

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.

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Judith J. Warren

Introduction: **Judith J. Warren, PhD, RN, FAAN, FACMI**

Judith Warren: I think I first came to AMIA like 1989, 1990, so have been hanging around now for about 15 years.

Interviewer: Was any time when you started to refer to yourself as informatics nurse or had an ah-ha moment?

Judith Warren: Uhm, 'a-ha' moments. If I think about it in terms of an informatics 'a-ha' moment, it would have to be in the early 1990's, as I was working on various projects within the hospital and also within the School of Nursing, and beginning to actually get some data about what was important to nurses, and having physicians and administrators going, 'Wow! You know, you guys do contribute something. This is not something we were aware of.'

But I think I had some nibbling ones before I knew it was informatics, where I would work with students, and we were looking at nursing diagnoses, and trying to structure that into the curriculum and things, and the student suddenly went, 'Wow! This is what it's all about. I sort of knew that's what I was doing.' And at the time, I was working with graduate students, so they had been nurses for awhile, and they were also kind of looking for, you know, 'How can I improve my practice? I need something else. You know, so I have to come back to school for the something else.'

So those would be the... kind of the informal pre 'Wow,' that I didn't know it was related to information, and then later in a more structured environment where you were looking at information, and pulling it out of some very simple computerized records.

Interviewer: What do you see as some of your accomplishments?

Judith Warren: Probably the, the most important accomplishments that I think I've contributed to the field of nursing informatics began in... probably around I would say 1994, '95, and somewhere in through there, the American Nursing Association had just reorganized some of their structure and they started a Congress of Nursing Practice. And so I was appointed to that. And within that Congress we suddenly became very overwhelmed with the things we were being asked to do, and so each one of us was asked to take on a particular project. And I wound up taking on the responsibility for making sure that we addressed things that had to do with nursing information in whatever... however that rolled out. We weren't really sure how it was going to roll out. As a result of that, when my term was over I was appointed to the Steering Committee on Databases Supporting Nursing Practice, and served on that committee for awhile, became vice chairperson of that committee, and then became chairperson. And then through some of those efforts, we really began to refine how ANA recognized nursing terminology, started placing that within looking at international standards for things like that. So we were making it more objective, more, more based on the science that was beginning to evolve around use. Through some strategic planning, we actually got the committee changed, so it no longer became a steering committee, but an actual standing committee of the board. And we changed its name to the Committee on Nursing Practice for Information Infrastructure.

With that, kind of the next piece as we started placing members of the committee in various activities around the area. And so one of the activities I picked up was to be the ANA liaison to the SNOMED editorial board. And so I began to attend those meetings. We had other activities with some of the other standards organizations, and after I finished being the ANA liaison at SNOMED, I was very surprised that SNOMED actually asked me to be a nursing consultant to their board, and so I started doing that.

And then I think the next big thing that kind of came out of that was I became very active in HL7 in developing standards because it became clear to about three of us that nobody was at HL7 making sure that the standards that they were developing could handle

nursing data. And, in fact, we found some of our data is very unique, and did make some inroads about changing that standard.

So that, that's what I think are probably the best.

And then the final contribution that I've made is actually based on the SNOMED and HL7 activity, which came out of ANA, which I was appointed by Secretary Tommy Thompson to the National Committee on Vital and Health Statistics. So one of four women out of 18 members, and the very first nurse to ever be on that committee.

So that would be the high point of how I think I've contributed.

The everyday points, I think, are connections to peers, connections to students, seeing people get turned-on and, and find out how to go through it. And those are the ones that make you feel kind of really good inside.

Interviewer: You're work with the Committee on Vital and Health Statistics, are you the only nurse on there?

Judith Warren: ...I am the only nurse on the National Committee of Vital and Health Statistics, ever.

Interviewer: Talk about that.

Judith Warren: Yeah, I think people are, are surprised. And then they realize that voice has been missing, and so the things that I bring up... the way this committee works is there's about three subcommittees with different skill sets to belong. I naturally gravitated towards standards and security. And so what people are looking at as we start really studying issues to have that the secretaries asked us to look at, I've brought a lot of perspective to that.

I think one of the biggest ones was the new Medicare Modernization Act. We were tasked with writing recommendations for standards in electronic prescribing, or e-prescribing. The law specifically says ‘physicians.’ Through my influence, we changed it to ‘prescriber.’ So we still have the ‘P’ word, but we really broadened it out, not only to include nurses who have prescriptive authority, but psychologists, other kinds of people that depending on their state laws have that authority. And so now they’re kind of put in. So it’s, it’s little pieces like that.

And, also, the opportunity to ask questions of... when we are hearing testimony or making recommendations is, is the patient’s perspective considered? Because what I would say about some of the other professions that are represented on there, they may be looking at confidentiality, but they’re looking at it from a legal perspective, or they’re looking at it from a... more of a medical or an organizational perspective. And so I bring in the individual, the patient that we’re all there for. And I think that that’s becoming more and more seen. And so as we, we brought in some... another woman that’s on there looks at quality. And so she’s now started talking about patient perspective. So that’s kind of a nice thing. I think that’s one thing nurses always bring to the table, is we really have the patients’ best interests at heart, and that’s what kind of motivates us and drives us.

Interviewer: Who are some of the people who have influenced you?

Judith Warren: Gee, the people that I’ve collaborated with that I can say have really made an impact is Sue Bakken. We found out that we could work together. We came from very different directions. We could be in various meetings, and without any kind of planning or something, almost act like a, a tag team, you know, where we could get ideas across, because we work so differently, yet have some of the same motivations, and so worked well together.

Other nurses that I've worked with that have helped my own learning and made me really push to stretch are people like Ida Androwich, Patricia Button, some of those that, you know, you're trying to an... get something done, and so that's a...

Another group that has really pushed me is the Invitational Terminology Summit, which was started by Judy Ozbolt. But before she even started it, at that time, I was at the American Nurses' Association, and so she called about, 'Can we get support for this? Does it belong at ANA? Can we do this independently?' And we decided to do this invitational think tank, got together a steering committee of people. But this is a group of about 30 nurses that meet once a year, go off and hibernate together for about two-and-a-half days, and the work of that group, I think... I think all of us would say, that's a gift we give to each other and to ourselves once a year, to go and think cutting edge thoughts, to be in an environment where we don't know what the answers are. And, so, again, it's that, that peer pressure to help you grown and stretch and start looking at things. So I would say those people probably helped me the most.

And then I've had some other people who have given me advice that I've followed and, and things like that. I... you know, it's kind of difficult to try to give a list of folks, 'cause you're worried that you're going to leave somebody out. And there are lots of somebody's. And I think that's one of the best things about nursing informatics is that we all are out there to help each other out. It's a very warm, comfortable community to, to be in, and to grow in as, as an informatician.

Interviewer: What have Sue and you done together?

Judith Warren: I guess Sue and I really started working together when she was appointed to the Steering Committee on Databases Supporting Nursing Practice at ANA. Then one of the things that we realized was happening is that was some terminology issues that were coming to the fore, and nursing had not been invited. I don't it's because it was intentional. It was just one of those things that nobody thought about us. And I can remember one meeting,

Sue and I were at the meeting, and we knew the, the gentleman that was organizing this activity. And so we just went up to him at break, and Sue stood on one side—and Sue’s very tall; the gentleman in question is short, a little bit taller than I am, but, but still... much shorter than Sue—and so we just started talking to him about, well, of course, we would participate in this activity, and everything. And he said, ‘Sure.’ So the next thing we knew, we were actually at some national forums, and actually had... were at the table speaking and representing nursing. And I don’t think anybody really realized how we got there.

We were then asked by Patti Brennan at AMIA, when, when Patti was on the board and, and was providing a lot of leadership at AMIA, to begin to put something together on nursing terminology. And so Sue took chair. I assisted her, because I was in a position at that time that I really couldn’t assume a chair responsibility. And we put together a variety of forums at AMIA to start talking about nursing terminology.

Early on at SNOMED, Sue was asked to be a consultant on their editorial board, and made the suggestion that they really needed to have an ANA liaison, and so, you know, brought me along in that. And so we started really paying attention that as we had started developing reputations, both within and outside of nursing informatics that we assumed it was our responsibility that once you got a place at the table, you find another nurse informatician, and you bring them into the table too, you know, so that we could start getting a presence. And I think that’s been a pretty good strategy. We’ve had a lot of fun over the years doing that.

Interviewer: That first meeting, when you were talking to the guy, what meeting was that?

Judith Warren: Gee, I don’t... it had to be around the late 1990’s, maybe 2000, and it was at a CPRI meeting, back when that organization was happening. So Sue and I were attending one of these meetings of CPRI, which is the Computer-Based Patient Record Institute, which is defunct now, and, you know, heard about these meetings that were going to be coming

up that were kind of co-sponsored by CPRI and some other folks, and... so we just sat there and decided we would have to talk to this gentleman. And just assumed that he had not gotten around to inviting us yet, and went on from there.

So that's, that's kind of some of the, the ways that we looked. And, and we've shared that strategy with other nurses, and so you can see people doing that.

I think the one thing that Sue and I felt very strongly about is before you could be that brazen, you really did need to have the skill set to function at where you were. And so we made very careful assurances that people knew that we really could come up and speak knowledgably, and not embarrass anybody, or embarrass ourselves, which would be worse.

Interviewer: Throughout your career have there been any core principles, guiding philosophies...?

Judith Warren: I guess because of my nursing background, I mean, and it's so strongly integrated in, in who I am, is that the things I've done I've always made sure would enhance patient care, and then after that would enhance nursing, so trying to move nursing forward. And I think after that it's trying to be a good person. I mean, to do the right thing, and not go out and advance Judy Warren. I mean, that's not something that I've been at. And, and try to bring other people, you know, with me, that we're much better off the more people we get in, in these activities, and, and things like that.

Interviewer: Are there any events in the arena that have really moved the practice ahead...?

Judith Warren: That's a tough one, because I... I'm not sure I can point to any one kind of innovation. It's been one of these... and a lot of things have just fallen into place, so if you look at nursing terminologies, most of those were developed by nurses who were not informaticians. As nurses grew in their skill in informatics, they began to realize that some of those terminologies needed to be tweaked a little bit to make them more useable

within information systems, even though that was kind of the motivation, so I would think the informatics nurses realizing that they had a role to play in terminology.

I think, also, some of their realization that we needed to design systems that supported nursing practice, that... and that was subtly different than div... designing information systems that supported data. You know, so really looking at these systems are not going do us as, as good an effort, you know, if they don't do that.

I think just some of the innovation that's come about. I mean, the, the, the innovation that's come about in computer science alone, of the different tools we have to work with, the different insights that we have.

The other thing that I've seen is, is... I mean, I can remember a time when people would... if you said you were a nurse informatician, they would look at you kind of funny. And there are still some that do that, that have... don't know what informatics is. But then when you think where the jobs are now, I think that's been the other big recognition, is hospitals are... and healthcare organizations are activity looking for nurses to help with implementing and designing information systems. The major consulting companies are desperate to hire nurses to come be consultants. Most of the major healthcare information technology vendors are now hiring nurses to help not only sell their systems, but also to help design them, and then to work as internal consultants for implementation. So I think those are, are some of the pieces.

When you look at our nursing and education activities right now, probably five years ago, no one really thought about informatics being important or relevant to our curriculum. Now we're beginning to get accreditation requirements that are demanding, you know, some sort of content being provided in our baccalaureate programs. We're working on two new innovative programs nationally now at the master's and doctoral level where informatics is kind the co... not a core piece, but it's one of the, like the top five areas that have to be covered in these programs. So I would say that's, that's a piece.

Interviewer: In the early days did people support you...?

Judith Warren: I would say the atmosphere when I first started getting interested, people would look at me like I was very strange, which is why AMIA was so important, because you could come here, and you could hang out with other people that were strange like you. And I think that's where the support was, for us to figure out 'What was nursing informatics? What did we need to do? What was the science? What were the, the skill sets that we need? What were relevant research questions? What were the kinds of things we would need to teach our students?' You know, I can think of a lot of conversations that we've had either at business meetings, or out in the hallway, or at dinner, as we were trying to share, 'You know, here's what I'm beginning to think about in informatics.' 'Here's what I'm looking at.' 'Here's what I want to share with my students.' 'How are we going to handle helping people become informaticians in the future?'

Now, when you... when you go around, especially in academia, every school wants one. They may not be sure what one is, but they do want an informatics nurse on faculty because of some of these initiatives that are coming out. And it, it's odd, in, in my own institution, we do a lot of things within information technology. And so the assumption is because I'm an informatician that I can fix any broken computer. And that's... while that may be a part of informatics, it's not a skill set that a lot of us have. In, in fact, probably, we're better at breaking the computers because we're always pushing them to do the next thing, you know, to handle more data or to do... to see what we can make the computer do. So I'm... I would say that would be, be my answer to that, about what we look like.

Interviewer: Where do you think the field is headed?

Judith Warren: I think nursing informatics is, is just... we always thought it was coming into its own, like every year it's coming into its own. At the current AMIA meeting, one of the things I'm beginning to see is that we thought it... nursing informatics was a small specialty.

I'm now beginning to see some indications that we're developing sub-specialties in informatics, and we're going to see people who are an expert in one small, tiny area. So as we learn more about terminologies, we're going to find people who are really coming into that, that really understand knowledge representation, and how to get those into databases. We're going to find other people are becoming very specialized in consumer informatics, so how do you draw patients in to using computers and information in order to manage their chronic conditions, or to stay well, or things like that. We're going to find nurses that are getting very specialized in decision support. Other nurses that are going to get very specialized in figuring out how to take research and turn that into evidence and then embed it into our systems, and that takes another set of skills. So I think that's going to be some of the things that are coming into the future.

Interviewer: What are the biggest challenges?

Judith Warren: The biggest challenges in nursing informatics? Keeping up. [laugh] There's so much new stuff happening there are times that I feel that I can't keep my skill set up. You know, I need to, you know, kind of take a break. I want to stop the world. I want to go off and learn something, and then come back where I stopped it at, because if it keeps rolling on, I'll be behind when I come back after I learn a, a new skill set. So I think that's going to be our biggest challenge.

The... and, and then there's a second challenge, and that's health policy in our country is changing so rapidly, and it's beginning to really have a strong core around health IT in an effort to improve patient safety, reduce medical errors, and things like that. And I, I think producing enough nurse informaticians to meet that need, and then to participate in some of that policymaking is going to be a huge challenge.

[change tape]

Interviewer: Any people you've been able to help along?

Dr. Judith J. Warren

Nursing Informatics Pioneer Interview

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Judith Warren: Okay. Well, let's talk first about the qualities of the next generation I see. There are times I'm very jealous of the next generation. My informatics skills came from on-the-job training, the workshops that I've gone to, the reading I've done, the trying to do things and succeeding sometimes and failing sometimes. The next generation have all these wonderful informatics programs to go to where they have activities that are structured to help them gain some of the skills that I look back and think, 'Gee, you know, how did I ever think that I would ever call myself an informatician because I don't know these things?'

People I've influenced. I get a lot of feedback from former students that things that I've taught them or conversations that we've had have helped them grow a lot. It's probably one of the reasons I continue to teach is that ability to articulate with students. One of the students that I've had in the past has gone on in to a career with one of the leading IT vendors, and has actually started working in a team that is doing some very innovative business process redesign of looking at processes within hospitals, and then modeling that, and then actually starting to create some simulate work that's doing that. And she keeps telling everybody I taught her how to do it. And, I mean, basically, what I did was point her in the right direction and stay out of her way [laugh], you know. And then encouraging her with what she was telling me that she was doing.

I think other people that that I have influenced is encouraging people to become active in committees, to become active in standards organizations. There are a couple of nurses out at UC Davis now that are very active in HL7, and probably contribute far more to that organization than I ever did. And they're doing all kinds of contributions.

I think the... trying to share the lessons that I've learned with others of how important it is to do volunteer work, to be somewhat involved in a professional organization, or even two. In the informatics world, if you're not... at least maintain an awareness of standards, but also probably participate in the development of them, because it really

pulls you out into a broader world where you begin to see how a lot of different people come together, instead of being in a very narrow focused nursing world.

So, you know, sometimes when people ask you who have you influenced, you're probably the last person to know who that is. If you were to interview other people, you know, they might bring in situations of that. In getting ready for this interview, I, I think one of the people that I've influenced in head of the project, Bonnie Westra, because I convinced her to follow me as Chair on the Committee for Nursing Information Infrastructure. And I think she's done a lot of things after that. I mean, it was a wonderful experience for me, and I think it was a wonderful experience for her, at least I hope it was a wonderful experience.

So I think... I think it's hard to tell, you know, who you've influenced, unless they actually reach a place and come back and, and tell you that, or, or they get interviewed, like this one, and will mention your name.

Interviewer: Early stories.

Judith Warren: I think one of the stories... and they were people that I enjoyed collaborating with. So stories of when we were doing fun things, but were kind of a little out of line but wound up having great impact is at one of the AMIA meetings, probably about, I would say 1998/1999, several of us were getting together, and the people that were getting together were myself, and Sue Bakken, and Ida Androwich, and Pat Button, and we were beginning to hear some of... about some of the work coming out of HL7 about using use cases to do some modeling work and stuff. And we decided we'd do nothing at all about use cases. We didn't know what they were or anything else. And we happened across a physician named Charlie Mead that was doing a lot of work with HL7, but had his own IT company, and was in the process of helping H7... HL7 switch over to using some object-oriented techniques for design. And somehow or another, we came up with this idea that we would ask Charlie to tutor us in this. And that started out about a two-year

process where about twice a year we would wind up in Washington, D.C., where Pat Button was living, and we would descend on her house for a weekend. And it was kind of a non-stop tutorial, so we would do all this reading. We would come into town like Friday evening. We would take Pat and Charlie out to dinner, since they were hosting us. And then we'd start like at 8 a.m. on Saturday, and go to about noon on Sunday with a very intensive tutorial kind of thing where we began to learn how to do use cases, how to do modeling, how to do a lot of that. And that's probably why we've continued over the years to collaborate is we were in this environment where it was perfectly safe to say dumb things, to... again, to help each other grow.

But as a result of that, we had a lot of good times, a lot of laughter, a lot of craziness came out of that. And some of the influence that nursing has had on HL7 was because Charlie learned a lot in trying to get these four women, you know, together in an environment that as very informal, trying to get us to be serious and to teach us things. And then he began to learn about how nurses view the world. And so we made a lot of contributions there.

So that's one way where you do something just a little bit different. People would ask us, 'Now, wait a minute. You've got four women and this physician, and they're meeting twice a year in these intensive weekends.' But it was one of those things, I think, that changed all of us. You know, we, we grew a lot from that.

Other fun stories would be, I guess... we would try anything. I mean, if we saw something new, it... after that experience, either any one of the four of us or other people we would work with really started asking questions. You know, not, not sitting back and waiting for permission or invitations, but going up and saying, 'You know, you this is important. I need to learn this. Would you work with me? Or, you know, can we talk on phones, or e-mails, or can I take you out to lunch, or, or whatever?' So fun stuff like that, that I think they're growths that come out of it.

Interviewer: What do you enjoy most about your career?

Judith Warren: I think what I enjoyed most about my career is when I went into nursing I thought I would always be a staff nurse. That was my first love. I started out with my husband being in the Navy, and so we moved around a lot. And because of that I got to try all kinds of new things. You know, so being in different places, and, and finding out that your nursing... your basic nursing preparation really sets you up for a lot of fun things. I have never been bored in my career. New things are coming out all the time. You begin to feel good about what you do, and that's the best thing you could have, and so I've had a ball. You know, new stuff has happened. That stuff that's interested me, I've always been able to reach out and be a part of. And, I, I would encourage anybody to, to do that. You know, don't feel that you're, you're in a rut or anything. If, if there's something happening out there, you probably do have at least the preparation for it.

And I would tell people one of the best pieces of advice I, I ever have is I was offered a job that absolutely frightened me to death, because I knew that I did not have the skills for it. And a very good friend told me, he said, 'Well, why would you take a job that you knew how to do? You know, if you knew how to do it, you'd get bored with it. You know, take one that, that always has you stretch and stuff.' And I, I think in the world of informatics there's always something out there to stretch in. It's probably also one of the reasons I have always kind of gravitated back into academia, is that it gives me that opportunity to explore new stuff. And I've always been someone who, once I've mastered something I need to go on to something else. Yeah. And so that's, that's probably the best thing. You know, it still is a real good time.

End of Interview