INFORMATICS IN NURSE EDUCATION
Developing a nursing curriculum to impact nursing

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1988 Reg. Nurse Aarhus University Hospital
1998 Master of Health Informatics, Aalborg University.
2016 President of NI (nursing informatics) EFMI

EHR, implementation, usability lab, terminologi, standards, welfare technology clinical guidelines, teaching development of curriculum ect.
Agenda

1. Background
2. Nursing informatics versus nursing technology?
3. Curriculum in nursing informatics
4. Closing remarks
Where did it all start?
Google scholar: Nursing Informatics history.

- Approx. 14.600.000 hits
Nursing history EFMI – ”nursie” . Nordic countries.
2. Nursing informatics versus nursing technology?
Nursing informatics

IMIA-NI states that: “Nursing Informatics science and practice integrates nursing, its information and knowledge and their management with information and communication technologies to promote the health of people, families and communities worldwide.”

Nursing technology

Many definitions...

Assistive technology, Ambiguous technology

Welfare technology is technology that can help and assist users in their daily lives. Examples of welfare technology are intelligent aids such as cleaning robots, sensors in clothes, smart homes, etc.

wikipidia
Health technology refers to the application of organized knowledge and skills in the form of devices, medicines, vaccines, procedures and systems developed to solve a health problem and improve quality of lives. (WHO).

Nursing e-health???

Maybe:
IMIA-NI states that: “Nursing e-health science and practice integrates nursing, its information and knowledge and their management with information, communication technologies and assistive technologies to promote the health of people, families and communities world wide.”

5. Curriculum in nursing informatics
The Nursing profession has to make a choice; either learning to live with the computer or being passive and observant while the control over practice is removed from nurses who are unaware of the computer's special computing ability. .....

Student nurses tomorrow's practitioners must learn how to respond to technological chances that are already under development in the nursing practice. They must learn to consider the computer as a machine that gives them opportunities to support them in the pursuit of qualitative care.

*Walker MR et al: What every nurse should know about computers* p. 7
2000
Work shop, NI 2016

Discuss the clusters as core curriculum

June 2016: INTERNATIONAL NURSING INFORMATICS, 2016 Geneva, Madsen, Lacroix, Cummings & Borycki
Developing a Framework for Teaching Nursing Internationally.
12 clusters

1. Design and Development
2. Health Technology Assessment (HTA)
3. Evaluation
4. Safety
5. Secondary use of Data
6. Implementation, adoption and readiness
7. Pervasive Computing
8. Terminology
9. Interoperability
10. Tele-Health and mobile health
11. Robotics and rehabilitation
12. Health Portals
To old?
Our Mission is to Map Skills and Competencies, Provide Access to Knowledge Tools and Platforms, and Strengthen, Disseminate and Exploit Success Outcomes for a Skilled Transatlantic eHealth Workforce. The overall goal of the EU*US eHealthWork Project has been to measure, inform, educate and advance eHealth and health information technology skills, work and workforce development throughout Europe, the United States and globally.

http://ehealthwork.eu/
DANISH NURSING CURRICUM..
The Danish Nursing Curriculum
17. juni 2016

www.retsinformation.dk/forms/r0710.aspx?id=181963
Learning outcomes:

- **Knowledge**
  
  Have knowledge of and can reflect on the professional use of technology in care, treatment and quality assurance.

- **Skills**
  
  Apply and evaluate technologies in performing and developing care and treatment.

- **Competences**
  
  Independent management of technologies in the execution and development of care and treatment.
ONE ects point = 8 lessons

- Are able to self-management of organization, assessment, adjustment and documentation of the care treatment process in interaction with patient / citizen across professions, sectors and institutions throughout the healthcare system.

- Are able to understand and reflect on knowledge of targeted pedagogical about communication and interventions in a direct and digital context involving patient, citizen and relatives with respect for diversity.

- Are able to reflect on dilemmas and ethical issues in nursing.
Curriculum – limits in learning taxonomies:

- Digitization of health care
- Interprofessional communication
- Electronic patient / citizen journal
- Terminology / systemized data
- Standards for data exchange
- Documentation
- Quality development and research
- Healthcare databases
- Information Security
- Health Portal
- Pervasive healthcare
- Telemedicine
- Welfare technology
The rest is embedded in all over the curriculum. ( or ? )

- Communication
- Elderly care
- Documentation
- E- healths portals
- Electronics devices ect...
Heath informatics in the National curriculum 2001 + 2008

Health technology in the National curriculum 2016
Curriculum

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- Robots
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An other kind of nursing ....
Becoming a e-nurse...

• Observations : ABCDE : Smell, temperatur, anxiety, hygiene, home surroundings, ect.
• Care: The citizen is sad, starts crying...
Curriculum

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Welfare technology – the new black
Are nurses ready for the Evolution of Welfare technology?

“I fear the day that technology will surpass our human interaction. The world will have a generation of idiots.”

Albert Einstein
Staff:
- Motivation and attitude
- Work environment

Management:
- Values and strategies
- Culture and willingness to change

Usability
- Who will use
- Needs and wishes

Values
- Self dependent
- Life quality

Functionality:
- Performance quality
- Safety and precision

Usability:
- Design
- Guidelines and instructions

Investment
- Cost to buy and implementation
- Cost for training staff

Operation
- Cost related to open and maintenance
- Cost savings

https://www.teknologisk.dk/ydelser/vtv-velfaerdsteknologivurdering/32944/
translation Inge Madsen
Curriculum

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The robots
Welcome to your new nurse...
Inge Madsen, SHI, Aalborg 2018

Chronic Obstructive Pulmonary Disease (COPD)
A nice suitcase
And wupti
Paro the seal
Closing remarks..

Predictions is very difficult; especially about the future..

*Storm P.*
BIG data

LET’S SOLVE THIS PROBLEM BY USING THE BIG DATA NONE OF US HAVE THE SLIGHTEST IDEA WHAT TO DO WITH.
Using e-Health Big Data to Determine the value of Nursing Interventions and Patient Outcome.

• Big data are comprised of information from clinical information systems to which nurses contribute in the care and treatment of patients.

• Terminology reflects the standardized taxonomy used within clinical information systems.

• Nursing-sensitive quality outcomes are measures previously described as being variable between countries.

Madsen, Lacroix, Borycki, Procter. unpublished
Is Nursing Invisible?
Challenges...as I see it..

- Patient involvement
- Nursing sensitive quality outcomes
- Patients Reported Outcome – improve nursing
- Evidens based nursing care
- International terminology – structured data, re-use
- Telemedicin
- How do we make a valid assessments of the wellfare technology
- Teachers qualifications
A General discussion about the GOAL...
So what I want for X-mas....
Nursing informatics “embedded” in the nursing curriculum

Maximums curriculum?
An international tool boks

Madsen, Laroix, Borycki. 2016
Join the European work

https://www.efmi.org/workinggroups/nursie-nursing-informatics-in-europe

Or write to me: imad@via.dk
THANK YOU FOR YOUR ATTENTION.

imad@via.dk