



A C E N D I O

THE ASSOCIATION FOR COMMON EUROPEAN NURSING DIAGNOSES, INTERVENTIONS AND OUTCOMES

Summary

14th ACENDIO Conference: Nursing-generated data: predictive analytics and eHealth strategies

This conference was fabulous: UniCamillus in Rome was a great place to be, and the faculty and staff were wonderful hosts for ACENDIO. Over 150 persons of 17 countries learned a whole lot during this conference. In the welcome reception, the UniCamillus dean and the president of the Italian nurses' association gave insights on what's going on in the hosting country. After that, Italian speakers presented their work and lyric singers enjoyed the audience with internationally known, heart-touching Italian songs.

During the following conference days, three keynotes, 52 oral presentations and the same number of posters were presented. Visions about Artificial Intelligence (AI) and how it possibly can support nurses and patients were shared in Lisiane Pruinelli's keynote '*From Predictive Analytics to Personalized Care: The Power of Nursing Data*', and later also in a panel addressing AI possibilities.

The presentation on connections of the *Advanced Nursing Process* – according to the OPT Model – with nursing caring theories was a highlight and showed how caring science and Standardized Nursing Languages (SNL) are linked to bring nursing forward, support caring, decision-making and documentation to enhance nursing-sensitive patient outcomes. In parallel sessions, examples were given on implementing SNLs into clinical practice and on building nursing education curricula based on the best-evidenced SNLs. We learned about the combined use of Gordon's Functional Health Pattern Framework and the Herdman & Kamitsuru Clinical Reasoning Model to develop planning and reasoning skills of nursing students. Participants also got in-depths information on the development and validity of the newest NIC & NOC classifications, and several studies were presented on their use in different clinical settings and countries.

Nowadays, evidence-based nursing is a MUST and the foundation for all further SNL and AI work!

Several presentations made clear that the time of "self-made" classification systems - which are often mainly constructed for selling purposes and lack research - is over. An abundance of validation studies on nursing diagnoses, outcomes, interventions, and their linkages are available. Many research reports based on the latter when new validation studies were presented. It was encouraging to see how far nursing science has come with its ability to make nursing visible by using SNLs. But it also became clear that there are big differences in their implementation, application and use in education, clinical practice and EHRs. This conference supported to learn from each other and to build new networks and collaboration.

For safe patient and family care, we need not only models or frameworks. Nurses, patients and their families need valid content: nursing diagnoses, outcomes, and interventions. Valid SNLs are

the basis for nursing education, clinical education, the implementation into Electronic Health Records (EHRs), and research.

Moreover, linking SNLs with AI is to come, otherwise the applicability of evidence-based nursing and making the body of nursing knowledge visible would suffer. This conference made clear: It is key that nurses rely on valid SNLs when being the drivers in AI developments, voice analytics, sensor techniques, activity trackers, and telehealth developments. Several research indicated that clinical reasoning and well-educated nurses are key to bring the profession forward. Techniques or algorithms alone will not do it – nor can they replace well-educated, reliable, caring nurses.

As an international community, we learned from country-wide developments such as shown in the keynote by Ulla-Mari Kinnunen on *'Nurses' eHealth competencies - strategy and current competency level'*. She presented Finnish eHealth developments and the collaboration between universities, health authorities and SNL implementation in different clinical settings.

We also got input into clinical reasoning supported by national electronically available SNLs in the Netherlands, and learned on the structure, reliability, and convergent validity of the Functional Health Pattern Assessment screening tool as used in Brazil, along with examples from other countries.

Nursing diagnoses predict patient mortality, hospital costs, and the Length Of Stay (LOS) much better than medical diagnoses alone: By starting with two patient examples, Gianfranco Sanson's keynote *'Who cares about nursing care? Nursing data as a guide for clinical care and healthcare policies'* was an eye-opener. Based on several studies, he demonstrated the evidence that nursing diagnoses are strong, significant predictors and how these can steer health care policy and funding. This was encouraging, inspiring and the standing ovation well deserved!

In a roundtable on *'Babel nursing languages? Interoperability: How to harmonize implementation, research and education?'* an overview on the FINCC, ICNP, NANDA-I, NOC, NIC and the Omaha System was given. The panelists promoted interoperability as a common goal. *Semantic interoperability* is the ability of computer systems to exchange data with unambiguous, shared meaning. It is a requirement to enable machine computable logic, inferencing, knowledge discovery, and data federation between information systems.

Semantic interoperability is therefore concerned not just with the packaging of data (syntax), but the simultaneous transmission of the meaning with the data (semantics). This is accomplished by adding data about the data (metadata), and by linking each data element to a controlled, shared vocabulary. The meaning of the data is transmitted with the data itself, in one self-describing information package that is independent of any information system.

It is this shared vocabulary, and its associated links to an ontology, which provides the foundation and capability of machine interpretation, inference, and logic. Syntactic interoperability is a prerequisite for semantic interoperability!

The 14th ACENDIO Conference made clear: making nursing visible is the common goal, and to reach it, semantic interoperability of SNLs is the path to follow and the basis for future AI developments.

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