American Medical Informatics Association Nursing Informatics History project

Purpose

The overall purpose of the Nursing Informatics History Project is to document and preserve the history of nursing informatics.

Copyright Statement

The contents of the AMIA Nursing Informatics History project which includes the digital images, text, audio, and video recordings may be protected by United States copyright and/or other laws. The compilation of all content on this Web site is the property of AMIA and is protected under U.S. copyright laws.   The materials on this Web site are made available for use in research, teaching, and private study, but may not be used for any commercial purpose. For these non-commercial purposes only, you may reproduce a single copy (print or download) of materials from this Web site without prior permission. Usage of some items may also be subject to additional restrictions imposed by the copyright owner and/or the repository. Thus transmission or reproduction of more than a single research or teaching copy or a protected item requires the permission of the copyright owner. Please contact the collection holding repository for available information regarding copyright status of a particular digital image, text, audio or video recording. Unauthorized use of the Web site content may violate copyright and other laws, and is prohibited.

The nature of historical archival and manuscript collections often makes it difficult to determine the copyright status of an item. Whenever possible, the AMIA NI History project and the collection holding repository provide available information about copyright owners and other restrictions in the catalog records, collection finding aids, and other metadata associated with digital images, texts, audio and video recordings. AMIA is providing this information as a service to aid users in determining the copyright status of an item. Ultimately, it is the user's responsibility to use an item according to the applicable laws and terms governing its use. AMIA is eager to hear from any copyright owners who are not properly identified.

Conditions of Use

By their use of these digital images, texts, audio and video recordings, users agree to follow these conditions of use:

- for purposes of research, teaching and private study, users may reproduce (print or download) in accordance with fair use materials or link to materials from this Web site without prior permission, on the condition they give proper credit
- materials may not be used for any commercial purpose without prior written permission from AMIA and any other copyright owner
- materials may not be re-published in print or electronic form without prior written permission from AMIA and any other copyright owner
- materials may not be mounted on an additional server for public use, or for use by a set of subscribers

AMIA   4915 St. Elmo Avenue, Suite 401 Bethesda, MD 20814

Susan Newbold

Susan Newbold: Susan Newbold, MS, RN, BC, FAAN, FHIMSS.

Interviewer: And very soon you'll have your PhD…

Susan Newbold: I don't want to jinx it by saying it out loud.

Interviewer: Okay.

Susan Newbold: But Dr. Barbara Covington's on my committee, to help me get my Ph.D. shortly. So I hope by the time this is edited I will be able to add the Ph.D.

Interviewer: So let's talk about just overall, your career in nursing. Talk about your career and how did that lead up to getting involved in informatics?

Susan Newbold: My career… I was a great bedside nurse, and I wanted to… so because I was a great beside nurse, they made me into a head nurse. But I wanted to get back to the patient. After a couple years of being a head nurse, I decide to go to school and get my master's degree in med surge clinical nurse specialty. So I came to the University of Maryland, and at the University of Maryland is where I heard about computer nursing. This was before the term 'nursing informatics' was used. So I was actually in a course, an organizational behavior course, we could have done a group project on anything. It could have been how to make jellybeans, but my project happened to be computers in nursing.

It started out with six people, and due to attrition in the course, not the topic, I'm sure, it ended up only being two of us talking about computers and nursing. Coincidentally, at that time, the IBM personal computers came out, the first computer came off the line, and I got one of the first of them. And so for my project, computers in nursing, I did my

AMIA   4915 St. Elmo Avenue, Suite 401 Bethesda, MD 20814

outlines using a computer, and printing it out on a printer. So I was excited, I had word processing at my fingertips.

I got interested in the topic because my husband, in his government job, was involved in computers, but I didn't know anything about computers at the time. And so I thought in order to understand a little bit more about what he was dealing with, I would take this, do this topic, computers and nursing, and I got very involved in it. I was working at the time, as a nursing supervisor, at St. Agnes Hospital in Baltimore, Maryland, and I went around the hospital taking pictures of computer systems, with permission, of course. So I was taking pictures, and the information technology people, which then were known as data processing, came and stopped me and said, 'No, Susan, that's an air-conditioner you're taking a picture of. Those are the computers over there.'

Well, they noticed me around the hospital. I went to Admissions and took pictures there, the admissions officer called Data Processing and said, 'What is this woman doing here?' And so data processing people started knowing me, and at the time, because I could spell 'computer,' because I was known to the hospital, I was a manager, I was a teacher, they put me in charge of being a liaison between the computer people and the clinical people for the purpose of implementing the IBM Patient Care System.

So that was about 1982 that I started with a real full-time job, and I was known as the 'Computer Nurse.' We didn't… we were not Informatics Nurses at that time. I was the Computer Nurse at St. Agnes Hospital in Baltimore.

Because of that opportunity, there were… well, at that time there were no educational opportunities available for nurses working with computers. So I was… I had the great privilege of going to Duke University, where this IBM Patient Care System was co-developed, and there were a group in about 1983 of 50 nurses who all worked with the IBM Patient Care System, or similar systems, in their hospital, and we got together and we taught each other. That was a marvelous experience, that was how I met people who I

consider pioneers, such as Ruby Borden, Linda Edmonds, some of the early nurses that worked with computers, and they taught me, and we taught each other.

Because there were so few people out there at the time, we had to network with each other. We had to get each other's phone numbers. This was before e-mail, external e-mail, so we really couldn't communicate with each other that way. And so we communicated by phone or letter, and helped each other through the process of implementing a computer system.

Interviewer: I want to get to when you said you were a Computer Nurse at St. Agnes. So in your early days as the Computer Nurse, what did you do with the computers? What did a Computer Nurse look like? Kind of what years were that, and what did you do?

Susan Newbold: This was about 1981 to 1983 that I was the Computer Nurse at St. Agnes Hospital. And we really didn't know what the job was, because there was no one at our organization to model… on which to model our role, so that's why we had to call upon other colleagues that worked in area hospitals that had that system or similar systems. And about that time is when I contacted, or perhaps she contacted me, my colleague, P.J. Halberg, who worked at a local hospital, at a Washington D.C. hospital, contacted me, and we met with several other nurses, Susan McDermott was one of them, helping each other get through this process. What did it mean to be a Computer Nurse?

Now, at that time we were all implementing order entry and result reporting. And, by the way, we were told that was a nursing system. After that time, I disagreed. It really didn't touch nursing, but we were told that was a computer system. So I helped teach nurses about the upcoming computer system. We had to… I felt like I was almost warning people, 'The computer system is coming, it's going to change our job, it's going to change our roles, it's going to change how we're doing business.' And I had to be the cheerleader. So, in essence, anyone who had that role of computer system liaison had to be a cheerleader to say, 'Well, there may be some negative parts about the system, but

AMIA   4915 St. Elmo Avenue, Suite 401 Bethesda, MD 20814

we're going to implement it and it's going to help patient care, and orders are going to get through faster, we're going to get results faster.'

So our focus was on teaching. I also had a big role in development, because the system, as we got it, as many systems at the time, was really a shell. And we had to develop it to meet the needs of our hospital. So in doing that, I had to understand the work processes of the people in the hospital. [clear throat] Excuse me. So we'd gather together, these representatives…

Interviewer: Let's take a… drink of water, yeah… What I want to get at is, because I'm thinking of like young nurses who are just getting into it, like in the early days…

Susan Newbold: Not us oldies.

Interviewer: Yeah. So, you know, a Computer Nurse… so they were using computers—what?—in the hospital for just keeping track of admissions, keeping track of billing. On the actual patient floor, how were computers, when you first got into it, how war computers used on the actual floor?

Susan Newbold: When I first was involved in computer nursing, there were no computers on the patient floors. The only computers in the organization were those in laboratory, those in the admission office, and those in billing. And we, really, as nurses, did not have much to do with those computer systems.

So the computer system that I helped to develop and implement and teach were not available to the nurses at St. Agnes until about 1982. So I recall, for example, one of the first floors that we implemented, we made a big deal and had big announcements, and had a birth announcement about the birth of our new computer system. And it was a big change for the organization; it was a big change for nurses, because we never touched computers before. This was in the era before the graphical user interfaces, so we did not

Dr. Susan Newbold   Nursing Informatics Pioneer Interview   Page **5** of **24**

have pretty graphics, we did not have pretty colors, we did not have the mouse to deal with. It was a light pen-driven system, so that was our implement, our instrument, in order to select the patient, to select the order, to order the test, to get back the result, to review the result. So those are the kinds of things that the nurses looked at, eventually. But I was involved right from the beginning, and I'm glad I was. I was glad that I was able to see the change from pre-computer now to automated systems.

Interviewer: So what was the climate? What was the reaction when you were the Computer Nurse, and you were the one that's saying, 'Look, this is coming?' What was that like?

Susan Newbold: Early on, as probably now, there was a lot of fear. People did not have computers in their home, people did not understand computers. This was before the use of ATM's. This was before the use of using a credit card for… to purchase gasoline. So nurses, as a whole, were not familiar with using computers. We probably didn't use it at home for word processing, we weren't required to use it in school for papers, so we just had no interaction with computers. I think there was a lot of fear, there was fear that nurses would lose their job because of computers. That has not happened in the 24 years I've been involved in health care and informatics.

Interviewer: Was there any moment where you really kind of got, you know, like 'Whoa! Tike this could be valuable, this could be…?' Talk about your understanding of the value of information and nursing.

Susan Newbold: When I worked at the hospital in Baltimore, I was an evening part-time nursing supervisor, so I was in administration, and I heard that this thing, this computer system, was coming to our hospital. And I thought, how would it affect nurses? How would it affect patients? How would it affect us as we give our care?

And so at that point, I felt I had to be involved, because if I, as a nursing supervisor, had just heard about the implementation, the coming of this computer system, I had to be

there to protect the patients and to protect the nurses, and be a liaison, and kind of run interference, and think, 'Is this a good thing or is it a bad thing?' Because technology can be a friend or a foe, and I think it's up to us as nurses to analyze and evaluate technology, and see if it really is helping us do our job better, helping us with patient care, helping the patients get the care that they need. So I felt that I had to be there to defend nurses and patients.

Interviewer: Was there a moment when you said this is a good thing? I mean, what was their, you know… or did that just kind of evolve?

Susan Newbold: I… let's see. That's a good question. It really just evolved, because early on, the applications we had were more to service the organization and really not to help nurses. And I think when I finally started to see applications that helped nurses, such as staffing and scheduling and acuity, nursing documentation, charting, being able to chart our assessments, that's when I really saw that computer systems were helping nursing, and therefore helping patients.

Interviewer: When you became a Computer Nurse, was there a time when you said, oh, I am a Nurse Informaticist? Was there anything that you remember about that transition?

Susan Newbold: It evolved so gradually from being a Computer Nurse to an Informatics Nurse that I can't really tell you. But the informatics term was probably invented somewhere around the early 80's. Some people attribute it to the French word 'informatique.' It was really adopted into nursing also in the early 80's by Dr. Scholls from England, and she talked about… and Barry… along with Barry Barber… talked about Informatics Nurses. So it was the early 80's that we started to use that term. It wasn't until the 90's, though, that in the United States we were recognized as a discipline. So it was the early 90's we were recognized as a discipline with a distinct body of knowledge, a distinct but small body of research. So it probably evolved in the early 90's that I finally started calling myself an Informatics Nurse or an Informatics Nurse Specialist.

Interviewer: So in the course of your career as a Nurse Informaticist, has there been any guiding like philosophy vision, passion… I mean, what sort of… is there anything that you sort of weave your work through? What matters to you in this field?

Susan Newbold: There's a couple things that matter to me, and one is change. Change is an underlying theme. We can't implement any computer system, large or small, in any department without considering the impact of change on the person, and the impact of change on the organization. So change is a big underlying theme.

Many systems fail. Now, when I first got involved in nursing informatics, I asked in my interview if the job was going to last more than two years, because I thought you implemented the system, and then you went off and did another job. But I'm finding out, no, the system's always changing, evolving, getting better. I think they are getting better. I really can see that within 10 years or maybe nine years now, we will all have an electronic health record, because technology is changing. We're finally thinking about standards, developing standards. So change is a big underlying theme.

Another [clear throat]… another thing I'd like to talk about is my bias that every nurse has a role in informatics. It's not just left up to a key person at the organization, a key person in the hospital, a couple people that work in the nursing school. Informatics is something that every single nurse needs to know about and learn about, and use in his or her practice.

Interviewer: Talk about the evolution of nursing information, nursing informatics. How has it evolved? Has it come from the point where, okay, there's a couple Computer Nurses to where, oh, it's like… so just talk about where the specialty has come.

Susan Newbold: I have been involved in nursing informatics since the early 80's, when there were indeed a handful of nurses that met probably at SCAMC, Symposium for Computer Applications

in Medical Care. And I can recall names of people that were there, people like Jean Arnold, Roy Simpson, Virginia Saba, Harriett Werley, Dr. Ball, who's not a nurse but a wonderful friend of nursing, and others… I'm sorry if I forget other names right now… Ritz Zielstorff, these people were guiding lights for me, that were involved in nursing informatics, although it wasn't called that at the time. They were involved in computers.

So we gathered once a year at this session, usually in Washington D.C., and talked about the issues, and helped each other, and supported each other. Out of this group came… out of SCAMC, we did… some of us in the local Washington D.C. area decided that we needed to meet more often, we needed to talk to each other more often, we needed to have a sounding board for ideas. So what was created out of that was a group, which was known as, actually, Rounders. We… well, we had names in the past, But it was a group of nurses from Washington D.C. …

Interviewer: Hold on a second. Let's pick up from the group that formed.

Susan Newbold: Okay. There was a local group that formed out of SCAMC, with nurses from Virginia, Washington D.C., and Maryland, and we started meeting more frequently. This group had a name. It was long. It was like MIS Nursing Round Table, and then we shortened it to Rounders. And then we found that probably we had some negative connotations, especially in Texas, for some reason, so we actually got the name of CARING, which originally stood for Capital Area Roundtable and Informatics in Nursing. So this little group of a few people back in the early 80's has now involved, evolved to a group of over 900 individuals with 16 countries, and probably, today, I have another country added to this list of 49 states—I'm going to work on that 50th state. But this group has evolved for networking purposes, we can contact each other through electronic mail, we have an electronic mail list, where nurses, one nurse [...unintelligible...] may be on bar coding or computerized provider order entry or something, one nurse will throw out a question, and then others will answer that question, either publicly or privately. So it's a great way of sharing information.

And we also have a newsletter, we have conferences periodically, so it's a group that's evolved in order to network and support each other.

Interviewer: In your role in starting the organization, and do you see that as one of your biggest kind of contributions? Talk about that.

Susan Newbold: I think one of my contributions to the… I know one of my contributions to the field of nursing informatics has been in the area of networking and organization. One of my idols, Roy Simpson, has deemed me the queen of networking, and that is a very big honor coming from him, because he's the king of networking, I think, but bringing people together to support the mission of implementing and furthering health care informatics is really something I think I do well. I have been involved in several organizations. CARING is one that I co-started way back when. I also currently am on the National League for Nursing Council, Advisory Council on Educational Technology, so I have a role in that. I'll be president next year. So I think networking and organization is probably my forte.

Interviewer: The field of nursing informatics, the collaboration, is that like unusual among other nursing organizations? Is there something unique about nursing informatics and the atmosphere, the collaborative atmosphere?

Susan Newbold: I think one of the unique aspects of nurses collaborating in informatics now is the fact that we have…

Interviewer: I'm going to hold on…so once again, what's unique?

Susan Newbold: One of the unique aspects of being an Informatics Nurse is we have tools that we can use in which to communicate. So electronic mail has been a Godsend, so we can communicate, not with people in our own community, but with people in other states, and

Dr. Susan Newbold   Nursing Informatics Pioneer Interview   Page **10** of **24**

with people in other parts of the world. So I think that has been a huge asset to the field of nursing informatics. Other nurses, of course, are now taking advantage of that technology, but I think it's partly us that are introducing other nurses, and patients to that technology as well.

Interviewer: What do you see as some of the significant events that have really, sort of been hallmarks of the evolution of this specialty?

Susan Newbold: Nursing informatics has evolved because of parallel evolution in computer technology and information management. So we wouldn't be as far ahead as we are, if we didn't have the personal computer. We wouldn't be as far if we didn't have the Internet, and laptops, and word processing, and wireless technology. So some of our evolution in nursing informatics has been because of technology evolution.

Interviewer: Go back to some of the people that you've collaborated with, or you've worked with. Who… you mentioned their names, but what do you think their contributions, when you talked about, you know, you talked about Jean and you talked about… I think you talked about Marian… and Roy Simpson. What did they contribute to the field?

Susan Newbold: Some of the early pioneers in nursing informatics focused on the nursing minimum dataset. So that was people like Dr. Harriett Werley, and even though she's not with us now, I can still feel her and hear her standing behind me, saying, 'Nursing, minimum dataset.' And people that worked with her early on, and I'm sorry if I missed people, I apologize for that, but that's… people like Roy Simpson was involved early on, Ruby Borden from Duke University was involved in nursing minimum datasets early on. So they're some of the pioneers.

                      Again, I don't want to miss anyone, because I can think of about 25 people that were instrumental in helping my career, and helping lead the way for me. But there are wonderful people, like Dr. Marian Ball, who is not a nurse, but a great friend of nursing.

She's really an honorary nurse. She's been recognized as that, as being a member of the Sigma Theta Chi International Honorary Society of Nursing. She's a member for the National League for Nursing, and she has helped guide the way. She and Dr. Kathryn Hannah from Canada have written one of the first books on nursing informatics. I have been very privileged to work with both Dr. Ball and Hannah in co-editing a couple editions of *Nursing Informatics, Where Caring and Technology Meet.* That has international impact. For example, the book has been translated into Korean, Japanese and currently being translated into Chinese.

Interviewer: I liked that anecdote, when you said you could remember her over your shoulder. Are there any other memories like early on, when you were tackling issues or tackling problems, any personal anecdotes that you think back and go, 'Boy, that was really exciting,' or that was, you know, that you were personally touched or personally enthused by what was going on?

Susan Newbold: I recall in the early 80's, when I was working at St. Agnes in Baltimore, I was trying to figure out how many terminals were needed per nursing station. And I figured that I probably wasn't the only one in the world that had to determine this number, that somebody else would know. So I thought, 'What are my resources?' This was the days before e-mail. I couldn't just e-mail my colleagues and ask them. So I called up on the telephone, after getting permission to make a long-distance phone call from the hospital, I called up Dr. Gary Hales, who was then… he was the founding editor of what is now known as *Computers, Informatics, and Nursing.* And this was about 22 years ago that he actually founded the journal. He is another friend of nursing, not a nurse, was a researcher-statistician, but a great friend of nursing. So I called him and said, 'How many terminals per a nursing unit?' Well, he didn't know, but he said, 'I'm coming to Baltimore and I'd like to meet you.' So I said, 'Oh, this is great. I get to meet the great Gary Hales.'

So he came, we had an appointment to meet in Little Italy, in Baltimore, and then all of a sudden I got nervous. 'Ooh, I'm meeting this gentleman, and I don't even know him.' So I brought along a friend, who was not even an Informatics Nurse, but she was a nurse, and a person that could help, you know, defend me if there were any problems. We could run away together, or whatever. But it turns out; Gary Hales was one of the most wonderful gentlemen that I know. He was a great friend of nursing informatics. He had the vision to start this journal when none of us nurses did. It started from a little newsletter, I think it was a blue newsletter to begin with, it changed to the yellow newsletter, and I was privileged to have my first article published then in the yellow newsletter. Now it's a fully, indexed journal that comes out frequently, and is well read, is a refereed journal. So that was my experience in meeting Gary Hales.

Now, he had a little unusual feature, and that is he liked rabbits. So he would carry stuffed rabbits with him in his suitcase.

Interviewer: Let's talk about, where do you think nursing informatics is going to go?

Susan Newbold: Nursing informatics has evolved for as long as I've been in nursing informatics, which is almost 25 years now. So it has evolved. I can see it still will be evolving.

As I mentioned, it's my bias that every nurse be involved in nursing informatics, so in a way it would be nice to do away with the role of Informatics Nurse, because every nurse should know about data, to information, to knowledge. It's not going to happen for a long time, because we need Informatics Nurses to take us into the future, the goal, one… immediate goal being an electronic health record for all individuals in the United States.

Interviewer: And what particular role do nurses play? There's doctors… there's medical informatics, and there's nursing informatics. Why nursing informatics? What do they bring? What do nurses bring to the party?

Susan Newbold: Nurses bring to the informatics party the ability to describe the observations about the patient, so the nurses are the ones that actually touch and feel the patients 24 hours a day, and it's up to us to describe our observations, and then be able to document those observations. So once we document observations on an individual, and aggregate that information, then we can start doing things like compare across nursing units, compare across hospitals, compare across states, and see how care differs that's given by certain nurses.

Interviewer: Lessons that you've learned, that you'd like to pass on?

Susan Newbold: Lessons learned in nursing informatics. You can't do it alone. You need buddies, you need your colleagues, you need other nursing informatics professionals to help you do your job. And there is a great collegial relationship among Informatics Nurses. Many Informatics Nurses have started from on-the-job training, and it's wonderful to see the growth of education, traditional educational programs in nursing informatics. It's only growing. Now, I hope that all the classes are filled with nurses who want to and need to know about… more about informatics. I really think that informatics should be a required course in all nursing schools. Even more than that, it should be integrated into every single course, and I think we're working toward that, but that's one area where we're really going to evolve.

I'd like to see the day where when a nursing student orders his or her stethoscope, they also order a laptop and a PDA equipped with reference material.

Interviewer: It should be standard gear at some point in time, I would think.

Susan Newbold: I think it should.

AMIA   4915 St. Elmo Avenue, Suite 401 Bethesda, MD 20814

Interviewer: So I know at the conference you're going to be talking about technology's role in addressing Maryland's nursing shortage. Let's talk about that as part of the scope of nursing informatics, and being able to serve nurses and serve patients, talk about that.

Susan Newbold: I have to admit that in all my years of dealing with nursing informatics, I never really thought about nursing informatics and the nursing shortage. And what made me think about that is a couple years ago in Maryland, there was a bill sponsored by a Senator Teitelbaum, to appoint… have a committee appointed to investigate technology and the nursing shortage. And because it had the words 'technology' in it, I thought that I should be involved. So I got myself appointed to this committee to investigate how technology can help the nursing shortage.

                      Now, originally when I got on the committee I heard, 'Oh, robots and PDA's were going to solve the problem.' So then I started to think, 'Were the robots going to be using the PDA's? ' I'm not sure about that.

                      Okay, so Dr. Maria Koszalka of Johns Hopkins Bayview was chair of this committee, and after a few meeting she invited me to co-chair. I should step back and say that the committee was created because there is a commission on the shortage of nurses in Maryland. There's a shortage everywhere, we know that, we just happen to have one in Maryland. There's a commission on the shortage of nurses. And a subcommittee out of this was created because Dr. Maria Koszalka from Johns Hopkins Bayview decided that technology would be one of the ways to help solve the nursing shortage. So she had the vision to create the committee. I was able to get on it, and we decided what…you know, what can we do in Maryland?

                      One of the first things we needed to capture was what were nurses actually using technology for in Maryland? So we had to define technology, and we decided it was not the global definition of technology, which would be like drugs devices procedures,

AMIA   4915 St. Elmo Avenue, Suite 401 Bethesda, MD 20814

organizational arrangements, we just wanted to look at information management, and information technology, and how that helped or hurt nurses in Maryland.

So we did a grassroots survey, and called a bunch of people, telephone people, talked to as many people in the 50 hospitals in Maryland as possible. We e-mailed as many people as we could, and we said, what technology are you using that's been helpful in your practice? We tried to capture case studies of helpful technology in all arenas, not just hospitals, but nursing homes, long-term care facilities, community health, education. And what we came up with was some 27 case studies on how technology can help the shortage.

So we looked at things like online bidding for shifts, which we didn't have any examples at the time in Maryland, so we went to another state and found how that technology was helping bond the nurse to the organization. It reduced the need for agency nurses, for example.

So the reason we gathered these case studies was we wanted to share those with other nurses in Maryland. We put them together in a document that was published in 2004. It was also published on the Web. So it's available to any nurse in Maryland, and nurses outside of Maryland, as well.

Also, we decided that we would do a more scientific survey, and now we have a survey that's underway, looking at a random sample of nurses in Maryland. This is a survey that, where Dr. Barbara Covington is the principal investigator, along with Dr. Maria Koszalka and they're looking at technology in Maryland, and how it can help the shortage. So we'll have the results of that survey soon, I hope, and can disseminate it, because it's not just a Maryland issue.

I had a nurse contact me from Dublin, Ireland, who said that the issues that we discussed in this report are the same issues that they have in Ireland. So what we presented in the

report was not only these 27 case studies, but we looked at some recommendations. And recommendations include things like educating all nurses in nursing informatics, not just Informatics Nurses. We also looked at sponsoring the idea that someone should have a recognition for innovative use of technology, and we're soon to announce that we... that there is a partner that will have an award for nurses or a group of nurses that are using technology in an innovative way.

So we're very excited about the report. We've actually won an award from the American Academy of Nursing. It happened to be an honorable mention award, but when I found out we lost to Johnson & Johnson with all their marketing dollars, then I wasn't too disappointed.

Interviewer: What's your definition of nursing informatics? How do you define it?

Susan Newbold: When I think about nursing informatics, I use points from several definitions—there's accepted definitions, and there's worldwide definitions. I think about data, to information, to knowledge. So I think about data, the raw facts, and our job is to put them together in meaningful ways to make information.

Now, the next step would be to put that information together in such a way that we can create nursing knowledge. I think right now, I know right now we're stuck between the data and the information. We're still at the point where we're trying to figure out how to put the data into an automated system in a way where the data is accurate and timely, we can trust the data. I never checked my paycheck until I worked in an information technology-type role.

Interviewer: Most frustrating? Talk about one of the most frustrating and most enjoyable. But first what's the most frustrating aspect of working in this field, of being an Informatics Nurse?

Susan Newbold: Outside of people who use the word 'Nurse Informaticist?'

Interviewer: Yeah. Sorry.

Susan Newbold: That's okay. No, actually, one frustrating thing for me is the fact that we have probably over a hundred titles for nurses in this field. Now, we have different roles, we definitely have different roles. Some people implement systems, other people teach systems, other people are marketing, in a marketing-type role for systems. So we do have different hats and different jobs within nursing informatics. But it is a little bit frustrating that we can't define a little bit better who we are. I collect Informatics Nurses for a hobby, and so I've seen probably 5,000 titles of Informatics Nurses, and that's how I know there are over 100 titles.

                        So how can we describe to the outside world? How can we describe to the Department of Labor, so we get a labor code who we are, if we haven't figured out yet within our discipline? So that's a little bit frustrating to me, but I see that's an area where we can evolve and grow.

Interviewer: What do you enjoy the most about it?

Susan Newbold: What do I enjoy about nursing informatics? I enjoy the networking. I enjoy the people contact. I enjoy having a positive impact on patient care. I enjoy having an influence that is more than if I was still at St. Agnes Hospital in Baltimore at the bedside of a few patients. Even though I was a big shot nursing supervisor evening shift, I now have more influence over the people who give the care and the patients who get the care than I ever have before. And it's a positive influence, too, so that's my greatest joy.

Interviewer: Do you have advice to anybody who's thinking about jumping into this field?

Susan Newbold: A nurse who wants to jump in the field of informatics first should read my 'Frequently Asked Questions' on my web page, because that's why I put it out there, for the many,

many nurses who say, 'Gee, I like computers. I would like to be an Informatics Nurse.' And I tell them it's more than just computers. In fact, information, informatics nursing really doesn't even have to deal with computers, computers help us do our job as a tool, but it's more than that, it's managing the information, taking it from the data to the information to knowledge. So what I would say to a new nurse wanting to get into informatics is that, first, they need clinical experience. They need to know something about a health care environment, whether it be a hospital or a long-term care facility, or community health, but they need to have several years of experience in nursing before they can go into informatics.

And then now we have so many education programs that are available, either in person or online, that it's really a good idea to start looking at traditional training in informatics.

Interviewer: Do the majority of nurses get the connection between informatics and the patient?

Susan Newbold: Nurses don't get it yet. I think we're still… people who are Informatics Nurses are still seen as 'the Computer Nurse,' 'the nurse geek.' 'Ask the one who knows about the computers,' 'oh, I don't know anything about that, ask Susan,' kind of thing.

So I don't think nurses get it yet, that each nurse needs to be involved informatics in some way, shape or form.

Interviewer: I'm assuming the field is out of its infancy. Would you say it's just in its adolescence? Where would you put it as far as its maturity?

Susan Newbold: Teenage years. I think that informatics nursing… informatics nursing as a profession is still in the teenage years. We're growing, we still have… I don't have children, so I'm making this up… but we're growing, our hormones are growing wild, we still have acne, we're trying to learn how to behave appropriately. I think we're in the teenage phase.

Interviewer: When you first got involved in this field, when Jean talked about some of the resistance she had… she was more a teacher, and… did you come up against much resistance when you first got into this?

Susan Newbold: I didn't feel… speaking of resistance, I didn't feel personal resistance. I think I felt resistance to change, resistance to people using computers, but I never felt a personal resistance, I think, because I always try to be a cheerleader for the profession, and point out the good ways that technology can help us to improve patient care. When I was in my master's program, I even did my thesis on *Attitudes of Nurses towards Computers*, so I was very interested in it then.

                    But we're at the point now where we can't really pay attention… we have to pay attention to the attitudes, but we don't have a choice. We have to use a computer system. So we can't ask people what their attitudes are with the idea of saying, 'Well, if your attitude is bad you don't have to use the computer system,' because we all have to learn how to integrate technology to make patient care better, to make our work easier, more efficient.

Interviewer: Let's talk about board certification.

Susan Newbold: Nurses can now be certified in nursing informatics, and that is a discriminator, so if someone is hiring a nurse to be an Informatics Nurse at the organization, they would look at credentials. 'Do you have education in nursing informatics or health care informatics?' And then another discriminator is whether or not one is certified. The certification that is available is from the American Nurses Credentialing Center, a subsidiary of the American Nurses Association.

                    Now, when this certification was started in about 1991, there were really no courses available. So several of us got together to help each other pass the certification exam. What actually evolved out of that is the weekend version in nursing informatics. So that

was originally started with eight people, each doing the eight topics, general topics of the nursing informatics examination. And by doing, I meant teaching that aspect. So it was things like professional practice trends and issues, computer technology, information management, and database management, usability, human factors in usability, so those were some of the topics.

And then after this first event that was sponsored by CARING, the Capital Area Roundtable and Informatics in Nursing, we were asked to take it on the road. And so three of us that were part of the original team, developed the weekend immersion in nursing informatics, and had a roving, roaming educational session. That's been very, very popular. It's probably… there's been 60 of these events now in the 10 years that these events have taken place. So it's been a very popular way for an Informatics Nurse, who may not have traditional education to get some basic grounding in information systems.

Interviewer: But certification, because that seems like that's a key thing in the history of the specialty. How did that come about? Were there just some people who said, 'Hey, wait a minute, we need to get board certified here. We need to get…?' What was the genesis of that happening?

Susan Newbold: Well, through the American Nurses Association and the subsidiary, ANCC, the American Nurses Credentialing Center, they have a model for certification, and, first, when the… when the discipline becomes… when it becomes a discipline, so when nursing informatics became a discipline, one of the things we had to do was have a *Scope and Standards of Nursing Informatics* created. And now it's in its second edition, and I think people are now working on the third edition of the *Scope and Standards of Nursing Informatics*. So we have a baseline, what every Informatics Nurse needs to know kind of thing. Out of that came the idea that we needed this recognition, because we had a discipline we could be recognized as having achieved a certain level of knowledge about informatics, so that's how it came about.

Interviewer: Who was involved in that?

Susan Newbold: I'm probably not the best person to ask this question of, but the people that were involved in early certification of nursing informatics included people like Dr. Milholland, Jean Arnold… thank you for the prompt… yeah, okay. Was she? Okay, anyway. Let me start again.

                    The people that were involved… some of the people that were involved in certification efforts, early certification efforts, were people like Dr. Kathleen Hunter, Dr. Milholland Hunter, she was working at the American Nurses Association, and helped gather people to write the original scope and standards of nursing practice. Dr. Carol Bickford was one of the people that wrote this early document and… think back on who the other people were.

Interviewer: That's fine. Did the ANA go, 'Oh, this is a discipline,' or did they go to the ANA and the credentialing thing, 'Hey, look at us, you know, we're…'?

Susan Newbold: I don't really know the answer to that. Probably hand in hand.

Interviewer: Talk about the WINI's.

Susan Newbold: The Weekend Emersion in Nursing Informatics was started in 1995, and probably 2,000 nurses have taken this course over the last 10 years. Now, our excuse for getting together is the content hours and the content of the areas that I briefly described. But a real reason to get together is to network with each other, to learn from each other, have contacts for the future.

                    When the WINI's were created we put in a lot of time… we have a lot of breaks, and the breaks are for networking purposes. The breaks are you… so you can sit together and

learn from colleagues. We also have a rule that every day you have to sit by a different person. So even if you come with someone from your organization, you need to move so you can network with someone else. So part of the it's forced networking, part of the plan of the past WINI's has been to get together to groups to do little mini problem-solving. And it may be some issue that's not relevant to your organization at the time, but it may be something that you'll be facing in the future, so perhaps the participants can look back and say, 'Oh, I remember when we discussed this. Let me get together with my WINI participant list that gives me e-mails and phone numbers, and contact that person and ask them what they're doing now with bar-coding or what they're doing now with CPOE's.'

Interviewer: What has been your role in these WINI's?

Susan Newbold: I… my role in the WINI's is that I really was one of the original creators of the Weekend Emersion in Nursing Informatics. And I'm really proud of that.

Interviewer: Talk about your work with distance education.

Susan Newbold: I try to figure out what hat I wear, because I am an educator, I have been an implementer in the past, I have… am a consultant, so I have different roles—have worked for industry, worked for consulting firm, hospital, vendor in not just the U.S., but in Singapore, Australia, and New Zealand. So I have a lot of good experience.

A couple years ago, I started working with Excelsior College. One of the reasons I actually went to work with Excelsior was some of the people that I respected worked there, and advised on their developing nursing administration program that is an online program. Excelsior College has the first online program in nursing administration, and it was developed and first started in 1999. Some of the people that were on the committee to help develop this program were some of my idols in nursing informatics. So these were people like Judy Ronald, Jean Arnold, Roy Simpson, Virginia Saba, Diane Skiba,

Roy Simpson—if I didn't mention him already. And they were some of the people that I really respected in nursing informatics, so I thought, 'Well, I want to be part of that school as well.' And online teaching was a new thing, so it was a new way of utilizing technology, and I was eager to jump on that online teaching bandwagon.

So got involved in Excelsior College probably about four years ago, and now teach a course, because they have a certificate in health care informatics, a 17-credit course, and I teach the first one on Informatics in the Health Care Delivery System. Now, that's quite an interesting phenomena, because a number of these students are, first of all, new to the master's program, they're new to taking the course online, and it's quite a shock for students and also for the new teacher to teach online. I think that's one way where we can evolve in nursing informatics, and that's one vehicle we can use to teach more nurses about informatics, and that's the use of online courses, not… many nurses don't have the benefit of being able to attend school, a physical classroom because of working full-time, having kids, having a husband, whatever. So I think online learning can be a vehicle can be a vehicle where we can teach more nurses about nursing informatics.

End of Interview