Mark Hollis

PRISCILLA HOLMAN: Interpreting for us today is Edward Crafter. Since its beginning, CDC has had many able managers. One of public health's leading outstanding managerial teams today is Dr. Jim Mason and Dr. Don Hopkins. Dr. Mason, CDC Director and currently Acting Assistant Secretary for Health, and Dr. Don Hopkins, Deputy Director, CDC, and currently Acting Director, CDC. Both leaders as so good, in fact, that it's difficult to imagine either giving advice to the other. We can thank, however, that Dr. Hopkins might offer one suggestion to Dr. Mason and that is Dr. Mason, I wish you'd come home. Well, Dr. Mason is here today and it is a pleasure to have him introduce our guest. Dr. Mason.

JIM MASON: Thank you, Priscilla. I want all of you to know that it is a great honor to be asked to introduce the first director of the CDC. We've had a lot of directors come back but it isn't often that we get the first director back, and so it's my privilege to have this opportunity. Dr. William Mercer Hollis, Mark Hollis as he's known here at CDC, interestingly is not a physician. We sort of think of previous directors or directors of CDC as being in the healthcare industry and indeed Dr. Hollis is but he was an engineer. He attended the University of Georgia where he received a Bachelor of Science degree in Civil Engineering in 1931, and then the University of Florida conferred a Doctorate Degree in 1956. After he graduated from undergraduate school, he worked with the Rockefeller Foundation before joining the Public Health Service in 1933. Dr. Hollis, during the period of World War II, was heavily involved in the control of so-called tropical diseases that were a menace to our military forces and it would seem logical that when CDC's forerunner, Malaria Control in War Areas [MCWA], was established here in the Southeastern United States that Dr. Hollis would be involved in that activity. I can see [Dr.] Marion Brooke over there and I think Marion can almost think back or remember back to those days. We're honored to have him here, too. So Dr. Hollis became involved with the very roots, the very foundation, of what was to become the Communicable Disease Center. And when, with the leadership of [Dr. Leroy E.] Lee Burney, [Dr.]Joseph Mountin and Mark Hollis, himself, in 1944, CDC was established and Dr. Hollis was that first director and he served during the period of time when CDC was going through its most formative years from 1944 through December of 1946. That did not end Dr. Hollis' career. He continued to serve in the Public Health Service for 15 years. He was an Assistant Surgeon General, Chief Engineer with the rank of Major General. He has served in a number of positions but I'm just going to outline some of the items that this visionary man was responsible for doing. His early concern, even when he was with CDC, was with regard to the environment; what were pesticides going to do with the environment. And early in 1950, he became concerned with the unrestricted discharges of heavy metals as basic biological threats. So he spoke out strongly about the growing significance of chemical pollutants in the environment. So a lot of things that CDC is doing today with occupational health and safety, with environmental health, with the non-communicable disease and infectious disease processes, he was involved in even though CDC had no responsibility for those areas. He has served with the World Health Organization first as Chief Engineer in Geneva, Switzerland. He's been the Chief

Engineer of the Pan American Health Organization from 1974 to 1980. He worked in the state of Florida or was living in the state of Florida where he was a member of the Governor's Environmental Regulation Commission and served as its Vice Chairman. In 1981 to 1983 in the state of Florida he was a member of the State Public Health Council. Currently, he's a consultant to the Publix Supermarket Corporation in Florida and in that capacity it's worth mentioning that the Publix Supermarket chain is owned by Dr. Hollis' son, and Dr. Hollis does consultative work for that large supermarket chain. It's a great honor, Mark, to have you come back to CDC and spend time with us. He was willing to take his time and has dictated an oral history so that we can go back and capture those formative years of CDC. We do express our appreciation for your willingness to come and spend the day with us and now I'm honored to turn the time over to you for your discussion and comments.

(Applause)

MARK HOLLIS: Thank you very much, Dr. Mason, and to each of you, a very warm good afternoon, and to our principle collaborators for this session, really a heartfelt thank you for this opportunity, this privilege, again, to be before colleagues at CDC. But first, at the risk of being out of order, I do wish you would stay in Washington. You've got able assistants here and we need that level handedness and that vision that you're able to give at a point in time when it's really needed. So I venture to take that liberty. It's good to be able to get back. Now, it's been about 40 years thereabout, one erosion time comes about. It's really astounding though to get back here and see what has evolved from that very modest beginning of CDC 1945, late 1945, and really in full official existence in 1946, and I'm not speaking of the physical facility or facilities I should say because I understand there's about six or eight of them. As impressive as these are, I'm speaking of the scientific achievements of the recognition and the contribution that this CDC has made. I think it goes back beyond what some of you here realize, the enviable reputation of CDC nationally and internationally.

Now about this particular session. I was told to get up here and sort of relax and reminisce I think was the expression, but I was sure that was in jest, Dr. Mason. Surely no one on your staff would unleash an old retiree unbridled, uninstructed, just to get up, relax and reminisce, particularly one now that's past the three score and ten plus seven. That's the age when you ask the time, you have to first explain how you build the watch and how it works and, of course, by then you have forgotten the question. That's about the way it goes. You younger people, you've got 30-odd years before you realize this but as a tip-off for the years ahead you know you're getting old when you have to bend down to tie your shoelace and you begin to ponder as you do it, what else can I do while I'm down here. You know you're getting old, they say, when almost everything hurts and what doesn't hurt doesn't work. It's another tip-off when you reach the age where you know all the answers but nobody asks the questions so it doesn't do you any good. Or the old saying, you know you're getting 17 around the neck, 45 around the waist and about 120 around the golf course. Another indication. And so it goes. But I have my young colleague here, Scott Charlton, a young chemist who is in spite of his youth the director of a new department down at the public supermarket chain of quality assurance department at the corporate structure. We're trying to educate these corporate executives down there they'd better watch their health implications when they get into the manufacturing business, as they are doing in a big way. I brought him on two counts, really. I told him first if I begin to drift off on a tangent, he's supposed to look at his watch high enough so I can spot it and I'll try to get back on beam best I can if I haven't lost my place. And second, he's a bachelor and I told him, I said, you know, you're born in Florida, there are very few pure Floridians. Most of them are transplanted Georgians like I am. But I said, I'll take you up there and introduce you around and maybe one of the Georgia girls will take an interest in you and that will kind of offset the fact that you're a Georgian and you went to Vanderbilt; that will kind of compensate for those deficiencies. So he's with me and we'll watch out, watch over.

Now, I'm not sure what I'm gonna try to do this afternoon will work or not but I've been seeking an opportunity to try out something in the environmental area of history repeats itself but I'm gonna try and after all you'll only waste 15 minutes so you could spare that. But during my WHO[World Health Organization] years in Geneva we had a very distinguished and noted East Indian director of our WHO Asian region, Dr. Brewster Monty. Some of you that have traveled in India perhaps have met him. He was trained in England but went back home and was in the Indian medical service. One of the top, incidentally, public health minds in India. He told me once, and I remembered it. He said, if you by chance find yourself uninstructed up before distinguished peers, it's good advice if you will seek reference and distant time and space, and then by all means stick to basics and you'll get by. So today that I will attempt to do and I'll do it on the very light side. Now, for reference, I picked one I'm sure familiar to all of you. I drop back some 2,500 years to Hippocrates classic epidemiologic observations in which he linked human illnesses to the airs and the waters and the land and the diets and all the related orbs of externals, a condition that lasted through the centuries. And I'm gonna add one other point to this. It was this decade, a hundred years ago this decade, that we got enough of the validations of the germ theory that would spawn the breakthroughs that led, of course, to this great 20th century advancement in public health and in the well beings of people. And now with that background, just a few observations. To me, the environment, ecology, pollution syndrome falls pretty much into four overlapping eras, that can be, I think, distinguished a bit. The first era is that 2,400 years from Hippocrates to some understanding of germ infections, the period when man's principle ally was isolation and the vast resilience and adaptive capacity of the human organism. Pandemics swept continents, you recall, enteric infections and enteric diseases were rampant, infant mortality ghastly. Life expected hovered at or below 30 years. The second era, 50 years, this is 1900 to 1950, that giant leap forward having the scientific knowledge and understanding of communicable and infectious diseases. In 1920's we, crudely speaking, state and local health structures began to take shape. The '30s came the mass immunizations, the wonder drugs as benchmarks. The quarantine sign began to fade back into the back pages of the history text. The disease yielded to this onslaught. And I would remind you that environmental controls provided the key through these years and water quality management pretty much led the way and well documented are the accomplishments, the reductions in infant mortality, the suppression of childhood diseases, the control of adult germ-spawn morbidities, and understanding of the general environmental impact. And these accomplishments, together with the logistics of transport, I think one can say with confidence, is what spurred the mass rural urban migration phenomena that took place in this period. And for us in the services 1902 the Marine Hospital Service became the Public Health in Marine Hospital Service. Surgeon General [Dr. Rupert] Blue was Surgeon General. I was privileged to meet him. My dad, I should've said, was in the service ahead of me. He was a medical officer and surgeon, had experiences in China back when we had hospitals over there. We were in different places in the country. He wound up in New Orleans at the plague epidemic and so forth. So there's a personal background history and I kind of feel proud of the fact that I knew and met, shaken hands so to speak, with Surgeon General Blue, and then served directly under five surgeon generals from Blue on starting with Dr. Hugh Cumming on shellfish research back in the days when we were trying to figure ways to quote, pasteurize, end quote shellfish. I don't dare get off on that tangent. But other benchmarks related to the environment field, of course, was the 1912 Act which put for the first time legally federal act water problems, water pollution, stream pollution in the Public Health Service. And incidentally, that was the act that finished the transition of NAMS from the public health marine hospital service to the Public Health Service.

Pearl Harbor, coming as it did so totally unexpected, was no I think shock that we got into the conflict but we didn't anticipate getting into it in that sense. I don't want to get off on that one either but this opened up a whole quick new vista. Here you were going to have problems with tropical diseases. So it hastened the establishment of MCWA, the Malaria Control in War Areas, and the rational being, of course oversimplified a bit, is that stateside we were going to have mobilization and training throughout the Sun Belt in areas of malaria, typhus, some dengue, etc., and then the war on the Pacific Islands no question these would expose troops to unprecedented exposure to tropical diseases. So the combined too was the formation of MCWA. There were three locations, three states thought of for the headquarters of MCWA. Atlanta was chosen. It was the 4th core area headquarters. It was a rail hub of some note, even in those days, and access to Washington made it quite simple to move. So it became and served throughout the war years as the Malaria Control in War Areas which was expanded into typhus and to the other problems even in those era. Now, as early as 1943 there were some early remarks about the post MCWA years; what would happen, what would be needed. And three things stand out. Dr. [Thomas]Parran felt there would be need to maintain some surveillance, some tight watch on the emergences of tropical infections as they might migrate to the states. The state health departments felt with returning troops there would be an importation of communicable diseases, and these too needed to be watched. There were uncertainties as to what would happen in some of the other areas as we got back to quote normalcy end quote, whatever that is. We never reached it, of course, but the principle factor, the main point that made the decision was a recognition that there was an urgent need for a competent, highly trained specialized facility that would deal with field investigations, that would back up state health structures. We had the NIH that emerged, as you recall, from the old hygienic laboratory down east, NIH Washington finally in 1930, and to the NI's of H in '48, but this was a thought-out…was and is the basic medical research arm of the service. It did field investigations, yes, but it did them to support the bench. This new facility, as it was envisioned, would be converse to that. It would focus on field investigations, unusual complex problems. It would do bench research, yes, but to the extent needed to support the field. So you had the two centers and for the record I wanted to say Dr. [Rolla Eugene] Dyer, who was director of NIH at the time, gave his full support both in service and on the Hill and congressional hearings to that concept. Also for the record, if I may, the man most directly responsible that provided the greatest force behind the creation of MCWA, in spite of what you would read in the Furman history was Dr. Joseph Mountin, and he deserves that and I'm glad to have this opportunity to say it.

Now, as to specific functions of the center, there were differences and perhaps the major one was myself. Again, Dr. Mason, with your permission I'm going to unburden a little bit of frustration that I've had for 40 years, where it ought to be unburdened right here at the Center. It seemed to me even in those days--these were early CDC days--we had the problems as outlined that we were gonna focus CDC on for the first year anyway, the eradication of malaria, the suppression of typhus, knock those two things out while we had the machinery, and we would get into the creation of the Center. But that was to come the second year and I was assured I had two years because Dr. Parran had already told me that I was gonna be brought to Washington because he wanted to realign NIH. He wanted to shift the emphasis in NIH from acute to chronic. He envisioned what we now face; the cardiac problems, the mental health problems, the broad cancer problems and so forth. And he said, when we're ready for that, but you've got two years before we're ready, you can stay there for two years. I thought I had two years but I didn't. I had about a year when he wanted to move ahead with that and so went on. But the rationale behind my point of view in all frankness was we had split the atom, we had ill-defined future outlook as to what we would do with it, but even in that vague ill-definition there was quite a bit of comprehension. What did we have here, were we ready for this sort of an advancement? Now, in my own mind attracting little attention then was the synthesized molecule. This was producing synthetics, more needed synthetics, at a fantastic pace. We had the Okinawa base overnight during the war developed into producing synthetic materials. These were petro-chemically based, they were organics. As waste material they were behaving pretty much like inorganics, long term periods of stabilizing and so forth. Also the populations were going to concentrate. That was evident. I'd like to throw in that in 1908, that was the year I happened to be born if you wonder how I got my 77. In 1908 Surgeon General Wyman wrote a memorandum and I've got a copy and it's a fantastic memo. I was going to try to bring it up but I couldn't find it in my own files. It was a memorandum to Dr. [John W.] Kerr who at that time was joined incidentally in the service in his day. But he was Assistant Surgeon General for Research and this memorandum said, and I can quote I think without missing a word in the first part of it. He said—this is a memo to Dr. Kerr—he said, cities will grow, populations will concentrate, industry will expand, there will be all sorts of pollution that will degradate the human environment, and much of it will have health implications. And he instructed Dr. Kerr—I'm not trying to quote that part of it—to go out and find a center and set up a center that would look into these physical problems of water supply and stream pollution without going into detail. That was the forerunner of Cincinnati, the Stream Sanitation Station at that point. Anyway, as I say, I had less than a year and I was then ordered back into Washington. I outlined this to Dr. Parran. He agreed. He told me I could have the two years. Move ahead with it, he said, promote it, get it underway. But in the end of November, early December in '46, he called and told me he wanted to move ahead with NIH and as soon as I could wind up, to help him find a replacement and I was to come up there and move ahead with [Dr. Leonard] Len Scheele and [Norman H.] Topping on the conversion of NIH. So I went up in January '47. In April that committee was formed and you know the story on that one. Now, I still hold strongly the conviction that had CDC in the beginning years integrated a good solid base with focus on these environmental stresses, these problems, and had done as well with it—and I'm sure they would have as they have done and did do with infections—that it would've saved the nation a great deal of the confusion and mix up and mess, I would call it, we have in the environmental picture today. These were problems that have deep seated medical deep issues and they belong in those days, and they belong today, under strong medical leadership such as you have at CDC, and not as I told Langmuir when I debated with him on this many times, not out there in the shadows of the caduceus where we've got them. And I said, we're going to move ahead now and this whole question of radiological health, and because you and no one here will touch it, we're gonna have to set it up out of Washington and it's the wrong place. It belongs down at CDC. And that history of course you know. It did come out and I think [James G.] Terrill and his staff did a remarkably good job through those years with radiological health. Those were back when we were shooting off the firecrackers out West. Sheep were dying and somebody had to take action and this was put over in the service to move ahead. Anyway, as I said, after 40-odd years I've got that off my chest so I'll go ahead with this. But it was delightful to come down here now and see that—I knew that you had broadened out the name. We need not get into. We knew when it was set it was gonna have to be changed. I think it was remarkable that they got such a fitting name and was able to salvage the initials. That worked out. But the point is there'll be more Legionnaire-type diseases but there's gonna be more EDB's and with it confusion. I was going to cite a case but I'll skip over it. But these need attention and now with your Center for Environmental Health, I think now that's finally long last in good hands. I'm glad to note it.

Now the third era. We passed through the two. The third era is this mid-century to the current years. Now, this was a fantastic leap of technological change in the United States from the war-spawned technologies that were evolved, put into practice, and that history, too, you know. And the task at that time and the task today and the judgment is to anticipate and to recognize these evolving trends, the social trends, political trends and economic trends, and then to go back and define these in terms of health impacts, quantitate them and develop an understanding. Not necessarily do the controls; leave that to the control group, but the understanding that can be applied with a real sense from a prestigious organization for public use. We moved, of course, rapidly from the questions of chronic disease; typhoids to toxicities, from rats to renkins, from acute to chronic, and this latter with these wide separations of cause and effect that are so hard to define. The speed is gaining momentum every day with speed, speed and more speed. You've got decades colliding, times telescoping, the world shrinking down, and all of these factors, it's almost the anatomy of future environmental dilemmas and what we have today is just today and we don't know much of what's gonna happen. So we come to the 4th era and that's up ahead. Again, I think you'd almost say history is going to repeat itself. We are going to have more time now debating these issues, quarreling among ourselves. Much of this is going to get into emotionalism and extremisms that are hard to define and legalisms are taking the place a lot of scientific judgments and so forth. And there's no better way, I think, to keep it short and characterize this 4th projection than to liken it into DNA, genetic engineering, this tinkering with life. Whether you like it or not, and whether you're ready or not, that genie is out of the bottle and there's no more point. I argued this before the academies recently when they said we will watch it, the decision we're fixing to send forward, the academies will watch it, the national academies will watch it; if we see any signs, we'll suggest legislation that will limit activity. That's not the way the human being is constituted. To seek, to find, to exploit, to use. That's the nature of man and he's gonna use it. And if this comes about, then I think that the genetic engineering is going to open up vistas with great potential and not a little bit of concern. There's a large precept that do not destroy what you cannot create. We kind of live by that. Now we see this looming now in reverse. Do not create what you cannot destroy. But as I say, this genie is out of the bottle and we're going to do it.

Now, seemingly and winding down here thus far, seemingly people are able to live in these congested environments. I think of them pretty much as the stress-induced phenomena. That's kind of coming into focus pretty well. That's the aggravations of congestion, noise, tensions, monotonous, drug abuse, accidents, crime. All of that fits this pattern in the changing environment. I wish we had time to review—I'm sure you're familiar with it anyway—there was early research at NIH on rats. If you put 40 rats in an environment fix for 40 and are healthy and happy and so forth, and let them develop into instead of 4,400 and see what you get and look at some of that. Granted there's a difference between rats and man but sometimes you wonder if there isn't a connecting link there some way. But seemingly these people can survive in this environment and be reasonably healthy. My point would be this. Is this a real or a pseudo-adaptation? And I don't think perhaps we're far enough along in it to do, but my question—and I don't answer it, I just raise it—do we wait until there are evidences of social impacts of this and degradations that are physiologically measured affecting man or do we move now to try to reach some understandings a little bit about talent, a little bit of our effort, and a portion to understand and maybe ease some of these severities. Another one is the unbridled right to grow and to exploit. Now, that's been the history of our young country. The right to grow and exploit are on a collision course. I think we would agree with that as a general hypothesis and hence they must be somehow kept within the bounds of technological accommodations. Now, if we'd buy that to the extent we do, then is it not proper organized health movements to define this a little better to try to establish some innovative actions that will broaden perhaps this technological accommodations? Another one would be the byproduct level of radioactive waste. It's now past a half a million tons of this high level radioactive waste in some sort of containers. We still debate and worry what are we gonna do with it, where are we gonna store it, etc., and it's growing every day not only in the private sectors but in the military use and development and creation of byproduct waste and should not, again, health agencies be a little bit more active in trying to help define some indication of the broad implications of this. Another, and I'll wind up on that, in talking with a colleague at General Electric Corporation, he tells me that there's no question that their genetic gene spliced bug will do what the press says it'll do on stabilizing oil spills. And here you know the Supreme Court decision. You know where we stand legally on that and that's certainly spurring the research and the genetic engineering and it's amazing how much is underway, that one wonders, ponders again, why can't we use genetic engineering in some of these toxic wastes, particularly the ones that have petro chemical based origin. Again, it's a question and if so, how safe would it be. And, again, so it goes. So, again, for emphasis now, we live in this complex changing society and this what is an age of discontinuity actually where ills of affluence now replacing the ills of scarcity of yesterday. We're enmeshed in these complex webs of sophisticated stresses and these are going to increase, not diminish. And with all of this, the reactions are going to involve complex webs of sophisticated affects. The point would leave, if we could but resolve some of these differences and could get this channeled in the right way and could balance the equation in political, technical and social that we might put these needed innovative research movements on the fast track and to equate the scientific impact against the dilemma. Problems are multiplying and time is certainly short. So my final plea in closing off; let's keep the scientific intelligence faced with the issues and keep it in a high scientific plan. Let's press for these needed innovative actions geared to the major problems. And to support that final thought I'm gonna borrow the sentence out of Sir Frances Bacon who you recall helped move man out of the dark ages into the renaissance and this sentence I quote. "He that will not apply new remedies must expect new evils for time is the greatest innovator and at time alters things to the worse and wisdom and culture shall not alter them to the better what shall be the end." And that's the thought, the one thought I'd like to leave. So now I'm gonna return back to the sidelines where old retirees belong but I'm gonna retain the right to watch, to criticize and to challenge and this I intend to do Dr. Mason. In Geneva in 1962 a certain journal, Luther Terry, came over to the world assembly and he asked me, he said, you've been retired about a year now, give me one good satisfaction of retirement. And my reply to him was, Luther, there are many but if you limit me to one, it's when I stand here and look west across that pond and see how you fellows are really messing up the works over there, and I can speak out freely and so say, and I do it, Luther, with not the slightest sense of guilt or sleepless nights. Why? Because as an old retiree, I know no one's gonna pay a damn bit of attention. So with that I'll sign off but it is great to be back and I certainly wish the very best for CDC. Thank you, Dr. Mason.

(Applause)

MASON: Someone—I don't know who it was—said that the true measure of a person's age is not how many years they've lived but how they react to change. And I want you to know that we're dealing with a teenager here.

HOLLIS: I've only been married 58 years, a wonderful girl really, and she was quite worried about me coming up here. She said, you've got some questions, you haven't looked at them and I'm concerned about it; you're not going to impress anybody up there. I said, honey, 32 years in this service as an engineer in a medical environment, I had to keep my tie straight, my shoes polished, clean shirt, to be sure I got by with impressions, and then we join the U.N., went to Switzerland where 95% of it had to do with impressions, 5% technical; all the rest impressions. Now I'm retired, I'm down here in

Florida and I'm going up to Atlanta and just who in the hell is it I'm supposed to impress?

MASON: Well, you've impressed every one of us here and we thank you for coming and we hope that you'll continue to criticize from the sidelines but we're not gonna give you any reason to criticize.

HOLLIS: Thank you sir.