. Mountin just loved those stories. My God, you can imagine if Mountin had lived with me and gone all the places I'd gone? He'd be still talking. He just loved the situations that we'd get into. Well, we'll get some as time goes on.

Anyway, I get back and thinking it's time for my reward, he's gonna set me up in his office. He'd set up public health dentistry just across the hall from me, public health nursing to the left of me or right of me, and his office down at the end, and I thought I

was gonna complete the picture [with veterinary public health]. "No, you're going to Atlanta. Yes, you're going to Atlanta, aren't you there yet?" He's pushing me. "Didn't I write orders on you?" Hell, I didn't know that he'd written anything. But anyway he said, "I want you out of here." This is some weeks or months after our excursion. The good feeling had worn off. Anyway, I get down there and Mark Hollis, very open minded and at this point he was…

He was the first director of CDC.

I'm still a sanitarian. Now my other veterinarians are telling me, "Look, there's a new category. We can be scientists now. We don't have to be sanitarians under the direction of the sanitarian engineer."

So I said, "Why not?" I felt this is coming from my staff, these are the people working with me, it's their thought [that] I'm not doing anything. And I tell Mountin.

"Well, if you think so, go ahead and do it," he said, something like that.

Then this trip to Michigan and Ohio materializes and everybody's feeling so good about it. The next time Mountin asked me to drive him someplace, suburbs of Washington, Dietrich or something, I had the audacity to say, "Dr. Mountin, I just can't recruit the kind of people I want to offer them commissions as scientists or sanitarians. They want to be veterinarians and I want them to be veterinarians."

And Mountin, without asking a lot of questions, says, "Find out what NIH says, see what Gene Dyer says."

Gene, or Dr. Dyer I should say, I didn't ever call him Gene until ten years later maybe, they—his deputy, again in the book, I can't get through to Dyer and I don't want to really. I felt I didn't want to go too high. And I get to Ted Badger and I say, "They want to set up a veterinary category officer, you have M.D.s, you have dentists, you have sanitarian engineer, now I want to be the fourth," although I hear there's scientists, maybe I'm gonna be the fifth of being a category for veterinarians. And I said, "Would you endorse such a move on my part?"

"Well, he said let me ask around and see what the reaction is." That's good. And by that time we'd had problems with laboratory animals through epizootics that swept through the mice or rats or they weren't handled well and they had die-offs, and that's a story I'll get back to in a minute.

And Gene Dyer or Badger comes back to me within weeks and he says, "You know, you guys made a good impression around here, I didn't hear any objections."

And I said, "Can you call Dr. Dyer?"

He said, "I called Dyer and Dyer has no objection. Fulfill it if it's logical." So I get Mountin to send orders creating—or how he did it I really can't say. He goes through Dr. Charlie Williams (who is above Mountin) to Parran and everybody signs off. Now previous to that I had that great success in Mexico and had a meeting with Parran and things just kind of worked out better. And comes back from Parran, Mountin does something, we get a notice in August, what is it, must be August, had to be the summertime because I started in the spring all this going to Michigan and we start in August before I go to Atlanta.

I go to Atlanta in September and naturally I'm on pins and needles and not being in Washington, pick up the phone to talk to Joe Dean. Anyway Ray Helvig, head of the milk veterinarians calls me and says it's approved, the surgeon general has approved it, and asks what we should do, what's the order of commissioning? Well, I said, "You guys should think in terms of how we got here," meaning who was pushing this thing; how I pushed the idea that there should be a veterinary corps.

That veterinarians should be included in public health?

Yeah. The idea is: I'm not gonna tell you; I want you to endorse the idea; I want you to tell me that you felt that I did a good job. And we get that circuit coming back not only from Ray but the other people at NIH and so forth. Looks like I got good support. I'm not doing anything for my own benefit, let's put it that way. And that's true. That could be the most honest statement I could make. Not for my own benefit.

Anyway, I then get the new commission, I guess in the new year, (it had to be because there was enough time), and I remember wearing my new uniform to the office and being complimented with the three stripes and saying, "Yes, I got it but it was with sorrow." Mountin had died just two weeks before.

That was 1952?

Yeah. And then Mountin, I learned that I was on the pallbearer's commission and his wife told me how much Mountin loved to tell stories about me. Anyway, that brings me up to Mountin and pretty much all of those early years, and then what you read there about Parran having the affect telling that table when he has Mark Hollis and Gene Dyer and not in the book, in this other thing, notes by Furman. I never saw those before. It should be at the bottom of page three or something like that. There's what, ten pages there?

It's much bigger than that. This is the *Action for Public Health, Surgeon General Thomas Parran.* (Pictured below)

Yeah. Furman—who told you this?

Harry Pratt.

Oh, Harry Pratt, the meeting of the surgeon general. Good, I'm glad.

Yeah. I'm surprised in the book Parran talks about Mountin always coming forth with new ideas.

Tell me more about that.

Surgeon General Thomas Parran, Jr. Photo retrieved from: http://en.wikipedia.org/wiki/Thomas_Parran,_Jr.

The thing is all three of those guys—the three of them anyway—started together in Tennessee as the hookworm control began. Well, this is all second, third hand. Mountin comes in the Public Health Service. As he said, he's assigned to the hospital and then to quarantine and then to the state. And he never mentions Alabama where the hookworm problem was the biggest; Alabama, Florida, South Georgia. And Tennessee creeps in because they had a health officer, I can't think of his name and I don't think it's in the book, he was always interested in new ideas and Parran's deputy was from Tennessee. He was the one that gave me my final examination when I was supposed to meet with Dr. Parran and he sat down to spend an hour or two with me and we never got around to it because he got to talking about his experience with rabies and a human case that they thought was rabies and he cured it by a hard slap in the face. And I thought to myself as I sat there for 40, 50, 60 minutes, "Is this my final examination?" And then we got back to talking about the shortage of insulin and a few things that were of concern.

Mountin had these other programs which I mentioned, dental and public health nursing, and in addition there was a program for nutrition, and nutrition fell by the wayside. They couldn't come up with any data showing that there was vitamin deficiency in the population they were studying in northern New England. I remember hearing all that discussion and a lot of times I thought, "Well maybe this discussion is aimed at me to say don't come up with a lot of bull and tell me you're doing this and that. Let's go out and see it." And Mountin, as I said, was elated when I got into the Q fever because that was my first hard run-in with NIH with the deputy director [Norman Topping], was under Dyer.

Rolla E. Dyer, Director of NIH from 1948-1950. Photo retrieved from:

http://www.nih.gov/about/almanac/historical/directors.htm

Very capable. Went on to be President of the University of Southern California and eventually University of Pennsylvania. One of the highest ranking officers in the nation. What else happened there?

Tell me about your involvement in getting the Communicable Disease Center started. What was your involvement with that?

Why Georgia got it? The senator, the two senators from Georgia backed the health care bill. But the senator for Georgia [Walter George] said it would unbalance the budget. They were over budget from World War II, or no the request coming in. See, this is 1930 and I really can't give you anything except through another source and that's through Ralph McGill, the editor of the Atlanta Constitution Newspaper. And I often asked, I said, "How come Roosevelt didn't get Medicare in his original 1935 Act?"

And he said, "The best answer I can give you," (I sat in in a lot of discussion), "that there wasn't enough money in the federal budget because we were in the depths of the depression." See, they were putting the law together in—well, we can say he takes off as of 1933 and he forms a group already that are going to work on the Secretary of Labor, [Frances] Perkins. Now her name comes back to me. And she is going to be the master of that and she has to line up who the politicians are going to be. And the senator for Georgia is the top man. I can't think of his name [Walter George]. And the others will tail along with him. This is from Ralph McGill, the editor of the newspaper, and it was confirmed by other people in saying the Georgia senator wanted a reward, and CDC. And Roosevelt or Ms. Perkins wanted Medicare added to it and the senator said, "There isn't enough money." They were enormous deficits. That's before they ran up a $14 trillion deficit for World War II. If you read the history of that, it was resolved by what? Inflation. And that's what it's being resolved by right now.

How about in the later years when CDC got established?

Mark Hollis was the one that—well, all I can say is Mark Hollis deserves every bit of credit. Mark got to know all of the top politicians of Georgia and maybe Tennessee for that matter, I don't know, but Georgia anyway. Then with the passage of time, the senator from Alabama. Both of them became strong supporters of the public health service and they were the ones that put Luther Terry in office when you had two

outstanding officers that were battling for Surgeon General, and the senator from Alabama said, "These guys can't come to an agreement, I've got a man here from Alabama, Luther Terry, he'll do the job."

And I remember Larry Smith calling me and said, "Do you know anything about Luther Terry?" And I'll be damned if I could put it to my mind but they reminded me then that I had cooperated with him in studying the high level of heart disease in pigs. And Tim Watt wanted to know more about this and he turned it over to Luther Terry and Luther Terry then got the report of people that had these study contracts from the heart disease program. All I could say is they were everything they anticipated, that if you just put a lot of fat into an animal, you're gonna have problems.

And I don't know if I'm supposed to say this; they wrote articles for me on heart disease in pigs that I would never have been able to put together and put them in the AVA [American Veterinary Association] Journal and places like that because they had hard data and they could interpret it correctly where all I was doing was saying, "Yes, they got big swelling, they got a lot of crud in their veins." I never wanted to make out that I knew all this stuff. But Mark Hollis was surprised and Joe Mountin jumped right back and switched the subject completely. Isn't that remarkable?

Yes.

Well, Joe Dean proudly told me, he said, "Look out for Mountin, he gets his head under the edge of a tent and he'll have the whole body there before you can blink the other eye."

All I can say is, "Who laid the ground work for that complete acceptance by NIH?" I often wonder, as I say, some of those guys I got to know quiet well and they never really told secrets.

They just would say, "Oh that's a great guy to work with, you can get anything done you want, that's the kind of people you want to be seen with." I remember Mountin sent me over there—Anderson, a fellow named Anderson was head of the infectious disease laboratory and had been for a long time and Carl Habel who I wanted to work under learning about diagnosis of rabies knew systems, I wanted to stay with him.

And then Anderson says to me, "I've got a good problem for you: about this axilla swelling of people that get small wounds." It was first identified about 1930, and this is what, 15 years later. I wouldn't know anything about that…..and I saw only this past year that NIH had finally worked out the answer to that. It was allergic reaction to a certain type of injection.

And I said to myself, "Imagine if I'd spent the last 30 years working on that, biting my nails off and spitting them at people." When I got angry, I always thought that was a good way of expressing your anger. I'll bite my nails and spit it at you.

When you started to set up your lab at your section at CDC, how did you go about it? What was your plan?

All I can say is it was amazing. I get there and Gilbertson, one of the deputies to Mark Hollis—you know, he had two deputies from North Dakota, Hansen and Gilbertson, both engineers, both great guys. And they had worked with Mark Hollis on some water project in the Dakotas. So they were asking me—

About setting up your division at the Communicable Disease Centers.

Mountin gets me down there and the messages are being relayed to me, I guess, by Joe Dean and his deputy but I'm not getting word—what are you going to do about rabies? Because probably I said that rabies was a major problem. There had been some unfortunate approval of vaccines that weren't reputable. I don't know anything more than that. And the vaccine used in animals had a duration of six months. You couldn't go out and sell programs like that. But I had learned from some of my friends at Lederle [Pharmaceuticals] that Rockefeller Foundation, Harold Johnson specifically, had isolated or mutated viruses that took months, and these mutations now they could extend vaccines for years. And I wanted to find Harold Johnson to get it straight from him that there is isolates that will provide protection for months if not years. And I run into Harold Johnson at a United States Animal Health Meeting in Philadelphia, and my question to Harold is, "Is this true that you have…" that Rockefeller had this big study at Montgomery, Alabama that came to light about 1930 and this is 1946, "I'm looking around for where's the data? Is this just rumors, has this been published?"

And I get word that Harold Johnson just doesn't like to publish. He likes to talk. He's a good talker, he convinces you, but you'll never catch it in literature. I run into Harold at this meeting of the State Livestock Officials as they called it; today they call it the Sanitary Animal Health Association. And I'm telling Harold, I said, "I'm trying to set up a laboratory to determine duration of immunity in rabies vaccines for animals, dogs mainly."

And he hears me out and then he said, "I think I can help you." And I'm thinking that he's got this virus isolated. He said, "We're going to be closing the rabies project."

Well, that leaves me uncomfortable. This is the best data we have. And I said, "What I want to ask you about is do you have the isolate that gives duration of immunity?"

"Oh, I gave that to some fellow that went to work for Lederle Pharmaceuticals," he said. Well, that makes it commercial immediately.

In the meantime I tell Harold what I want to do, set up this laboratory that's gonna cost me $100,000 maybe $200,000 to get the thing off the ground. And he said, "You know, I have instructions to close down in the next 18 months, you can have the entire laboratory for one dollar."

I go back and tell Mark Hollis, Joe Mountin, and everybody's out there with a flag, "Get it appraised, get it appraised, steal the county laboratory!"

Now I say to myself, "Who do I get to run this thing? I don't need a virologist, I just need somebody that's got good public health training," and I look at the data. We're not looking for a new isolate, we want to set up somebody that's got patience; "Five years," I'm thinking to myself.

I go to a meeting of the New York Academy of Science and I run into a lot of gifted people looking for work. The war is over, they're coming back and they're leaving their war time jobs and I run into Earnest Tirkle and Earnest Whitt, two Penn graduates that had been locked in by the Department of Agriculture in food inspection during the war. And they had really heady jobs overlooking Manhattan or all of New York greater area. But both of them wanted to get into public health. They wanted to have inspection behind them where they had maybe 100-200 people reporting to them, data, all kinds, looking for trouble. No trouble, good program. So between June of '45 and the spring of '46, the meeting, Harold Johnson, we get that whole thing transferred by—well, should I say the summer of '46 Ernie Tirkle and I, and we have to find support for him and that's when Martha Kissling comes in, Bob Kissling and others that are being recruited and by the end of the year we got this program going. And I got an advisory committee of topnotch people including Tom Sellers, the laboratory director of Georgia for many years now, the health officer.

Now we speak about reverence, about his contribution and all that comes together and then to top it off we don't have the vaccine yet but we're making a vaccine for experimental use and somebody said, "Well can't you use that in the field?"

I said, "Look, I'll get in all kinds of trouble with the US Department of Agriculture if it isn't approved."

But somehow we worked it out for experimental use in New York City under supervision and they did all their own supervising and then we had the big outbreak in Memphis, Tennessee where Ernie Tirkle went up and was in charge, cut up the city in blocks and determined what the dog populations were, what the economic status was and laid out what we call the CDC rabies control program and that then spread across the country. It works.

I really got in no trouble with it except in El Paso where the local practitioners said something to the effect, "What's our cut?

And I thought, "Now how do I pacify this guy?" Well, I get him on the podium and say, "We've gotta get your voice endorsing this vaccine, how good it is."

That keeps him quiet for awhile but he's writing to his senator saying that practitioners are being pushed aside with the developments of new vaccines, and that became a problem of letter writing to different people in Washington. But nobody ever interfered

and all I can say is that the front office, Otis Anderson, Joe Mountin, Joe Dean, Surgeon General [Carlton H.] Sheeley, he knew all about this and he came down, it was one of his first visits to CDC to see what I'm doing with rabies, and incidentally probably about that other investigation about what kind of relations I had outside the government.

Tell me more about the vaccine.

Literally the duration of the vaccine can last a lifetime, attenuated rabies vaccine, and it called for a delicate balance of someplace in the neighborhood of 40 to 58 passages. You got the immunity you wanted but you also could produce disease at that level so you carried it into the low 70s and at 70 [passages] you had to have accuracy that you weren't diluting your vaccine too much, and then they tried to use it in veterinary students, their second year of veterinary medicine when they started handling animals and vaccine. And we had great success with it. In fact, we have not lost a veterinarian in the United States or a veterinary nurse, if we can use that broad term for their age, and New Jersey was the last one which would be about 1960, forty years or close onto 50 years. And I dare say beyond that that this has spread throughout the world and Merieux, the big vaccine company in France, has kept these things. I don't know how they do that on an international basis but we got pretty good data on the world scene. Mike Schultz through his globalization, he would certainly pick up a case of human rabies in a veterinarian if it occurred any place that had public papers. And in the army, the army has some 350 veterinary officers spread throughout the world identifying with food supplies and inspection, and providing services in addition to inspecting food. As I joked with Cole, who was the general in charge of the army veterinary corps and he was also one of my best students—I use that word "one" of the best, I've had so many best that I don't want to run out of them yet. But he's teaching at Kansas State now and he used that vaccine for four years and I said, "I'd like to have any reports you can give me that I use here for just teaching, and then relay them to CDC if they want them."

Next year we're gonna have Chuck Rupprecht, out as a speaker for my birthday. They're bringing us up to date. He gave a splendid lecture at Tufts two years ago on where we stand with rabies nowadays. We've got seven new isolates that are different from the original isolates. It makes you feel good that you lived long enough to see the expansion of creation. It's just like everything else that exists. Everything that can reproduce itself is constantly growing, constantly changing.

In the late '50s Mexico started having a problem with vaccines for human use and for animal use, and by the mid-'60s they'd sent requests to everybody to help them resolve this business. And I had turned it down stating that we wanted to keep track of our own problems and to resolve this would require a study of maybe two or three years. Well, it turned out to be that way. And that thing bounced around indefinitely and then I got a call from the Surgeon General's office who is chief of staff under Bill Stewart, to find out if I could do anything with it. I said, "Well I don't know anything about this exactly, what is the problem?"

He said, "We're being told they're causing rabies with the vaccine."

I said, "That's a difficult one to resolve. If people want to make sure they're going to embarrass you…is this a political fight or is it a fight among biological houses trying to tear down another vaccine?"

I asked George [Baer, DVM] to go down and look into it and he came back and told me what the trouble was; that they didn't always modify, attenuate the organisms according to formula. Time they put in [to work] was dictated by their social calendars instead of their work calendars. He said, "If they give me the right to discipline people, [I could take care of it]" And George did it in two years. He had that thing pretty well cleaned up.

Those kinds of things that we've done at other places; testing brucella vaccines for human use that was a nasty one. Naturally there was no way of handling it in the United States. You'd have to go back to my time 60, 70, 80 years ago when the last big trial of brucella vaccines in the United States was about 1935 out of Michigan State. J.M. Huddleston thought that he had prepared the vaccine that could prevent the Maltese type of brucella brucellosis. He had the isolate, he brought back, he was made a hero of; the old League of Nations had underwritten a project and how many veterinary students or graduates—I should say graduates—participated? I don't know, but it was all rumors. We were never allowed to see any hard data and the only reason I became acquainted with it, I worked in Huddleson's laboratory cleaning out the glassware and we heard scuttlebutt of all kinds, and all that stuff. Eventually it came out that his isolates were not always attenuated properly, and I said, "How come they're not attenuated properly?"

Well, we asked them to send them to Denmark from Malta where the boar experiment was going to go on because they didn't feel they wanted to have just a U.S. laboratory go out and that thing backfire, because when they used the vaccine at Michigan State University on volunteers, they had some human brucellosis and guys, they were made quite ill and in some cases they said they'd never go near an animal that had brucellosis again.

It was only last year or two years ago that U.S. Department of Agriculture sent out a bulletin that there's no cow left in the United States that has brucellosis, that the country has eliminated it. But where's our problem? Pigs. Not the domestic—wild pigs. We estimate we have four million wild pigs in Texas and maybe only one or two percent are infected but that's where the human infection is coming from, and the same with the State of Florida. The Florida human cases of brucellosis are coming from the guys that go out and say, "Let's kill a few pigs." And they're encouraged to do it. They get a state license. And trichinosis because that was radiation of food and this is where Sheeley showed his best colors.

About what years was this going on?

Must be in 1955-54. Sheeley is Surgeon General from '47 to '55 I think. He steps down at the end of his second term. He didn't have to leave. It was the early '50s. And the

people at the University of Michigan—I have a book devoted to this and I think I've got a chapter in there on trichina, how we eventually eliminated it. Not eradicated it, eliminated it. And the University of Michigan and I had been communicating because they had worked out a radiation program for radiating pork. So the old problem of Brucella Suis that I talked about earlier could be managed more intelligently.

Even better was trichinosis, which is a common problem with garbage-fed pigs. The garbage fed is another story. We cleaned that up. That was real hard politics. But staying with the University of Michigan, they organized with the American Medical Association a conference on the use of radiation to eliminate trichina in American pork. Naturally, I was all for it and lent our name to it. I could give a paper and brag about all the good work these other people were doing. Not that I didn't have a radiation machine, I was just taking other people's data and putting it together. So I made quite a splash in Chicago at the AMA. I was host at the meeting. And the meatpackers were all in Chicago still in those days, they hadn't moved out to Omaha and Denver and West. And they just raised hell with me and right there when I came down from the podium or even when I was talking they were shaking their heads and just making angry motions.

There was a meeting a month or two weeks later in Denver, Colorado of the midwinter meeting of the AMA physicians, and Sheeley was there and the meatpacker M.D.s were there. And they cornered Sheeley wanting to know why he allows his staff, meaning the guy Steele, it sounded like Sheeley, was getting away with dishonest science. Well, Sheeley had seen me just a month or two earlier. He wasn't at the Chicago meeting but he had visited CDC just to get acquainted and he saw my map of rabies, maybe I had some other maps on the wall, and he knew me well enough and everything I was doing. So Sheeley listened to these people and then came back and started an investigation. "Tell me; what's Steele up to? What's his papers? Can we get copies of everything?"

And everything made me smell like roses. I came out and the people at the University of Michigan praised me and AMA praised me. And then the story came back to me through the laboratory director of California. They were having a meeting at NIH and the meeting was about the conflict between NIH and laboratory directors that want to do research such as California. And Ed, whatever his last name is [Lennette], brings up this example saying that Steele was involved in radiation of meat and that the laboratory results were all positive; radiation works very effectively and we want to support Steele in his work, that he should not be attacked. And then he was telling his conference, he said, "This is the kind of thing that we want the public health service to be doing that we can brag about when they're doing something that reflects to our credit." So word comes down—

Ed Lennette.

Ed Lennette, yeah. Ed could really pick you apart if he had any reason to do so. And word comes down, to put a pin in there for him. But did I tell you about the earlier one with Eisenhower? Eisenhower's first order of business when he becomes president in

1952 was an executive order that all federal employees should report any suspicion of higher officials that they're working with or for that may involve relations with enemies of the United States. This was a big hunt. It started a big hunt. You can imagine my surprise when Ted Bower calls me in and says, "Who've you been sleeping with?"

I said, "What? I did what? What did you say?"

"Well, here's your letters, we got 'em."

I'd been at WHO the year before and made a number of acquaintances there and said I'll send some materials expressing how we organized veterinary public health, what our principle problems are, etc. And my secretary, a nice old southern lady, you couldn't design a better one for a drama and saying, "I'm protecting our flag!" And she accuses me of having correspondence with foreigners and that I could read foreign languages. Well, I do read a little German, I know a few words of French, I know a lot of words in Spanish, but I don't read any.

Anyway, the investigators come down from Washington, a nice old boy from Mississippi and he said, "Well doctor, we get these kind of calls but we gotta clean them up always, we gotta give answers."

Well, you can imagine the embarrassment I went through and the kidding I got out of it. But the idea that I stood up and rebelled and said they could say anything they could imagine and, you know, I had given Joe Dean a present for cooperating and keeping my name in front of people, and then I wanted to know what happened to this lady. Well, she had two or three years before retirement and they had to give her a skut job someplace at CDC when we were down on 5th Avenue before we moved out to Emory. That was the worst one. I tell you I felt I had been castrated standing there. My pain was such that I said, "These SOBs, how in the hell, what are they digging for?"

There was an editor of a magazine called *Birds for Pets* that I cooperated with and wrote little articles that our birds are healthy and keep them healthy and so on. And I got back to him when this [Senator Joseph] McCarthy business came up. I said, "Do you guys have any relation to McCarthy?"

He said, "Yeah, they all come around and ask for money." He said, "We'll say a word or so."

And following that, CDC put the son of a congressman on psittacosis to watch the data on psittacosis as long as he was alive or they wanted a job. And he'd drop into my office when we were still there on 5th Avenue and say, "Well, Jim anything new in psittacosis?"

"Oh," I said, "We're working on developing a vaccine." Well, we were, and eventually, not we, but the Department of Agriculture did a good job of developing a vaccine for

turkeys when the disease erupted in turkeys and chicken, and ducks we had a lot of. It was spreading through everything.

I said, "I have no way of keeping track of all the activity but I've been working with the pet industry to see if we can clean up the canaries who had a problem with canary pox." Canary pox is like chicken pox or smallpox, little pimples on the outside of the skin. And this interfered with the supply of canaries for malaria research where they'd tell them to use the canaries. Not that I was doing this but all NIH were, which was very practical.

And you'd say, "Well NIH shouldn't be doing that kind of work, I should be doing it down at CDC finding out how to keep the canary business active." Well, I never had any argument with those guys but they cleaned up the canary pox and that was long before I came in the service. So all these things had been going on for a year but they were bubbling up now and how they came to me. It was strange. But we stayed with the idea that the Department of Agriculture had come up with a suitable vaccine for turkeys. Then the disease started to decline in turkeys and it declined in pet birds but still was there. And I think the last turkey problem was 1975 because as you'll read about me in one of these bulletins, let me give you some things….

Oh, great.

It's a meeting that was dedicated to me on the idea that I come up with new ideas. We stayed with the pet bird industry but we're not having any luck at all. Anything we call back saying it's doing harm to the birds. Not causing disease, just killing birds.

And finally, Carl Meyer who I speak about earlier calls in a pharmacy chemist and said, "We've got a problem here, we're trying to get the tetracycline into these birds via some method of injection or in buttermilk," stuff like that.

And I said, "Well that sounds great." But damn it all, suddenly they work out a procedure with enough fluid that coats the birdseed and absorbs the antibiotic, and that's the answer to psittacosis. Everybody with a flag cheering, cheering. As far as I know nobody's raised a protest yet about it. That's what, 1968 I think, about 33, 43 years ago.

Amazing. Thank you so much for all your time and your fascinating stories!

END.


Dr. James Steele, June, 2011

James H. Steele, DVM, MPH describes an overview of national and international developments to eradicate zoonotic diseases. Created for the 2011 The James Steele Conference on Diseases in Nature Transmissible to Man in Corpus Christi, TX.

Quotations:

"We should remember that good public health is dependent upon good animal health. If you don't have good animal health, it's hard to have good public health and that works as part of a formula that leads to good economic health."

"Now I'm available for consultation and sit down and visit with any of you… I hope to be with you next year and carry on, and next year, as some of you may know, will be the beginning of my 100th year and I say, 'Gosh, it's great to be a public health worker because you live longer than anybody else!' "

Key Words:

Zonoses, rabies; veterinary public health; psittacosis; ornithosis; trichinellosis; tenia solium; tenia saginata; World Organisation for Animal Health; rinderpest; bovine tuberculosis; WHO; influenza; animal surveillance; animal reservoir; viral dermatitis; cholera;Foot and Mouth Disease;

Names and times mentioned:

Anderson, John	1	Mountin, Joe	1
Arambulo, Primo	1	Parran, Dr. Thomas	1
Austin, John	1	Shantz, Peter	1
Blood, Ben	1	Sussman, Oscar	1
Irons, Dr. J.V.	5	Whitt, Earnest	1
Mason, Don	2	Williams, Charles, Sr.	1
Meyer, Dr. Carl	1	Young, Elmer	1
Moore, John R.	1		

TALK GIVEN VIA YOU TUBE:

It's good to be here. It's hard to believe 61 years have gone by since J.V. Irons invited me over to organize a meeting on diseases of nature affecting the public health. I want to pay high respects to J.V. Irons and all those that followed J.V. He was a great man and Texas was a great place to introduce a new concept in public health; the use of veterinarians and their protégé or associates in dealing with the zoonoses which was a foreign expression at that time. I remember some of the top officials in the public health service making jokes about me and my zoonoses. As you well know, zoonotic diseases now are occupying many people in public health and the group here is a peer group in setting measurements for other parts of the nation and probably for countries outside the United States.

In starting or reviewing the past and the present and the future of veterinary public health, I go back to the old saw when Joe Mountin had me in at the end of the war in September 1945. He said, "Steele, what are you veterinarians going to do for the public health now that the war is over?"

That was both my challenge and marching orders. And we got to it as rapidly as we could and our first mission was to do a survey of zoonotic diseases, what was most important as we could measure it on a daily basis. And it turned out that rabies was the number one problem, and this was a dividend or, should we say, a leftover from World War II of people having had pets and the pets being lost or abandoned as they moved from one area of the country to another. And the incidents of rabies, and lesser so in cats, and then we found out we had a sizable problem in wild animals was our first challenge.

And what was that challenge? We had to find a vaccine that would provide immunity for some weeks, some months, and some years. And this was our first responsibility of solving that problem. This came out of the good fortune of the Rockefeller Foundation. They had set up a program to study rabies in the 1930s and they were closing it down after the war, that they had no time to carry on with rabies with so many other tropical disease problems. And to our good fortune, they said that we could have their laboratories in Alabama and this was the beginning of the trials of different vaccines for the duration of immunity.

Within three years we knew what our problem was, and to carry that to the field one of the first places we carried it to was Texas in 1948-49 under Elmer Young. The state health officer and I had talked about the possibility of having a veterinary public health program and they were very cautious about new ideas that would put new responsibility. But Elmer Young, a senior veterinarian, a man that was ten years my senior, had a reasonable war record and he came out and worked very diligently in getting word out that there was a good vaccine available to control rabies. He spread that word from Beaumont to El Paso, and I can say from the Big Bend Country to the far north of north Texas. And this was the beginning of veterinary public health.

We used that knowledge and information to give us confidence that we could go out and tell every state this is working well and it's working because we proved it in Texas by 1950. This was possibly one of the items of that first meeting of the successful control of rabies.

Now, we had other problems to look at but we went on to see what other things were appearing at that time, and one of the things that was most fortunate from my point of view, a personal compliment, was I was asked by Charles Williams, Sr., the senior assistant surgeon general, aid to the famous Dr. Parran, if I would come along with a meeting to meet with army people and others that were bringing back millions of men and women from all points of the world, and they were bringing pets with them, and what concern would we have about the health of their pets and what measures should we take to prevent the entry of disease that was foreign to the United States? He brought me to that meeting and he introduced me as "Dr. Steele, our chief veterinary officer."

That was the first time that I ever heard those words mentioned in the public health service and I was proud to carry them for the next 25 years or more in spreading the word. Now, our success with rabies carried on to other areas and we'll come back to those as we spread into the other states. The first responsibility I had beyond Texas was to think of introducing rabies control into other states in the South, especially Florida, Georgia, Alabama, all those states surrounding, a newly founded Communicable Disease Center. And then we carried on to the North, Alex Isaac in New York State to Oscar Sussman in New Jersey, Ernest Whitt in Pennsylvania and so forth across the United States. And the great thing was we had no failures and we had no vaccine [induced] rabies such as had occurred with some of the earlier vaccines.

A parallel problem that appeared at that time that had not been a great concern but was known to exist was the problem of psittacosis that was associated with pet birds. This came to our attention within a few years after I had established the Veterinary Public Health program in CDC in Atlanta, Georgia. The program was, "How are we going to manage the importation of psittacine birds and cockatiels and parrots?"

These were very important pets because frequently they belonged to embassies of people coming from foreign countries that wanted to bring their employees and in some cases their pets. But the big problem we had was the raising of psittacine birds. Were they going to be allowed to be raised in South America or Europe where we wouldn't have supervision?

To solve that we endorsed a program for the veterans, the VA, Veterans Administration, encouraged the veterans to set up bird breeding colonies both for canaries, yellow canaries that sing so well, and the psittacine birds that had less musical talent but were beautiful pets to have around. And their problem was to control the type of pneumonia that appeared in the birds and could spread to other birds and occasionally the human beings—psittacosis. Dr. J.V. Irons brought that to my attention early and how were we were going to control it?

But the big episode occurred when the disease spread to turkeys and domestic fowl, mainly ducks. It never got into the chicken population and it's something that I have no explanation for. But with the cooperation of Dr. Irons and his staff, again, we had some young EIS veterinarians, Don Mason came out here to Texas to work with how we could maintain a surveillance and see what control we could have about the pet bird industry and then when the turkey episode occurred, that was much more dangerous and in retrospect I remember Dr. Irons told me that he possibly had three or four fatalities that they did not recognize because they had no way of treating the pneumonia except to use the standard antibiotics of the period. They hadn't gone into more advanced antibiotics.

Well, fortunately we brought that under control by good hygiene in the turkey processing plants and eliminated any more disease, but we still had the problem on the farm and turkey-raising area and it continued for ten years or more as a principle problem. And some years later it just kind of faded away, and why it has faded away, this was a famous talk about the disease given by J.V. Irons, I believe, in 1975 which would have been 25 years later when J.V. Irons spoke before this very same association, the Diseases of Nature on the topic, "What Happened to Psittacosis/Ornithosis/"—ornithosis being the name that was applied to the domestic poultry. This then went on, was solved largely with the cooperation of Dr. Carl Meyer, a famous researcher of the University of California and CDC and people like J.V. Irons, again, and Don Mason, John Austin and John Anderson—just so many different people that all had a part of it. These are the successes of the first decade that carried on for decades afterwards and I dare say rabies is still a principle problem—no longer in dogs or cats because of good vaccines, but because of the wild animal problem and the wild animal problem has an extra flourish to it with bats; bats being the principle reservoir [for rabies] in nature today.

Returning to CDC, we had another problem that was causing us concern and this was trichinosis, the small worms of flesh of mainly the swine industry. The United States Department of Agriculture had been dealing with this problem since the late 1890s and their first control measure was to inspect all the meat under a microscope and John R. Moore, a famous veterinarian of the old bureau of animal industries set up microscopic examinations in the 1890s and into the new century and came to the point that finding a new disease was so rare that they dropped that measurement. But then subsequent to that we still had what you call a low rate of trichinosis that would appear annually in the CDC cumulative report. The problem was, "How are we going to get rid of this last residue of trichinellosis?"

This became an important challenge to CDC and the cooperation of the people like Peter Shantz that led the charge with other veterinarians in bringing trichinae control to the attention of all states 'til they would be concerned with it.

The big thing—a period at that time was radiation of food, and this was work done at the University of Michigan and Wayne State University by a medical staff. They brought this to my attention and we were able to organize a meeting with the American Medical

Association to further the use of radiation in eliminating trichinae in pork meat. The meeting went well but there was much opposition to the use of radiation of the pork per se.

So we had to intensify our level of hygiene and to do that the Department of Agriculture then enforced laws that prevented the feeding of garbage or recycling of waste, and by the 1960s or into the 1970s we could say that we had trichinae under control. But something else appeared unknown and that was new strains of trichinae that survived in the Arctic and in the Arctic—that is areas of Alaska and northern Canada, across Siberia and some parts of Northern Scandinavia there was wild animals or wild rodents that would carry the trichinae, and this is the sole problem that remains.

Other parasitic problems such as tapeworms, tenia solium and tenia saginata were big problems in the population migrating into the United States and we had some severe outbreaks of—when I say severe I'm talking about sizable outbreaks involving thousands of animals and much investment by ranchers here in Texas as well as in neighboring states into the Pacific Coast. But again, by good surveillance and the improved meat inspection this problem was brought under control by the 1970s. So today we can look to say CDC and its veterinary public health as well as the associates with the program have all contributed with the elimination with cooperation with meat inspection of the U.S. Department of Agriculture and we can say that north of the U.S. Mexico line that this disease is under control.

Parallel to that we also had some new problems of identifying tuberculosis, a rare disease in cattle but there were small numbers that would appear across Texas and some parts of the United States, namely Florida and Georgia, occasionally north, and there we ran into something new that we hadn't realized before and this was the spread of bovine tuberculosis from cattle to wild animals. The wild animals were namely deer and elk and so forth.

So when we looked to the challenges of the future, we've got to look to what the problems may be among our neighbors and this is the big responsibility of helping our neighbors mainly through the Pan American Health Organization and through the World Health Organization and through OIE [Office International des Epizooties] which has now changed its name to the World Organisation for Animal Health, and some of you may have seen in the press the eradication of Rinderpest from the earth. It's the first animal disease that has been eradicated and we can be hopeful that other animal diseases, possibly rabies, but it's hard to believe that would be in the foreseeable future. On the other hand, disease like bovine tuberculosis or brucellosis could be candidates for eradication.

Dr. James Steele http://www.worldvet.org/node/6613

We should remember that good public health is dependent upon good animal health. If you don't have good animal health, it's hard to have good public health and that works as part of a formula that leads to good economic health. I've been working with my colleagues in putting that to mathematics and budget: "Public health plus animal health equals economic health." It's something that we can extend to the whole world that is based on good health in animals and man. And some of the bigger activities that could be measured in a western hemisphere is the elimination of both bovine tuberculosis and brucellosis in our goats and sheep and cattle. Both these diseases in the western hemisphere would add billions of dollars of new developments in Mexico to Chili to Argentina throughout the Americas, and we could also say the same thing for Africa and for Asia, except I don't have the data to prove that but the same principle of good public health leads to good animal health and good animal health leads to good public health. And we started claiming that or putting it into print at the first WHO meeting in 1950 in Geneva. I had the opportunity to be on that committee for the next 20 years and be the chair in the last meeting in 1968.

I look back on those years in the international area as some of the most productive areas of getting recognition of veterinary public health. And in the western hemisphere we have had great success with the promotion by Primo Arambulo and his colleagues that preceded him going back to Ben Blood, a period of 30-40 years. All of these have led to improved world health and improved economic health as I stated earlier.

In closing I should emphasize the importance of new diseases that are appearing, and naturally the biggest one that has attracted attention is influenza. Did the 1918 influenza start in animals? The evidence that we have today we would say "yes," but we never found any carcasses left over from 1918 such as they did for human cases. But we have to have a constant surveillance of our bird life as well as other animals to determine if the influenza virus has maintained reservoir in other species. And one that was brought to my attention just this past month was the appearance of, or identification of Influenza C, the letter "C". You know, we have A and we have B and we have a

combination of A and B and then we have C. And it appears that C has an animal reservoir as well as D and E. So C, D and E and possibly others beyond that we will find modifications in our animal population.

So it goes without saying you young people that are digging into new diseases as well as old disease, when you spoke about possible cholera in Texas here, or plague, those are old diseases but naturally they should be watched carefully and any time suspicion—any time they should be investigated thoroughly and treated as new invaders. On the other hand, we do have problems of the spread of viral dermatitis, a disease that could act like Foot and Mouth disease but is very limited to West Texas, New Mexico and Colorado. And this is where the important laboratory surveillance is very, very important and we can be thankful that, again, the colleagues and the health officers of Texas have one of the best health laboratory services in the nation backed up by CDC.

Now I'm available for consultation and sit down and visit with any of you but I know many will be on your way, but I hope to be with you next year and carry on, and next year, as some of you may know, will be the beginning of my 100th year and I say, "Gosh, it's great to be a public health worker because you live longer than anybody else!"

So thank you all. Bye-bye.

http://www.youtube.com/watch?v=xBrVpJeo9mE

Some influential articles with Dr. Steele listed as an author:

1. Ann N Y Acad Sci. 2011 Aug;1230:4-11. doi: 10.1111/j.1749-6632.2011.06138.x. One health-one medicine: unifying human and animal medicine within an evolutionary paradigm. Currier RW, Steele JH. American Veterinary Medical History Society, Clive, Iowa 50325, USA.

One health is a concept since early civilization, which promoted the view that there was no major distinction between animal and human medicine. Although persisting through the 19th century, this common vision was then all but forgotten in the early 20th century. It is now experiencing a renaissance, coincident with an awakening of the role that evolutionary biology plays in human and animal health, including sexually transmitted infections (STIs). A number of STIs in humans have comparable infections in animals; likewise, both humans and animals have STIs unique to each mammalian camp. These similarities and differences offer opportunities for basic medical and public health studies, including evolutionary insights that can be gleaned from ongoing interdisciplinary investigation--especially with the molecular analytical tools available--in what can become a golden age of mutually helpful discovery.

PMID: 21824162 [PubMed - indexed for MEDLINE]

2. Am J Med. 2008 Mar;121(3):169-70. Teaching "one medicine, one health". Kahn LH, Kaplan B, Monath TP, Steele JH.

Program on Science and Global Security, Woodrow Wilson School of Public and International Affairs, Princeton University, Princeton, NJ, USA.

PMID: 18328295 [PubMed - indexed for MEDLINE]

3. Vet Ital. 2007 Oct-Dec;43(4):785-7. A personal history of veterinary public health in the Pan American Health Organization. Steele JH.

United States Public Health Service, The University of Texas-Houston, School of Public Health, 1200 Herman Pressler Drive, Houston, TX 77030, USA.

The introduction of disease into the New World changed both flora and fauna. The need for coordinated veterinary public health activities was highlighted when anthrax and encephalitis were reported in native populations. The Pan American Health Organization has been a proponent of public health and animal health since its inception. Neither discipline can be successful without the other.

PMID: 20422557 [PubMed]

4. Vet Ital. 2007 Jan-Mar;43(1):5-19. Confronting zoonoses through closer collaboration between medicine and veterinary medicine (as 'one medicine'). Kahn LH, Kaplan B, Steele JH.

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In the 19th century, the concept of 'one medicine' was embraced by leaders in the medical and veterinary medical communities. In the 20th century, collaborative efforts between medicine and veterinary medicine diminished considerably. While there have been some notable exceptions, such as Calvin W. Schwabe's proposal for unifying human and veterinary medicine and joint efforts by the Food and Agriculture Organization and World Health Organization to control zoonotic diseases, 'one medicine' has languished in the modern milieu of clinical care, public health, and biomedical research. Risks of zoonotic disease transmission are rarely discussed in clinical care which is of particular concern if humans and/or animals are immunosuppressed. Physicians and veterinarians should advise their patients and pet-owning clients that some animals should not be pets. The risk of zoonotic disease acquisition can be considerable in the occupational setting. Collaborative efforts in biomedical research could do much to improve human and animal health. As the threat of zoonotic diseases continues to increase in the 21st century, medicine and veterinary medicine must revive 'one medicine' in order to adequately address these challenges. 'One medicine' revival strategies must involve medical and veterinary medical education, clinical care, public health and biomedical research.

PMID: 20411497 [PubMed]

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