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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Ida Androwich

Ida Androwich:	Ida Androwich, Professor and Director, Health Systems Management Program, Loyola University, Chicago

Interviewer: Definition of Nursing Informatics?

Ida Androwich: I tend to fall back on the old definition – the combination of nursing science and information and computer science with the intention of improving the health care of the patient.

Interviewer: Your career/transition to Nursing Informatics?

Ida Androwich: My PhD is in public health. Public health relies on epidemiology and large data sets to look at patterns. I've always been interested in that aspect of it. I was starting a home care at Loyola and I wanted the documentation to reflect what the nurses were doing. At that point, I realized there was no good way to show what the nurses in the home care setting were doing. The ICD9 codes didn't do it; the DRG codes didn't do it. While the nurse might have been seeing a patient with diabetes, she was seeing him for other reasons than would be found in the codes.

I was looking for a way for the nurses to document so we could gather data about the kind of the care the nurses were actually providing so we could look for patterns and ways to improve the care. I came across the Omaha system, which was federally funded research that had been done by the VNA in Omaha and had conversations with Karen Martin. I spent a fair amount of time developing records that would reflect both the DRGs and the ICD9 codes that the patients had and then the Omaha nursing problem.

That, in fact, was to be my dissertation. As it turned out, we got so busy once we opened the home care that there really wasn't adequate in-service for the nurses. I wasn't happy with the quality of the data and the checklists. So, it was a nice exercise. We worked with

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technicians from Loyola to try to take a look at what we could develop for the nurses electronically at that time.

Interviewer: A key moment?

Ida Androwich: For me it was starting home care. I realized that without good documentation the nurse wouldn't leave her footprint on the chart. At that time, I also read the work of Harriet Worley, who strongly influenced my thinking on that with the idea of the nursing data set. We did some research in our outpatient center to see which elements of the nursing minimum data set were actually captured in the documentation of the nurses and found, unfortunately, there was not much. I set up a pre-conference workshop for the American Academy of Ambulatory Care Nursing (I believe in '89 or '90) and Harriet was keynote speaker. We pulled together the leaders from that group to say what should a nursing diagnosis look like in the ambulatory record; what should nursing intervention look like? At the same time, I was also very intrigued with the work that Joanne McCluskey and Gloria Bulecheck were doing in terms of identifying nursing interventions. Those that are done for assessment purposes, those that are done for care purposes, those that are independent. A lot of things came together for me.

In the early '90s, I had an opportunity to be an HBO Nurse Scholar, a program that Roy Simpson had started. The year I was there, Connie Delaney was also there. Connie was someone that Harriet also referred me to because she was doing interesting work. A lot of this was synergy. Also, in '92 was the publication of the first NIC book. So Joanne McCluskey came to talk to the nurse scholars about NIC and it was kind of like, "This is it. I'm going to spend time working on this."

Harriet knew I was very interested in this work and invited me to a day-long presentation that Joanne McCluskey was giving for the faculty at UWM. So I drove up from Chicago and Joanne was talking about the study they were going to be doing. I volunteered Loyola as the field test site – our home care and ambulatory care. She said in a nice way, "No thanks. We already have our four field test sites."

I followed up with a letter describing our ambulatory care and what we had to offer. My letter came about the same time they got the grant reviews that said, "Well, you need to include a community ambulatory site." It was a little bit of serendipity and Loyola became the fifth field test site for the NIC project. I spent the next three years working on that. It was one of those situations where you meet people as a result of being in projects with people that have the same goals and interests and then that builds.

Pat Button who was at Dartmouth-Hitchcock at the time – Dartmouth-Hitchcock was also another field test site. Joanne and Gloria called it the FUN group – the Field Users Network. We met and discussed the challenges of implementing the NIC terminology in electronic records. I was barely beginning to understand them. At that time, all of our knowledge was not what it is today.

Interviewer: Time frame?

Ida Androwich: Home care was in the early '80s. In the early '90s was the HBO. Probably from '93 to '96 was the Field Users Network.

Interviewer: Early days; reactions from colleagues?

Ida Androwich: A lot of people didn't have a good understanding of what Informatics, the term itself, was. Because within the School of Nursing, it was, "Well, Ida, you need something about Informatics." I would get a lot of people coming to my office, "Can you help me turn my computer on?" or, "I can't save this file." So there was not a good understanding of the difference between technology and informatics in a broader sense.

Interviewer: Did people think you were nuts?

Ida Androwich: That wasn't exactly the case. I struggled a little bit because it seemed I was getting farther and farther away from the patient or anything that seemed like it had anything to do with actual patient care. But it seemed it was very important to understand how to capture this. At the time, we didn't really have a term for evidence-based medicine. But

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that's the reason why. Early on you somehow knew if you could aggregate the data that was being captured daily by nurses, there was a lot of knowledge and wisdom in that.

Interviewer: Talk about the process – data to information to knowledge.

Ida Androwich: Early today we had a presentation at the nursing terminology summit and it caused me to reflect over the six years or so that we've been having the summit how much more sophisticated we are – not only the participants in knowing different things but the audiences we're talking to are light years ahead.

We're making great progress and the world is coming along. It's almost an idea whose time has come. A number of years ago, vice presidents for nursing didn't get any connection between why they should want to capture nursing documentation in the clinical area and now they really do understand it. Whether it's because there going for status and they want to be in compliance with Joint Commission and the NDNQI or whether it's because they're just understanding the value in terms of evidence-based practice, patient safety.

Interviewer: Your major contribution?

Ida Androwich: I would say that my major contributions have been in the field of terminology and some of the work with the terminology summit. I've also been instrumental – Virginia Saba and I started the expert panel in Nursing Informatics at the Academy and I'm working with the workforce technology commission and we're working at ways technology can leverage the work of the nurse. The demand side of the equation and the nursing shortage where we can't necessarily increase the supply, but we can leverage and make more efficient the work that the nurse is doing.

Interviewer: Key people?

Ida Androwich: Key people and moments moving Nursing Informatics are the willingness of the organizations to sponsor and participate in projects bringing people together. I've not

always agreed with ANA but I have to say that, early on when it was very important – after the computer-based patient record documents came out – ANA was funding Kathy Milholland to be at the table and she brought a number of us to go to these early standards-development meetings. The outcome of that was that nurses were considered to be at the table. Had that not happened, it might have been a different outcome, because we were there at the AFTM (?) meetings and representing the nursing perspective as some of these standards were being written. That is one key.

I also think that AMIA has been continually supportive of the nursing organizations and the nursing working group – projects such as this. Or, we published a monograph which was funded by AMIA. AMIA, along with other organizations, participated in funding the terminology summit. Prior to the summit, there were a couple years they brought together and sponsored special sessions. There was a spring AMIA meeting in the late '90s on nursing terminology at their spring conference. Those were very instrumental because it brought the right people together and set up a forum for the discussion.

Interviewer: NIH instrument grant? Big deal?

Ida Androwich: Actually not.

Interviewer: Talk about that event and impact on industry.

Ida Androwich: Some events that I believe had a big impact on Nursing Informatics was in the early '90s when the CPR document came out of the Institute of Medicine. There was a great deal of interest and the Computerized Patient Record Institute was formed. Although I haven't always agreed with the ANA, this was one time when they provided the funding and Kathy Milholland was the policy analyst. She got nursing informaticians in every corner she possibly could. She had people signed up to go to standards-development organizations. It was a time when I think informatics in general in the health care field was coming together. People got very used to seeing nurses at the table. That certainly

leads to Judy Warren now being on the National Committee for Vital and Health Statistics.

Another key event, which came to me as a group of u…Sue Bakken and I went out to the National Library of Medicine one day because we realized that many of us were teaching and were at a point in our careers when we weren't going to go back to school for formal education, and yet here we were teaching something that we'd never been formally educated for. So we were trying to convince Corn (?) to provide some type of funding for those faculty who were in that position. We were not successful at that level but Charlie Mead, who's a physician who did get his master's in computer science, offered to teach a few of us. We met several weekends – Judy Warren, Sue Bakken, Pat Button and myself and Charlie – for very hard, thinking work. He taught us UML modeling and It was a wonderful experience and brought all of us quite a ways along the way to understanding some of the issues and some of things that needed to be done.

Interviewer: In the early days, what was it like? Fun?

Ida Androwich: It's been exciting every step of the way. It was fun going to the meetings. It was a very steep learning curve and realizing how many different areas there were and some of the standards. It certainly was fun – and always struggling to try to see what is the right answer. Where is truth?

Interviewer: Back to your individual contribution. Clinical Information Systems, framework for reaching the vision? Awards, publications, etc.

Ida Androwich: It's always hard to know the impact of your publications. I do know that the monograph that we wrote was a work of love. And Rita Zielstorff and her colleagues had written a book in '93, which was the cutting edge. We and AMIA felt it was time to take a look. Our premise as we sat down to write was, "Why haven't we gotten farther with what we should have done and knew we should have done and wanted to do in '93?" We tried to

understand what the history was, what the processes were, and I think spelled it out pretty clearly and developed a model. The understanding came that it's really the clinical content that needs to populate these information systems to be of use to the provider.

Interviewer: Name?

Ida Androwich: Clinical Information Systems: a Framework for Reaching the Vision.

Interviewer: What was the framework you proposed?

Ida Androwich: It's hard to describe without a graphic. Probably, the understanding, at least for me, that in every clinical encounter you want to support the provider. There's a dual purpose to the information collection. You want to be able to provide the provider with up-to-the-minute information about that patient and that encounter. It could be alerts(?), it could be the latest evidence, that could be what is that own patient's history and assessments. So you can do a good job with that encounter.

The second part is that every encounter should capture information that can be used in an aggregated way to inform future encounters. That dual purpose of the information system that I think is very important. Neither is more important than the other.

Interviewer: Over-arching vision or principle?

Ida Androwich: If there's a framework that's guided my work I'd have to say it's the dual nature and the importance of giving the provider information to inform the current encounter and at the same time, documenting that encounter in a manner that the information can be aggregated with similar encounters to inform future practice with other patients.

Interviewer: stories to tell – collaborators?

Ida Androwich:	A couple things cross my mind when I think about good times or fun stories. This is a group that's always pretty much had a lot of fun. And certainly at the summits we've had very good times. I'm probably surprised by how frequently people who have these interests end up getting together and popping up in different areas. Certainly when we did the work – we called ourselves The Loose Cannons, which maybe was not the most appropriate name but it was a takeoff …Some of the medical informaticians had called themselves The Cannon Group that was kind of like a think tank. So we were being a little funny. Unfortunately, that's not the name you want to carry into perpetuity. But we certainly had a great time, got a lot done, and worked very hard.
Interviewer:	Support/collaboration?
Ida Androwich:	It's interesting when you talk about support. I often tell my students Nursing Informatics is young enough to be very welcoming to newcomers. If there's anything that's characterized this field, it's been the willingness to share. Maybe it's because no one feels they have the whole answer; maybe it's because there's so much work to be done, that we're just happy to see other workers coming along. But, it's generally an area where, if you're willing to produce and get involved, you're welcomed with open arms. That's the biggest thing.
Interviewer:	Currently involved with NI students?
Ida Androwich:	I am involved with students. Fortunately, I was able to receive a grant from the Health Services Resource Administration for a graduate program in Nursing Informatics. We just received a two-year continuation grant when that was over. On my list of things that have helped move things along …..For a number of years HRSA did not fund informatics programs or nursing administration programs. I think that's really those two areas. There was a large focus on nurse practitioner programs. Within the past five years, they are now funding informatics and administration programs. That has been very important to nursing.

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Interviewer: Who's coming next; impressed with students; future?

Ida Androwich: I'm very impressed. There's probably not a student I have that I don't learn from. We've been fortunate to have some real stars as students. In fact, Deb Konicek went through our program and gave the graduation address. She was an outlier. However, we've had many, many excellent students and they've learned to get involved, to get out there – that's been great.

Interviewer: What would you say to someone considering NI?

Ida Androwich: For someone considering Nursing Informatics, I would say you will be forever challenged. There's always something interesting to think about. It's not a solution, a puzzle, but it's fascinating. And it's not going to be solved certainly in my lifetime or perhaps another generation's lifetime. It's a wonderful group to get in, in terms of the support.

Interviewer: Does NA bridge the gap?

Ida Androwich: I would say if you can find a way to bring the best evidence for that patient encounter for nurses all over the country, you're probably doing just as much as you could do as one nurse caring for one patient. Another thing about NI that's more true than for other areas of nursing – at least I've seen it to be very true – is the international global nature. I've had the opportunity to meet people from all over the world and see them struggling with the same problems under different governmental structures and …some very delightful people

Interviewer: We were talking about international …..

Ida Androwich: I would say that one of the nice surprises about Nursing Informatics has been the whole international connection. I don't know of another area of nursing that has such a strong link with international colleagues. It's fascinating to meet people with similar problems under different governmental structures – some really, really lovely people.

That has been very much a positive.

Interviewer: Advice for people thinking about getting into this field?

Ida Androwich: Attend a conference; see if this is something that speaks to your heart. Another thing to consider is that there are many different aspects to what we call Nursing Informatics. For example, Patty Brennan is very involved with consumer informatics, which is a very different field than the terminologist. I notice that the students are already beginning to sort out, " I want to be teaching; I want to be involved in implementation; I want to be involved as a systems analyst." There are roles within informatics for people that have a large variety of interest.

Interviewer: What do nurses bring to the table?

Ida Androwich: That's really a challenge because there's a move today to an interdisciplinary patient record and an understanding that the interdisciplinary is more important than the silos. So, I think nursing has a unique contribution to make, and has already made some contributions even to the thinking of medical informaticians in terms of our teaching, working with patient families, working with communities …that may not have been on their radar screen, as it were. I'm also very excited that there's more and more about what we call public health informatics, which for me is a blend of my two loves. AMIA had a spring meeting a number of years ago on public health informatics and you had to decide if you were a public health person interested in informatics, you could get the 101 on Informatics. If you were an informatics person interested in public health, you went into a different room and you got the 101 on public health. I had a hard deciding where to go. But in today's world, with disasters like Katrina, the tsunami, the emerging infections that are coming from all over the world, there's no end to what a good understanding of information systems can do.

Interviewer: What do you enjoy the most about your work?

Ida Androwich: What I have enjoyed the most – it's tough to say – but I'd have to come down on the number of very interesting and very thoughtful and very bright people I've had the opportunity to work with. A very close second would be the excitement of figuring out the way something fits together. Generating knowledge, as it were – or thinking you're generating knowledge.

End of Interview