Martin LaVenture, MPH, Ph.D.
Narrator

Dominique A. Tobbell, Ph.D.
Interviewer

INSTITUTE FOR HEALTH INFORMATICS
HISTORY PROJECT

UNIVERSITY OF MINNESOTA
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In 2015, the Institute for Health Informatics (IHI) celebrates the 50th anniversary of health informatics at the University of Minnesota. Early institutional markers serve as the formal beginnings of the emergent discipline of health informatics at the University of Minnesota, designating the University of Minnesota as one of the first academic institutions to support and subsequently anchor the development of the new discipline. In 1965, the National Institute of Health (NIH) Division of Research Resources awarded the University of Minnesota’s College of Medical Sciences a grant to establish a Biomedical Data Processing Unit at the University. Two years later, the Hill Family Foundation awarded a ten-year grant to Professor Eugene Ackerman to initiate a graduate research and training program in Biomedical Computing. In 1968, the College of Medical Sciences established the Division of Health Computer Sciences, which would serve as the administrative home for the NIH research resources grant, housed within the Department of Laboratory Medicine. The Division provided interdisciplinary training to pre-doctoral and post-doctoral students applying health computer sciences technology to health services research. In 1974, the University of Minnesota was awarded the prestigious National Library of Medicine Grant for Training in Health Computer Sciences, which formally established the Graduate Program in Health Informatics at the University of Minnesota. The Division and its institutional successor, the Institute for Health Informatics (created in 2006), received continuous training grants from the National Library of Medicine until 2009. For fifty years, the University of Minnesota has been one of the preeminent health informatics institutions in the United States.

The Institute for Health Informatics History Project captures, analyzes, and records the history of health informatics at the University of Minnesota. Through oral history interviews, the Project preserves the personal stories of faculty members and National Library of Medicine administrators who were involved in the early history of the field and have keen insights into the history of health informatics at the University of Minnesota.
Biographical Sketch

Martin (Marty) LaVenture received his BS in Natural Science from St. John’s University in Collegeville, Minnesota in 1973, and a Masters in Public Health in Epidemiology in 1976 and Ph.D. in Health Informatics in 2004 from the University of Minnesota. From 1976 to 1978, Dr. LaVenture served as epidemiologist and surveillance coordinator in the Immunization Program Section of the Minnesota Department of Health. In 1978, Dr. LaVenture joined the Wisconsin Division of Health in Madison, where he held the position of assistant state epidemiologist and communicable disease coordinator until 1987. Between 1987 and 1990, he served as director of the Cohort Public Health Division of Epic Systems Corp., in Minneapolis where he worked as a developer of software systems for health information management. In 1990, Dr. LaVenture returned to the Minnesota Department of Health where he held the position of supervisor, Immunization Assessment and Registries Unit in the Division of Disease Prevention and Control. From December 1995 through December 1997, he served as manager, Acute Disease Prevention Services Section in the Division of Disease Prevention and Control. Since December 1997, Dr. LaVenture has served as Director of Health Informatics and since 2009 he has served as Director of the Office of Health Information Technology and e-Health at the Minnesota Department of Health. As part of this, he leads the statewide Minnesota e-Health Initiative, a public-private collaborative chartered in 2004 to advance health information technology adoption and use in Minnesota.

In 1992, Dr. LaVenture joined the graduate program in Health Informatics at the University of Minnesota, receiving his Ph.D. in 2004. Since 2004, he has served as a core member of faculty at the University of Minnesota in Health Informatics. In 2011, Dr. LaVenture was elected as a fellow of the American College of Medical Informatics.

Interview Abstract

Marty LaVenture begins by discussing his educational background in public health, epidemiology, and health informatics. He describes his experiences working as an assistant state epidemiologist in Wisconsin where he was in charge of developing information systems for disease surveillance. During his time in Wisconsin, LaVenture worked with Epic Software to develop online disease surveillance systems. In the late 1980s, LaVenture returned to the Twin Cities and joined the Minnesota Department of Health (MDH). LaVenture describes the work he did at the MDH in the late 1980s and early 1990s first, establishing a cancer surveillance system, which involved several collaborations with Laël Gatewood, Ph.D. at the University of Minnesota, and second, developing immunization registries in Minnesota, also in collaboration with health informaticians at the University.

LaVenture discusses experiences pursuing graduate studies in the Division of Health Computer Sciences (DHCS) as a National Library of Medicine Fellow during the mid-1990s while working at the MDH. As part of this he discusses developing an early interest in informatics during his graduate studies in epidemiology at the University of
Minnesota in the 1970s. LaVenture goes on to discuss the status of informatics within epidemiology and public health during the 1970s and 1980s – in Wisconsin, Minnesota, and nationally. He describes the significant work of Denton Peterson at MDH in the late 1980s and early 1990s in the nascent field of public health informatics. In particular, LaVenture discusses Peterson’s work on the simulation of epidemic diseases in which he collaborated with the DHCS’s National Micropopulation Simulation Resource (NMSR). LaVenture also discusses his own work with the NMSR on the simulation of measles outbreaks and vaccination transmission.

LaVenture continues discussing his experiences as a graduate student in health informatics, highlighting the challenges of balancing his studies with holding full-time positions with increasing responsibilities at MDH. He next describes developing an informatics capacity at MDH and the increasing role of health informatics within MDH and public health more generally. For the remainder of the interview, LaVenture describes in detail the development and implementation of Minnesota e-Health and the involvement of the Institute for Health Informatics’ (IHI) faculty in that initiative. Next, LaVenture discusses his role as a core faculty member in first the DHCS and subsequently the IHI. LaVenture concludes the interview by offering his thoughts on the major changes he’s observed in the health informatics graduate program and in the field more generally during his career.
DT: This is Dominique Tobbell. I’m here with Doctor Martin LaVenture. We’re in Doctor LaVenture’s office at the Minnesota Department of Health. It is January 30, 2015.

Thank you for meeting with me today.

To get us started, could you tell me about your educational background?

ML: Sure.

Thank you, Dominique, for the opportunity to talk with you today and share some reflections and thoughts related to my personal and my professional interactions as part of the department and as part of the faculty, and student, and others with the Institute for Health Informatics and precursors as well, at the University of Minnesota. I’m glad to do so.

A little about my current position, if I could. I’m the director of the Office of Health Information Technology and e-Health here at the Minnesota Department of Health.

My experience and background goes for some time, back at least thirty years, in interaction. [chuckles] I’ll try to answer your question about the education and a little background. I have a Master’s Degree in Public Health [MPH], epidemiology, from the University of Minnesota, School of Public Health. My Ph.D. is in health informatics from the University of Minnesota, health informatics program, as well. Those two have been the cornerstones of my experience and career, involved in my passion and career
love for public health and for health information systems and informatics. Those two really forged that relationship over time. I feel it’s a great blend and I’ve had a wonderful experience in both of those programs at the University.

DT: What led to your interest in public health, first?

ML: Public health goes, I think, back to interest in epidemiology and the broad goals and mission of public health to do what’s important for society to make it better and whatever that might take, and the broad goals to look at population needs, not just individual needs per se, to focus on prevention as a way to help improve the health of communities and the entire population, and from the epidemiology point of view, sort of the science, the structure that goes behind that, the analysis of what is happening in a community as a basis for really determining what should be done, the actions to be taken. Think: disease surveillance. As a core part of epidemiology, it helps us understand where are the measles cases that are occurring coming out of Disneyland or anywhere else in a community. Then, we can use that valuable data to really help forge policies and actions to reduce the future cases that may be occurring, and, hopefully, prevent them through things like immunizations. It’s very much parallel to informatics, which I’ll eventually get into here, because that’s the way we do assessment of the readiness for systems to support activities like epidemiologists. But it is from a systems point of view that we study how the information moves from one setting to another and the structures that support that. That becomes a critical part of the evaluation. The population system, epidemiology, and the information system, the informatics, has always drawn me, but I started in the population health part. That’s what I started in in public health.

DT: When did that interest in health information systems begin for you?

ML: It actually began shortly after my epidemiology degree and my first connection with the University of Minnesota way back in the late 1970s around immunizations and how to collect immunization records and sort of manage the whole issue of studying and evaluating if children are up-to-date on their immunizations or not.

That work led to further work at the department, but I moved on and spent about a decade in Wisconsin as the assistant state epidemiologist. I honed my epidemiology skills and, at the same time, was in charge of the development of information systems for disease surveillance there and developed and published the first articles on online disease surveillance systems for public health based on our work there. I worked with them and published papers, actually, with people from, at that time, a fairly small company and not so small anymore, Epic Software. I worked with them in Wisconsin to help develop some public health surveillance systems. So my informatics interests… Although I didn’t call it that at the time informatics, clearly, I saw the advantage of doing it and wanted to learn more from a technical side, from a behavioral side, about what’s involved with the management of information. It was in that setting that my interest actively grew around informatics.
Then, when I moved back to the Twin Cities in the late 1980s, I began working with the Health Department again. I started in two different program areas. One was involved with cancer screening. That cancer screening program is one where we started with the University of Minnesota. Dr. Laël [C.] Gatewood provided some advice and guidance on the cancer screening program for mammograms and pap smears, a brand new program that had just started separate from the program that Laël had worked on for a number of years and that was the cancer surveillance system. This was a screening program. We developed a database for that. That began my connections with Laël and with a number of the other faculty members at the University.

I moved on from there to obtain a grant with the Robert Wood Johnson Foundation to establish a plan for the development of immunization registries in Minnesota. That was about 1992. Laël was at the University and we were directly involved in that planning grant to move forward with that implementation. We established the framework and the plan that exists, actually, today in Minnesota, sort of a centralized data with distributed coordination efforts. It was the model that was established. We worked in conjunction with Laël and the immunization program, almost to the end of the decade, on additional grants from the Robert Wood Johnson Foundation for implementing immunization registry systems across the state. That was a big effort because of a lot of issues that needed to be worked out. Standards kinds of issues. How do you do matching of clients? Privacy types of issues. What do records look like? What are good information models? What should be the information flow? All of that development activity was done in collaboration with our department, the University, and the work with the Robert Wood Johnson Foundation. That was a wonderful beginning of some collaborative efforts.

At that time, with that very first grant when I moved back here, is when I wanted to formally add to my academic background and started in the Ph.D. program and was, for a period of time, supported as an NLM [National Library of Medicine] fellow, as well, during that early time. I finished my coursework related to health informatics at that time, so I was both working at the department and finishing up the coursework to support my Ph.D. in health informatics. My focus was, clearly, public health informatics in terms of interest, but the program, of course, was fairly broad but quite small at the time. There were just a few of us.

DT: Going back to when you were completing your MPH in epidemiology…


DT: At that time, through the Division of Biometry, there was the Biometry and Health Information systems graduate program. Did you take any of the…?

ML: I actually did.

DT: Oh, yes?
ML: You did your homework. I did from, I think—let’s see here—it may have been Lynda Ellis. I’m not sure. I did take a course in biometry and a few other areas. It was an initial interest and spark for my interests in epidemiology and information systems. Oh, my goodness, that dusted off some memories.

DT: [chuckles]

ML: That’s true, I did. That was an early connection to that program. It was very important because a number of us involved in public health epidemiology were in that class and had a similar type of interest. We saw the important value of informatics to public health and those connections when they weren’t, I would say, broadly advertised at the time.

DT: That’s great. That’s a great connection. At that time, in the late 1970s, it sounds like your fellow classmates, as you said, saw the connection between health informatics and epidemiology, not that it was necessarily called informatics, at that time.

Then, when you moved to Wisconsin, I’m curious how visible was that connection to other people in the field? The role of informatics, how visible was that?

ML: I would say my general impression is that, at that time, the information systems accessible to non-sort of mainframe people were just growing up. The digital piece, PD-11s—what were they called?—my digital corporation which no longer exists, I believe. The small mini computers, as they were called at the time, even down into small desktops were just beginning. So I would say the potential of using information to support practice was emerging. It was really the time when the computing power came to a program person, an epidemiologist, for example, in my case; whereas, it was not attainable before. You sent it off to IT [information technology]. You gave them a bunch of paper. They came back with some reports. If they were wrong, then you’d wait a few more weeks and you’d get something else back. So it was a slow disconnected process largely, certainly in Wisconsin and to the degree in Minnesota at the time, as well. What we were starting to see was that technology was allowing the potential for program people, public health people in this case, to use it more hands on, more interactive and say, “Oh, we can do some things with this in a more interactive and a more timely fashion to directly impact our daily work.” So it was that role that became very apparent.

In fact, in—let me get the dates—early 1984, there were two conferences held back to back. One was in Minnesota and one was in Wisconsin. They were called Epistat and involved the universities in both settings. What that was is it was a day-long sort of personal computer conference or mini computer conference for public health, associated with the Conference of State and Territorial Epidemiologists. They had their annual meeting in Minnesota.

The state epidemiologist at the time, [Andrew G.] Andy Dean, had a relationship with the University [of Minnesota] as well, with the Micro Simulation Center and several folks. He’s the developer of the CDC [Center for Disease Control] software that’s gone around
the globe, the freeware program that is called Epi Info™. He developed that in the backroom of his home here in the Twin Cities when he was here in Minnesota before he went to CDC. He had the University connection. I was involved with that because of general interest. When I went to Wisconsin, we stayed in contact

Andy and I worked together to put on these two back-to-back conferences…that he time had come to bring the use of computers into public health in the forum for discussion, a meeting, basically. We called it Epidemiology and Statistics, but it was about the use of computers. I helped him do the first one here. Then, we hosted the same thing in Wisconsin. It tied together the universities. It tied together the program people for one of first times early on. That’s one of the connections where they got together.

What was your other question?

DT: That was really it. Was this happening nationally, also?

ML: This was a national meeting.

DT: Okay.

ML: All of the state epidemiologists in the country—there were sometimes two to three per state—came to a meeting and we just held this as a day before that meeting. It was a special conference because, at the time, that’s when IBM [International Business Machines] announced the personal computer. Apple was out. The mini computers were becoming more popular. The epidemiologists were needing to crunch much more data and they could not do it through their existing large mainframe financial systems, and they wanted options. This was a way to show off tools for public health practice. Epi Info™ was one. There were a number of small database programs to do the surveillance and more about some of the process pieces. How do we implement this? How do we collect data? Were there standards?

Again, the University, ourselves, and Wisconsin participated in the first digital transmission of information from a state health department to the CDC. Normally, what was called the MMWR, the Morbidity, Mortality Weekly Report, data was collected by a phone call on Friday. Clerks would gather together their little cards. They would tally them up. They would call up the CDC on the phone. On Friday, it had to be in. They would call with the number of so many cases of a certain disease. We pioneered the development of a forty-character record that coded the diseases, the number of diseases in that record. Minnesota, Wisconsin, and three other states were the pilots to test collecting that, putting it in a database, and transmitting it electronically, again, with input from and with connections from the University of Minnesota doing that…all part of the excitement of the time.

DT: [chuckles]

ML: Lots happening. There are some citations, if you’d like, in those articles.
DT: Great. That’s fantastic.

ML: I actually have the original disk, a 5-inch floppy disk, someplace. I definitely have a slide of it that I use showing that’s how the data was recorded.

DT: That’s incredible. So Minnesota and Wisconsin were really on the cutting edge of this.

ML: We like to think so. [laughter] I think the fact that the University had even a group of interest... because there was nowhere else to go. Minnesota was, clearly, the leader in having a group that’s interested in applying computer technology in an academic setting to support the practice. In the State Health Department, we’re very much applied informaticians. So we’re thinking, really, of applications. Of course, the University was always primarily thinking of research and more in an academic type of question, which is great, but the two have to come together. That has been for the thirty years or so we’ve been together and continues to be that balance, that healthy tension, of how do we make this practical. How do we answer key questions that need to be resolved? That’s part of the research aspect of the three areas we’ve always been involved with: the education, the service, and the research. These are really the three areas I would say are pillars of our connections.

DT: You mentioned Andy Dean obviously being involved and having a commitment to informatics, too. I saw in the records that I’ve been reading that Denton Peterson was another person at the Department of Health.

ML: Yes. Denton [“Denny”] Peterson just retired from the Department of Health. He was the former CIO [chief information officer] of the Department of Health. He finished his Ph.D. and had some very interesting... I think I even have his dissertation here. It was micro simulation dealing with influenza spread. Denny was a pioneer in this area. There were very few. Today, it’s the hottest thing out there. We’re going to do simulation of anything from Google trends to disease surveillance trends and you get some nice graphics. Denny pioneered that back in the late 1980s or early 1990s when he did his dissertation. That would not have happened without the work of the Micro Simulation Center, because it provided lots of different models, from stochastic models to micro simulation to options down to the time where there were students simply doing some exciting simple spreadsheet-enabled models that were very basic. That started to take it from an academic micro simulation view, which was a fairly complex tool for many people, to an applied tool. So we got these tools. The concepts of simulation were starting to filter into an applied setting. I think Denton was one of the early bridgers of that, which was very exciting in his dissertation. It started to show the variables that may come into play, at that time. Is vaccine valuable or not? It had a practical application. How valuable might it be? How much spread? They were quite concerned, of course, and Denton was involved with what was called swine flu in 1976, the anticipated swine flu outbreak that never occurred, and the unfortunate circumstances of the Association of Vaccine that caused some Guillain-Barré Syndrome. So Denton was one of the early
people to discover that, actually. He goes back to the epidemiology roots. He was involved with the neurologists who we established a surveillance system with. He received some of the early calls, established a specific active surveillance effort in Minnesota sounded the Alarm and, then, the CDC took over with a broader surveillance when the CDC identified there was an issue. So early detection. Flu occurs every year. We’ve got some A and B strains. How do we begin to predict it? Denton, very beautifully, did some modeling which helped, I think, begin to pioneer some of ways of considering those questions.

DT: I saw in the 1990s, he did a lot of simulations around HIV-AIDS [Human Immunodeficiency Virus-Acquired Immune Deficiency Syndrome], too.

ML: He may have. I’m not as familiar with that, but I would not be surprised. Again, I think another great example of spread. That’s clearly Minnesota and the work that Denton did in pioneering far ahead of what was happening in the country. It was just not there. There was micro economic simulation. I think he drew upon, a lot of economic models but very little in health because they weren’t worried about population health kinds of issues at the time. There weren’t many resources. Denny clearly saw that.

DT: I actually wonder if we could talk a little more about that national micro population simulation resource. It was something that the health informatics folks at Minnesota were spending a lot of time doing for ten, fifteen years. Obviously, as you’ve already indicated, it was really important and I wonder if there’s anything else you can say about the role of the Center.

ML: I did some early work with it in graduate work, so that’s the late 1980s, early 1990s with MMR, (measles, mumps, and rubella,) vaccinations. In 1988 or 1989, Saint Paul had an outbreak of measles with three children that died. That was after a decade of loss of key funding to support immunizations and vaccines for children that couldn’t afford them, so that money was taken away in the 1980s. In addition, it was taken away from the global health initiatives. As everyone who had any science background predicted, there would be large outbreaks and people would die and, in fact, that’s what happened. This led to a number of different activities in terms of policy types of issues: the Vaccines for Children program which guaranteed vaccine for those who were under age, a critical piece that occurred at that time.

From a simulation point of view, my work was simply to look at how do we look at transmission. It was really some exploratory work, a little bit with the Health Department, at the time. It was dealing with the outbreak of measles and what type of spread can we expect if we have different size populations. We knew there were some where the vaccine was not fully effective, so there were pockets of children at risk for a variety of reasons, for those who don’t get their shots and those who do that are immune. If we try to do some simulation, what might that look like? I would say my role and interest, at the time, was how we take from what was largely an academic piece and try to use it for policy making applied issues of making program decisions. That’s how I got
involved with the center, at that time. Otherwise, I didn’t [get involved] a lot in terms of the Micro Simulation Center.

DT: My understanding of the Center is that the faculty and the other staff who were there were developing the software. They were also doing research. But they were developing the simulation software. Then, researchers such as yourself and others, some within the University and outsiders, were then able to run their simulations.

ML: Researchers seemed to need a lot of help, yes. So for an applied person, if I was just doing research here, it would be fine. But, for me, it was a time when Windows was coming out. The Mackintosh was out. The interfaces to the world were changing. People were looking for easier interfaces. Interfacing took a little bit more attention. It was great for the research. It was a time, at least when I interfaced with it, where it took a fair amount of time. I would have to say, although I was interested, that was not even on the radar for most people in public health, at that time. Given, I was working at the Health Department in my role, but it was just not seen as something we needed to do. I would say that’s not the case today. People see that the interface and entering the appropriate variables and doing simulations, the software and the interface are just much better. Clearly, where it was needed in some academic areas, it was very useful, but it did take people that kind of understood what simulation is, how it works, and how to get some of the assumptions. Even at that time, you had to make a lot of estimates on the assumptions that go into the simulation models. That would not only take some work, but it was sometimes difficult to kind of estimate. It wasn’t an easy process. But when it was done for particular reasons, it was valuable.

DT: Given how difficult and the number of assumptions you would have to make in establishing those variables, when you published your results, did you get some pushback from colleagues kind of taking issue with how many assumptions had gone into setting those variables?

ML: I’m trying to remember if I published. I may have done some abstracts, but I don’t remember. If there were, there were not a lot on simulation. Back to the practical… I was at the Health Department, at the time, so any work in the graduate program would focus on what would be applied. Although simulation was valuable, our bigger challenge was managing just program data, so disease surveillance systems. I had built some in Wisconsin to manage the now increasing volume of data and was working on that a little bit here and, then, got into the immunization registry issues. How do you manage large volumes of data to help provide functions like immunizations registries? That was more of the focus I got into. I did some simulation, but not that much.

DT: You said with the immunization registries that that was supported with a Robert Wood Johnson Foundation grant?

ML: Yes.

DT: With the cancer surveillance system, was that funded by grants, also?
ML: Grants mostly funded the Health Department project. In fact, over half of the Health Department is funded through CDC or other grants. That was funded through the Center for Disease Control. Also, a little bit of state dollars went into that to establish, basically, a screening system, so managing the data associated with women who were being screened for breast and cervical cancer. At that time, it was targeted to underserved communities and, oftentimes, I believe Native American women were involved in that, as well. It was targeted to groups that just had very low screening rates. The outreach was very high. They wanted to manage the data and, then also, show some levels of efficacy for the program. So we established a database to track those histories over time and, then, summarize the data that was available. That was the cancer system.

And then went on to the Robert Wood Johnson grant which was to begin to establish a model for implementing an immunization registry in the state.

DT: When you were working with like Laël and other faculty at Minnesota, were there fees? Was it kind of contracting with them?

ML: We did contract with Laël for a period of time with the immunization registry, in particular. That was one of the projects. I’m trying to remember if there was another one. Yes, we did have a financial arrangement with Laël for a period of time. She was very gracious, obviously extremely knowledgeable, experienced, asking amazing questions. She’s an amazing person with a great history. She would often be the person who would ask the tough question. She was very valuable to that aspect of the implementation…questions that others just maybe didn’t ask. Then, her connections nationally with the NIH [National Institutes of Health], National Library of Medicine, and other groups brought that broader perspective. So we did contract with her for that type of advice in the development. We had steering teams. She volunteered a great deal of her time, beyond what we paid, to be involved from steering teams to advisory groups, and still comes to meetings today as we’ve evolved into broader health issues.

DT: You, obviously, just mentioned that in many ways the simulation work that you and Denton Peterson were doing…

ML: Oh, mostly Denton.

[chuckles]

ML: Mostly him. I dabbled a toe in and Denton got two feet and maybe two legs into it. He’s brilliant in that area. I’m just a basic amateur. [chuckles] So I don’t come close to saying I’m a micro simulation person.

DT: All right.

ML: I can appreciate it. It’s like I can appreciate good art; I just can’t create it.
DT: So Denton’s work then on the simulation… He was quite far ahead of his time and it took a while for the rest of public health to catch up?

ML: Ohhh, absolutely, way ahead of his time. He was at least a decade ahead, I would say. It wasn’t until 9-11 [September 11, 2001, terror attack], I would say, when there was national interest in simulating different things in health, because of the anthrax. Following anthrax, they wanted to do simulations on large-scale outbreaks nationally and that picked up. He had done his work a decade or more before and it was not appreciated, in my view, but that’s life.

DT: Were there any other factors that contributed? The 9-11 anthrax were stimulating events, but were there other factors, too? You had mentioned the difficulties with the interface.

ML: For me, again, I’m looking for practical, so we don’t have a lot of staff to do it. I didn’t have time to spend a lot of time. Yes, I would say the interface was one of the challenges there in a world where the interfaces were changing dramatically. It was still a niche area; whereas, I think it’s come out of that today where people have more use cases, more examples of how you might do simulating. The news might talk about a simulation and you see the little graphics on the paper of simulating an airplane landing, lots of different types of simulation based on different data. That was not available then, so you had to have a certain amount of vision in order to even engage them in that area of interest. The language was foreign for a lot of people. I think that was part of the little struggle of where to go with that, at that time. That’s my outside perception of what it was.

DT: That’s fascinating.

If we could spend a little time talking about your experiences then as a graduate student in health informatics…

ML: Okay. I had interesting experiences, overall good but only because more from my point of view, not from the Institutes’ point of view, because I had to split up my personal completion from when I completed my coursework to when I got my degree, a long delay between the two for personal and work reasons, largely. I thoroughly enjoyed taking the classes. It was new. It was an area of interest. I knew very little about informatics from an academic point of view. One of the reasons was I had gotten the bug bite in Wisconsin with the development of the disease surveillance systems. I worked for three years with Epic to develop some public health information systems for them in Canada, across Canada. I said, “I really would like some academic options.” I knew I was moving here and, even then, I looked around the country and saw very few programs that really offered this concept of informatics.

So I was very pleased to get in the program, to meet Laël Gatewood. I appreciated her public health interests and, at that time, had already done early work with the cancer surveillance system in their consultation with Alan Bender in the development of that,
one of the first cancer surveillance systems in the country doing a probabilistic model matching, which was new at the time. The development of that system, she did. Working with her, I don’t know exactly what she did, but I know of that work. That was occurring. I was pleased in the course to get connected with her and, then, the other faculty members to take what, then, was courses… They were willing to accept a fair amount of my public health work, previous courses. I could take my informatics courses and, then, work towards the Ph. D.

DT: Who advised you for the dissertation?

ML: It was two people that played the large role. It was Laël and [Douglas R.] Doug Wholey in the School of Public Health who played a key role in helping me do my dissertation. I started several. For several years, I needed to take off some time to spend doing some things with my family. So that, personally, took a lot more time than planned, so it was work and that, so the dissertation waited. Then, I took on a role here that put me in charge of a large division. I agreed to the commissioner that I would take it on for six months… dissertation delayed again. It turned out to be almost two years. So that pushed back the dissertation progress for about three years more. Then, finally, I just decided to do it, which was like a decade later or something. Either do it or not do it was the decision. I’m very glad that I did, but it was an embarrassingly long delay.

DT: [chuckles]

ML: From my point of view, unfortunately, I just put a different priority…on my family and some work that I felt I needed to do which delayed it.

DT: When you do a Ph.D. fulltime, it’s hard enough doing the Ph.D. fulltime let alone doing…

ML: And working fulltime and we had some issues. It all worked out great, but there were some issues we needed to deal with.

The division was now 150 people, eight different sections, a very large division that needed a lot of help, so I told them I would take an interim director role. We would help sort out a lot of organizational issues, split it into two divisions, and hire some new key people. I said, “I will do this, but I want to go back to informatics,” which was my love. I had a choice to stay on as the division director, but chose to come back and finish the dissertation and come back to a narrow area in the department.

That’s when I started to develop an informatics capacity here at the Department of Health. That was a decision that I could go in a management level at high division, assistant commissioner type of level, but chose to go to really drive what I thought was the future of public health informatics, to make it operational at a state health department level. It’s very parallel to what epidemiologists did. In the 1960s, epidemiology was pretty much an academic area. It was clinical trials. I studied under Leonard [M.]
Schuman that branch of epidemiology and have his book on smoking—I don’t know if he signed it for me—*Smoking and Health*.

It was very much academic in the mid 1970s. It came out and became an applied science in a state health department. I was the first epidemiologist hired in a program area here at the department. There wasn’t even an epidemiology classification, at the time. It was brand new. There were only like six epidemiologists who graduated in our class. It was going from this academic only focus to having an applied dimension. I saw informatics as doing the same thing, as coming out of the academic setting into an applied setting and that there are different roles at a state health department just as there was in epidemiology that spread from a leadership role with state epidemiologists to managers to directors to frontline epidemiologists and investigators. The same thing, I believe, is happening with informatics now, that there are three to five roles that we’ve identified and, at some point, an official state informatician will be established as some states like Washington and Utah and others have done.

DT: That’s actually a really interesting characterization of the history of health informatics. It makes sense, especially in terms of Minnesota’s program which tracked NLM’s training programs initially in the 1970s through 1984. The training program had been geared towards training computer scientists and health professionals in how to use computers in health care work. Then, it shifted to basically training academic health informaticians. I think that’s still the agenda of the NLM’s training programs. But in Minnesota, they introduced the master’s in health informatics, which goes back to training health professionals.

ML: Parallel to epidemiology and others. We see that in informatics today with existing staff that have an aptitude and a job role that need informatics and want some courses and some training, a little bit more academic. We see a few key staff that should be getting a master’s at minimum as working informaticians, directing major surveillance systems. I see it as a parallel having been in both of those tracks, still am to some degree in both tracks.

DT: That’s a really interesting observation.

You mentioned that when you were looking at graduate programs, you had looked at the other few programs around the country. From my sense and what several other people I’ve interviewed have pointed out, including Milton Corn, was that Minnesota was pretty distinctive in that it was interprofessional from the beginning.

ML: Absolutely. I think that was a critical decision on my part, because I saw, clearly, medical informatics in other settings. Here, it was health informatics right from the beginning. It was broad. In the class might be in nurse, a pharmacist, a public health person, a physician, or a researcher. So, absolutely, it was distinctive in a very positive way. I see that as an important vision. From the outset, they described a vision which was, clearly, going to be the future, an expansive and inclusive vision that was broader than these other programs.
DT: If we can switch to your roles here at the Department of Health and the numerous work you’ve done instituting health information systems here… Basically, I’m going to follow your lead here and move chronologically.

ML: I want to tie it to the University work, as well.

DT: Yes, sure.

ML: I have an outline I’ll leave for you.

DT: Great.

ML: This is informatics—whatever it is—grand rounds that we gave last May.

DT: Oh, good.

ML: It’s giving a little bit of a history from how our informatics activity has grown.

DT: Fantastic.

ML: We have a lot more, as well. This is where, I would say, my interactions at the University get broader and deeper, starting in the late 1990s, early 2000s. They fall into those three categories we talked about before which, I think, are sort of standard University categories. I’ll try to lump things there, if that’s okay.

DT: Absolutely.

ML: That would be interaction related to the mission of the University around education, the University mission around research, and, then, the University mission around service. I think we have engaged in all three of those in terms of our interactions. The engagement with the University in those three areas has been largely around, I’ll call it, two main areas: the science of informatics applied at a state health department mostly around e-health activities, so information systems to support health across the continuum of care and population health, so everything from behavioral health clinics, hospitals. We list eighteen different domains that are under the umbrella of our e-health initiative here, which we started in 2004.

Why don’t we start with the chronology of how our organization has evolved, our small little unit here and, then, how we interacted during that time in the service, research, and education? Is that okay?

DT: Perfect.

ML: I’ll just follow this outline and try to fill in a little bit. Around 2002—this is when I was coming off of the division responsibilities—I said I wanted to go into informatics
and we formed what we called the Center for Health Informatics, at the time. That was a focus for using informatics science to provide input on the development of disease surveillance systems. There were just a couple of us that were focused on doing that. It’s focused around a couple of…I don’t know if there were actual grants or program activities around grants that we worked on.

The real activity came in 2004 when the affiliation of the University expanded. I think that’s about the time of my adjunct connection, the formation of what’s called the Minnesota e-health initiative. I have volumes on that. Some fact sheets which I could point you to from our website that will get to the heart of it.

DT: That would be excellent.

ML: The Minnesota e-Health initiative fact sheet summarizes the work… The fact sheet will give you a lot more detail. We can go there now, if you’d like or I can point you to it later.

DT: I was looking, actually, at the website the other day, so I’m sure I can locate it.

ML: Oh, good. It sounds like you’ve been extremely thorough and careful.

DT: I try to be. [chuckles]

ML: I’m very impressed, very impressed. Please, come and work with us.

DT: [laughter]

ML: Minnesota e-Health is a legislatively chartered initiative that establishes an e-Health Advisory Committee to advise the commissioner of health on the use of health information technology to improve health over all of individuals and communities. That’s’ the broad mission established by the Legislature. A tiny bit of funding came with it, at that time, and that really kicked off a number of things that led the committee to establish a plan of where we needed to go, which was in the law. The actual physical plan—we have a digital copy here—led to in 2008 publishing a prescription for Minnesota, I think it is, which set forth the framework for the Minnesota e-Health Initiative. That outlined a number of things. The basis for many of the decisions was around informatics.

We engaged the Institute of Health Informatics and it was immediately put on the advisory committee. Let’s see who we ended up having… Right from the beginning, the University and informatics were part of the e-Health Advisory Committee. Their formal input was from [Donald P.] Don Connelly to Stuart [M.] Speedie to Laël Gatewood, and indirectly Bonnie [L.] Westra. All people that are engaged with the Institute were actively involved in the committees and the work groups. This is a really big deal. This is the first in the country to establish a statewide initiative to say, “We need to advance the use of technology in a coordinated and systematic way, to establish an infrastructure
that supports a capability for capturing and using information.” The model…clearly informatics-based over all is the underlying piece and why we brought in both the research and the informatics part. Our model simply says if we’re going to implement electronic health records [EHR], for example, we need to, first, assure that they are adopted, so we monitor that their adoption is occurring. Then, we have to use it well, not just plug them in. We have to use them…the heart of informatics, effective use of an electronic health record. Then, we try to tackle the hard part, which is sharing that data among others. That model established then is the ongoing piece that’s been core to the whole entire initiative in terms of moving forward.

About 2008, because of the success of the policy and the work and, clearly, committee contributions from the University, the Legislature passed the first-in-the-country mandate for the hospitals and providers to actually adopt interoperable electronic health records and to do it by 2015, our current year. We’ve made great progress. We’re not fully there yet and we’re not fully there across the continuum of care, but the progress has been dramatic and it is, I would argue, probably leading the country in terms of the effort.

Our entire mantra is a slide I usually use. I don’t know if it’s in the slides I showed you… Probably not. The slide is of an African savannah, a picture I took while on a safari in Africa. It’s an Africa proverb that says, “If you want to go fast, go alone. If you want to go far, go together.” That’s been the mantra that has guided the Minnesota e-health initiative for 10 years and how we hope will guide the initiative in Minnesota going forward.

People have come together, several staying with it now for ten years, to attend work groups and to participate in the development of policies and standards. The Interoperability Work Group is one of the work groups that Don Connelly and Laël Gatewood have played a big role in supporting. It’s a lot of informatics issues and policy related to that. Working with Bonnie Westra and other University of Minnesota Nursing Informaticians, we have pioneered, just recently, the first nursing standards. Informatics and the influence there and our advice from there and the engagement have been really crucial.

The success is being measured by those people that are using the information who find it helpful and the over all outcome of the results. As you’ll see in some of the graphics, ninety-five percent of the 1200 or so clinics in the state have adopted electronic health records and ninety-nine percent of the hospitals. Just five years ago, it was half that, so it’s a huge change and exciting because, more importantly, the rates of use of things like clinical decision support, drug/drug interactions for prescribing have shot up as well. So they’re not only plugging it in more, but they’re actually using it to improve care, and, now, reporting to public health, creating population health reports. It’s very exciting to see the transition.

Underpinning all of it, we still maintain a core group of people trained at the University. We have several staff here that have received either certificates or take courses. We see informatics as the core science underpinning all of our e-health activities. I don’t know
how many grand rounds we’ve done. Here’s an example of one. I’ll leave this one with you.

DT: That’s great. Thank you.

ML: So that’s a little bit of the history. That just takes you up to about 2008.

More recently, the federal program HITECH Act, engaged even further the University, who got involved with the education aspect of training, so they’re more actively involved with the HITECH funding. That was the certificate program.

We were charged with what’s called the Minnesota Model for Health Information Exchange, which is a market-based strategy, different than around the country. I remember discussions on the committees with several of the University folks participating trying to decide how should Minnesota go. There was great pressure for this state to follow all the other states to develop one central health information exchange. We looked at it from a variety of ways. One of the ways was to…okay, let’s apply some basic business analysis where we would apply some key informatics principles from an applied point of view. What kind of data are we collecting? How will we manage it? What do we need to do to do that? Then, we looked at the money we were offered to do it, one time money, and what it would take to be ongoing. We said, “We don’t have the funds. We cannot do that. We’ll start up something, but it will fail. We’re setting ourselves up to fail.” The recommendations after a lot of effort was to say, “Minnesota will go with a market-based approach until the market settles down and we figure out what the exchange is really going to look like. We’ll put an underlying basis of standards and rely heavily on informatics to support some of the principles associated with implementation. Then, we’ll do a light government oversight of that that says you must play fair in the sandbox. If not, you get in trouble. That model is rare in the country right now, but we’re also the one that’s still operating. About half of those that took the money and built a big database are now shut down. They realized they didn’t have enough money to be sustainable. They do not have that model. We believe that, at least so far, we made the right choices and we did that in conjunction with this work group committee input and, again, the University played a critical role both on the advisory committee, the commissioner-appointed body, and the work groups which are open to the public. We have that combination of sort of an official body with designated appointees and, then, have a work-group-open process where we get broad community input. We seek it out. We send things out. We ask to collaboratively help us improve documents that are created and policies that are created.

The other thing that has driven, I think, from an applied informatics point of view here, I would say, and we’re different than most other states around e-health, is assessment of the infrastructure. We immediately started to ask how do you measure a system. We know in epidemiology we measure disease cases by morbidity, mortality, right? That sort of indicators of how well we’re doing. They’re surrogate indicators for the country. How do you measure e-health? So we have tried, and we believe we have pioneered some of this, to begin to measure capability and capacity. So can they do certain
functions? We have surveys that measure every clinic, every hospital. We’ve done chiropractor’s offices, local public health, long term care, and we’re working on dental offices and a number of other domains...a survey of I think it is fifty to sixty questions that get into their basic capacity, functional capacity. Then, the use of that system...things like decisions supported e-prescribing, measuring how much they’re doing it, and, then, their capacity for health information exchange and how much they’re actually exchanging within their organization and outside their organization. That data has been essential to make decisions, to guide the program into the future. Also, the University folks, Laël in particular, Bonnie, and others, have played a role in shaping those questionnaires, shaping the assessment practice. When we bring it to the advisory committee, they’re the ones that speak up, because they have their wonderful research hats on, and ask great questions. Stuart Speedie has been on that. He’s been very actively involved, in fact, in a number of areas. Stuart definitely receives credit, as well. That takes us up through almost today.

The last one is e-health across the continuum of care. We’ve talked about these eighteen or so domains, this process of informatics. In the initiative, we’ve been asked, “Okay, take it to the next step. You’ve got this adopt, use, and exchange going on. Great.” How do we get communities?” If you’re really going to make exchange work, how do we get accountable care with the Affordable Care Act in place, working for managing an entire population? So we have about six different communities that are coming under the umbrella to say, “We’re going to pool dollars. We’re going to keep a population healthy.” Well, they need data to do that. These accountable health organizations, we are now trying to help them develop their information capability around the same type of principles here. We’re bringing them together to deal with… For example, we’re just working on things like social determinants of health. Laël, I think, was just at one of our last meetings and provided some very good input of what should be the standard sets of data that you keep in repositories. These centers are creating repositories so they can do care management, care follow up, and watch for asthmatics or diabetics and assure the treatments and if they need outreach, they get help, all of that important service that help with that care. You need a good repository to do that. There are not standards for that, so our group is helping forge together or to leverage with some nationally to make it fit what’s needed here in Minnesota. That takes us a little bit from 2002 to 2014 of where we’re at.

If I was to say how to characterize the interactions... Education, we’ve tried to do two things: send students to IHI for classes for sure, and we’ve tried to help support development of the curriculum. I’m involved with the curriculum development for areas related to public health. We’ve sent I don’t know how many students, at least many dozens of students as part of their courses, either practicums or just students who are getting sent over at random to work on projects, usually a semester. We go through a structure process and work with a faculty member to do something that’s useful for both parties. That’s been a bit more of a structure...an active effort. So curriculum, the students. We tend to send students over there and we do presentations and lectures. Then, I’ve, in particular, played a role as part of the faculty, so I try to engage, as I have time to participate, in faculty activities. That’s been the education connection. I would
say we, with the University, have also tried to engage other informatics programs, so [College of] Saint Scholastica, the training program at Hennepin County Technical Center, Normandale [Community] College. So we have an education work group, for example, that works to support workforce. I know Bonnie Westra and I believe Don and Laël and Stuart have been engaged certainly in discussions, but I don’t know if they’re on the steering group. They may have been. We’ve had several over the years and I don’t remember which ones. But that’s the nature of some of our work through the education.

The research, we’ve talked about a number of things. All of these paid and unpaid research, we’ve tried to do some projects. I may have a list of some someplace.

Then, certainly the service. The contributions to the e-health initiative have been invaluable in terms of the effort. This is one of the reports. I think there’s an annual… We put out four guides like this one. Here’s a couple of them. Here’s a “Practical Guide to Effective Use of Electronic Health Record Systems.” Here’s the advisory committee members. Let’s see, I’m not sure who was on this particular one. Bonnie Westra, for sure, as an example. I don’t think Paul Kleeberg is on [unclear] group. We have a number of University people that played a role. They’re usually listed, but not always in here…that have been actively involved in the development of a number of these guides. We have five of them. So that would be their service and contributions. Those would be some examples.

I’m talking too much.

DT: No, this is great. I want you to talk. [chuckles] You don’t need to hear me talk.

I’d like to go back to, I guess, 2004 and just the kind of origins of the e-health initiative and kind of more generally. Where did the impetus for e-health come from, nationally speaking?

ML: Well, let’s see. The origins come out of a number of reports. The NCVHS, the National Committee for Vital and Health Statistics, reported in about 1999 or 2000. I might have it here or we can look it up. That set forth a recommendation to develop an office of the national coordinator and to establish a national strategy around e-health. It came out in about 2002, 2003. Several of us here and in discussions with the University said, “You know, we should be doing something. Electronic health records are [unclear]. What can we do? There’s a lot of interest. People are doing all kinds of things and we don’t know what it is and they’re not necessarily working together.” This national report said that and we all saw it. It had a beautiful diagram of three circles that were overlapping of clinic, and public health, and the community.

Let me pause a second and get my thought that I had that I just lost. There’s a nice connection. That’s what I’m trying to make. [pause] Ah! There it is. Grants. In about 2002, we were looking for some funding and a federal funding opportunity was announced and two other groups who offered some funding that was for research at a clinical level. We wanted to apply to make our role as it to more of a coordination role,
like e-health. They got a group together...two or three different grant applications right in the same year. We played a role and gathered together an application. They didn’t want to write it, so we wrote it, put it together, and they were all turned down. One of the reasons said, “It’s not necessarily coordinated as a state.” Their focus was we want a hospital or a clinic to do X. We totally disagreed with that approach. [chuckles] It recognized that as a state, we weren’t really coordinated. So we said, “We need to establish some way to work together to apply for these things and show that we have our total act together. The loss of that funding, I think spurred what was eventually the legislative action...came from our office the proposed legislation that said, “We’ll form a one-year steering committee to figure out what to do and charter the commissioner to do it.” That one year of the initial direction and policy in 2004, 2005 was so liked by the Legislature that they extended us for like three to five years—I forget—and said, “Get this plan together. We like the direction you’re headed. You’re working together. You want to be efficient. You want to avoid duplication. You want to focus dollars where they’re needed. You want to use some science-based efforts around this. There is a lot of difference. You want to focus on standards.” They liked the general approach, which was an informatics approach. From our perspective, at least, it was. So that’s what was happening about that time. It was really the failure to get organized. We have never missed on a grant since that was established. In fact, when the HITECH grant funding came out in 2010, we were one of only two states that received all of the awards for the different projects and they cited us because we were highly coordinated, and we had an advisory committee, and we had everybody connected and working together. That was their main reason. Six different groups applied. We all applied under the e-health umbrella meaning that we cited that as one of the advisory groups, and that we were working together. We shared the language. That was clearly cited as an important reason why we were successful getting the funding that we did. Out of failure comes reasons... People said, “Well, let’s form an initiative for us to work together.” That drove the legislation in 2004.

DT: That level of coordination that followed, does that, in part, account for why Minnesota has then become a leader in e-health?

ML: Well, we like to think so. There’s some material I’ll have to get you from our ten year anniversary. We celebrated it in June. It was on the website.


ML: We won a state innovation award for this initiative, for the success. There’s a video on the website or a link to that video which interviews... Bonnie Westra is interviewed regarding the importance of EHRs and research on that. In there are a number of successes and achievements through the initiative, both policy achievements, education, and coordination types of achievements. I think that’s in our ten-year fact sheet. I can have Bob [Johnson] get that. It should be on our website; if not, we can get that to you or just remind me and I’ll get it to you.

DT: Okay.
ML: That’s the ten-year anniversary summary. That outlines a number of things like those examples I just mentioned.

Yes, I would say, being modest, yes, I think it contributed to it. Others give us enormous credit. We would not be where we are at if this initiative did not exist. We like to believe that it had an impact. Certainly, a lot of people tell us that it did. I would say some of the indicators are qualitative indicators, so being an epidemiologist and informatician, I’m skeptical of data, right? [chuckles] The data is not perfect, but I think it’s very strong for what we have done. We’re very proud of the work and others tell us that the initiative has contributed to the over all success of the state.

DT: It sounds like the State Legislature was, obviously, supportive.

ML: So much so… Not only did they ask us to do a plan, they authorized $14 million, either the first state or second state grant in the country toward the EHRs, way before HITECH. This was 2005. One of those was a contribution to the first ever loan program, a revolving loan account. Several million dollars are constantly loaned out. You get a no interest loan. You pay it back over a period of time. When that money comes back in, it goes back out to others to buy electronic health records or other systems. So counties and others like that get a very good deal in terms on the data and that’s an impetus for doing it and it’s easy to get the money. It’s small program, but it’s an example of the confidence the Legislature had. Clearly, it still remains a pretty bipartisan issue, one of the few these days, or so it seems, unfortunately. This has been one item that’s been consistent since 2004 as a bipartisan issue. There are a few arguments on the edges but, generally speaking, most people have been strongly supportive.

DT: Has it also garnered the support of health plans and providers?

ML: Yes, I would say it has. The way I would measure that is that they, one, don’t oppose. They ask us to come and speak to their various groups and they regularly send people to participate, actively participate, and contribute. One health system in town has volunteered an attorney’s time to help write up some simple consent documents. They have co-chairs, I think one or two for five years, another one for eight years, and I think one for all ten years…have all come to all the meetings. One has co-chaired many of them. They have committed their senior leaders to participate in this. I would have to say, we’ve received very strong support. They have been active supporters of our annual conference. The ten-year conference was up last June. At the annual meeting of over 400 people, we try to highlight the work of the year. We try to highlight local stories and, then, have a national speaker. They have sponsored that. That’s been generally not any state dollars. Sponsors, vendors, and tuition pays for that. It started with nothing and they have from the beginning contributed dollars to pay for that educational effort. It’s been a one-day event and, now, people have said we’ve got to go to two days. We did two last year. It was such a success that we’re going to continue that this coming year. That’s been a real highlight, as well, of coming together to share the enormous amount of work going on in the community. I think that’s one of the big changes here. Just the
word informatics was foreign to so many people a decade ago. Electronic health records, they kind of got but certainly did not get informatics. Now, it’s much more commonly recognized as a field, as a discipline, and an important element in all of the electronic health records.

DT: It seems like that’s one of the things that the Division of Health Computer Sciences, but not the Institute for Health Informatics actually but its predecessors, struggled with. Although, they had a great national and international reputation, but within the University, there was little recognition for the work that they did. They couldn’t get much institutional support. But then with the establishment of the Institute for Health Informatics… That was able to be established because there was, suddenly, all this recognition for what informatics was and what it could do.

ML: That’s been an important effort. To some degree, we still don’t, but they need a director. That’s been a challenge. To have a focal point... Otherwise, from an outsider’s point of view, where do we go for help? Where do they come to us for help? So having a place here, for example, our office or do they go to each program in the department? We go to the School of Nursing. We go to the School of Public Health. We go to the Medical School. So before the Institute, it was kind of hard knowing where to go. At least the Institute is at one place. You know that it has input from a variety of different schools, so that’s helpful, as well. They need to...

You can turn that off.

[break in the interview]

ML: The Institute, I think, is very forward thinking and it’s trying to look across the Academic Health Center and be a home for that. It’s going through its own growing pains. It was ahead of its time and, now, we see everywhere around the country there are modeling systems like this and even making them better. IHI 2.0, maybe 2.5 or something. The next version will be even better.

DT: You mentioned the HITECH. When I was reading about HITECH Act, I saw that a lot of kind of credit was given to the fact that [President] George W. Bush in his State of the Union address in 2008 mentioned wanting to get electronic health records within ten years everywhere. Then, President [Barack] Obama then said it in 2010 or something. Did that really have much significance or was this something that was already underway by…?

ML: The goal was set by the NCVHS back in 2001. In 2004 is when the National Office of the National Coordinators was established and the first plan was released right around 2004. That goal was set then. It was a goal with no teeth. Until the HITECH Act, which was part of the Recovery Act, it was infrastructure building. As building infrastructure, that was the purpose of the money. It’s inside the … I always forget the name of it. The American Recovery and Reinvestment Act of 2009.

ML: Yes. Inside that was HITECH. It was intended to be stimulus money to help the infrastructure to move forward. So by its nature, it was short term. I don’t think it was anything more than that. It took ideas that had been out there but never funded and just funded them and put $20-some billion into an area that had none before. So it’s going to have an impact. We saw it as a continuation of a bipartisan issue and they’re finally funding it.

The only down side from an application point of view of the HITECH Act is that there are four groups named in the act that did not receive incentive funds. It’s a voluntary program, but if you don’t volunteer, you pay a penalty. So hospitals and eligible providers get money, but others named to participate do not. So long term care, pharmacies, laboratories, and public health were all named in the act to interface with the hospitals and clinics but they receive no money or no incentive money. So that’s been really hard on all of those groups to see the, now, $20-some billion that’s gone into electronic health records (EHRs) and see their rates of adoption go up. They’re ready to send data to the long term care and the long term care says, “We didn’t have quite that investment. We want to. We want it. We want to get that continuation of care document. But we haven’t upgraded our system to receive an HL7 [Healthy Level-7] message or a secure email message and do something with it.”

It’s been incredible and necessary but insufficient to really move to where we want it to be. It is incredibly important, I believe, in over all e-health in this country. Advertizing for an informatics positions have never been higher. It’s incredible.

DT: I know you talked about the Minnesota model for the health exchange. It seems like this is one of the few models that has survived. But more broadly in terms of e-health, have you served as a model for other states? Are you kind of an advisor to other states who have these e-health initiatives?

ML: We’re told that we are. Huh!

[chuckles]

ML: We have traveled and certainly presented it at every national meeting, told our story in different ways. We’ve shared our materials. They’re all on the website. Related to having a central committee, people saw that and many laws were passed around the country which established an advisory committee, got representation, got people engaged, which is much of what was happening with our law to do that. There’s not been many that have set down a mandate. There are a few that have set down sort of encouragement language. The advisory committee, for sure. Not too many in state health departments, but we have tried to share that message in lots of ways.

One example is the chapter in the nursing textbook by…
DT: Yes.

ML: …the HIMSS [Healthcare Information and Management Systems Society] nursing book [Nursing and Informatics for the 21st Century: An International Look at Practice, Education, and EHR Trends, 2010]. Connie Delaney, I think, is one of the authors on that. We worked with Bonnie. Bonnie came to us and said, “You know we love your work group process. It’s a real model for the country. Can we write it up together and put it in there.” It’s in there as a case study. It’s another way of sharing some of what it’s done.

The Kanter [Journal] just came today. “How Minnesota is Using Community-Based Collaborations to Support and Improve Health Outcomes” – January 2015. [An interview with Martin LaVenture, PhD, MPH, FACMI, Director, Office of Health IT, e-Health and Health Informatics at the Minnesota Department of Health]. This is just a privately financed little magazine. Through journals and different ways, we’ve tried to publish, mostly abstracts of our work. There’s some posters hung out in our halls with some of the studies that we’ve done, that we presented at different national meetings. We’ve tried to share models.

We were just on the phone. We have one of our projects for our state innovation model that we’re just working on for accountable care. It’s to do informatics road maps for four areas: long term care, public health, social behavioral health, and social services. They’ve never been done before in the country, so we were on a phone call with the Office of the National Coordinator. They want to join our work groups because they think this could be a national model for the direction we’re headed. We said, “Well, we hope so. We’re going to try and do a good job.” It’s that type of interaction we tend to have, at least in this area, so a variety of ways that we try to share what we’ve been doing.

DT: If we can just return to your role as a faculty member in IHI…

ML: Sure.

DT: Now, that you’re on the core faculty there…

ML: Okay. I try to be. I don’t know how faithful I am participating, but I try.

DT: You probably help serve as an advisor or a committee member?

ML: I’ve been on a number of committees, dissertation and master’s committees. So student…I don’t have all the academic jargon. I’m sorry. I’ll get the terms wrong. I’ve been on, is it, the Panel Student…

DT: [Panel] Committees.
ML: Okay. I’ve been on that type of committee. I’ve been on academic committees choosing faculty, things like that. Currently, I think I am on the committee to select the new director, as well, so those kinds of committees. I try to do what I can. I’m negligent. I was early on on the CTSA [Clinical and Translational Science Award] committees, but I have been the worst participant on those, I would have to say. They’re big, like forty, fifty people. I’ll listen but I’m not sure what I can contribute. Then, I was on like three or four of them and I finally said, “Which one do you want me on?”

[chuckles]

ML: I got named to these and we only have a few people here, otherwise, I would normally have a backup. We try. I try. I’m not sure I’m successful. But when we’re there, we try to participate.

DT: Have you taught any courses?

ML: Yes. Laël, “Priya” [Sripriya Rajamani], [William A.] Bill Yasnoff, and I did the first… They took the seminar spot. I forget what it was called. Advanced Public Health Informatics. We created it and put it on for a semester. It did not get refunded. That’s part of this no director issue. Then, the School of Public Health wanted to pick it up, so they split it. But, yes, we did a full course then on that. I’m doing a lecture next week for “Priya” in her class on public health informatics. I’m actually doing a Skype kind of link to one at the University of Washington, a lecture, next week. So we do that, as well. I think it’s hard. This is part of this service connection. [sigh] Timing, you know…how much on the academic participation and what is the balance here.

I think one of the next steps we need to do, what I’d like to do with the University here, is to establish more of an official policy, memorandum of agreements—we have little informal policies, but not an official organization policy—so we can better get some of the students actively engaged, what I call sort of institutionalize the process, that if I’m not here that it will go on, hopefully, smoothly. I think that’s our big, next challenge in terms of the Health Department working with the University.

DT: Have you noticed any changes in the graduate program since you were a student and, now, as a faculty member?

ML: A hundred years ago to today?

DT: [chuckles] In like a couple of sentences.

ML: I meant the time.

DT: Oh! I know; I know.

ML: Yes, a significant change. I think the updating of the courses in particular, the broad spectrum of courses, the broader set of students from different backgrounds that are
there. It used to be very technical in their view. I was odd. It was either a physician and a public health practitioner and then these foreign technical people who were the students.

[chuckles]

ML: Now, it’s a nice broad spectrum of students from all over the world, which is better. The courses themselves, I think, are stronger. The curriculum, though … the challenge is it needs to be more dynamic than it is. Curriculum is just changing a lot and the applied arena here, the tension between the pure informatics, what’s really core and required, to what does the workforce need. Then, I think the other good thing is the links to other programs. Nursing has some good programs. The School of Public Health has some good programs. The IT group on their databases and other things has some good programs. So the offerings, which really weren’t there much when I was there, are now much broader and better integrated into a program for students. I think the challenge of the online, which is a double-edge sword, is good for adult students, but you lose the core part of what informatics is, the relationships and how to make connections and how to work with people in a small groups and big groups. That’s a real tough one now. The reality is we have to do that virtually. It’s good to do it virtually, but you lose a little bit of that. That’s not an informatics only issue. I think even offering the course at all… The seminar has been a major step forward to get it integrated across the Academic Health Center to make it web-enabled. That’s a huge step forward, because now I can advertize it to a broader audience here to participate that would never go to the University but they will listen to a webinar on various topics. Those are some of the areas of change, at least on the education. There are probably some on the research, as well, perhaps.

DT: Do you have anything else that you would comment on?

ML: Along those same lines in terms of change, there remains the interest in working on research. I’m not sure we’re doing it anymore together. One of the future items will be to really look is there a shared research agenda. How do we create and establish such a thing? How do we get more informal as opposed to big formal interactions going on, I think is a challenge. I would say probably the most we’ve done with research recently is to link it to the education piece, so being rigorous enough with the practicums that they can go as far as an abstract that’s publishable. That takes a lot of work on both sides to get there, but we’ve been successful the last couple of projects.

DT: Great.

ML: Are there other questions that you have?

DT: No. We’ve covered a great deal of ground.

ML: What did we miss?
DT: Let’s see if we’ve missed anything.

[pause]

ML: Let’s go down our list.

Just a word about… Much of our e-health work is external facing, so it’s people that are facing with the Department. So we work at coordinating the community. More recently, we’ve done small projects within the Department: an informatics review of the Readiness for Health Information Exchange and a Name-Based Surveillance system—nice long names; sounds academic, right? —and the study of about twenty-two databases and are they ready to do electronic exchange. And they’re not. That would be a project that we did. We’re being asked now to give more of an informatics consultation to some of the forty different programs in the Department that collect data from the same hospitals and clinics. We’ve been offering some advice. That’s a big and new area that’s emerging.

And I don’t know…I’m sure there will be tons.

DT: [chuckles]

ML: I owe you, so far, the ten-year fact sheet and the e-health initiative fact sheet. Is there anything else?

DT: Then, if I can take the copy of your CV [curriculum vitae] that would be great.

ML: Oh, sure. I’ll get it to you electronically.

DT: That would be great. Excellent.

Then, anything that you think of that you can add to the transcript when I send it to you…

ML: Take these slides.

DT: Oh, yes, that would be great. Fantastic.

ML: How big do you want this?

DT: [chuckles] The more the merrier.

ML: Oh, really? Okay. This is a historical documentation, right?

DT: Yes. When I send you the transcript, I’ll just have you…

ML: Edit it, I assume…an edited transcript.

DT: Well, the goal is to have it as verbatim as much as possible. But anything…
ML: This is yours.

DT: Oh, great. Excellent.

ML: Do you want this?

DT: That would be great, actually. Thank you.

ML: Anything that you insert, I’ll just ask you to use track changes with Word.

ML: Oh, sure. No problem.

DT: Then, anything that’s substantially added, I’ll use parentheses just to note that it was added after the fact. So it’s still there.

ML: Do you want me to put parentheses?

DT: Oh, I can do that.

ML: Okay. I’ll just use track change.

DT: Yes.

ML: It sounds like great documentation.

Here’s Laël Gatewood from December 2001, an agreement with Laël. We had to actually take her in through our work piece. Let’s see if I can see a statement of work anywhere. [pause] I will look for a few things like that.

DT: Great.

ML: “This work exists to provide”—we couldn’t do any contracts; we had to take it on as position, actually—“high level expert public health informatics expertise and recommendations for the computer-based system design and implementation for the Bureau of Health Protection, including a national electronic disease surveillance system, [unclear] network immunization registries and other related aspects of disease prevention and control, provide expert consultation to the division and section on issues related to electronic data interchange, including X12 and HL7, data security privacy, and other relevant national policies, and management of computer-based data and public health personnel access.”

That was for the purpose of bringing on the University expertise, in this case Laël Gatewood.

DT: That’s great. Excellent.
Well, thank you so much. This has been incredibly informative. I can already see the section in the book it’s going in.

ML: I’m trying to see if Don Connelly’s name was on the poster. He was on the team that did the survey on the poster that’s out here.

DT: Oh, great.

Well, thank you.

[End of the Interview]