

FSAIO.NET: A Danish ICU Nursing Network



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ESPAÑOL

FSAIO.NET: La red Danesa de Enfermería en UCI

Palabras clave

Bases de datos, cuidado intensivo, red, enfermería, investigación

Resumen

- Este artículo describe la formación y actividades de la FSAIO.NET; una red Danesa de enfermería en cuidados intensivos.
- La red es de acceso gratuito vía internet.
- Se ha realizado una plataforma para un número de estudios de investigación Daneses, y se ha establecido una amplia base de datos de unidades de cuidado intensivo y sus actividades.

SUMMARY

- This paper describes the formation and activities FSAIO.NET; a Danish network of intensive care nurses.
- The network is free to access via the Internet.
- It has been a platform for a number of Danish research studies, and has established a comprehensive database of intensive care units and their activities.

INTRODUCTION

We live in an age of globalisation, networking and data-compilation. Databases have exploded with the electronic possibilities and networking is flourishing in many fields and sub-fields like intensive care nursing. In 2003, we planned a national sedation survey in Denmark and realised that it was difficult to locate each intensive care unit (ICU) in the country. We needed a list of ICUs, addresses and contact persons. So, as we sent out the questionnaires we started to construct our network.

Building the network

Contact persons

We invited a nurse at each ICU to participate as a contact person in the new network. The idea was to have a contact person that would respond electronically to questions and surveys enabling networking and research across the country. It was fairly easy to find a nurse in each ICU with an interest in joining the network. In some units several nurses volunteered (Egerod 2005). Initially the

contacts agreed to answer a questionnaire about their unit, including demographics and care related variables.

Home page

The next thing we needed was a website for our home page. We contacted the webmaster at the Danish Nurses' Organisation (DNO), who agreed to help us. The Danish Society of Anaesthesia, Critical Care, and Recovery Nurses (FSAIO) is linked to the DNO home page and we were able to get a free link at this site. We called our network FSAIO.NET, which is also the web address.

Webmasters

Since 2004 I have maintained the network with a succession of webmasters: two psychology students, one librarian, one nursing student, two nurses with bachelor's degrees and one nurse with a master's degree. The webmasters have put in a few hours each month, which has been financed within my general research budget. The DNO regularly offers free home page courses and all of us have participated. The webmasters have helped update and renew the FSAIO.NET homepage, and one of them developed our logo (see title, above). Working with the network has been a learning opportunity for the webmasters and most of them have participated in data collection and subsequent publications.

Using the network

Research and publications

The network is free and accessible on the Internet. Over the years, the network has been a platform for a number of surveys and cross-sectional studies, which are outlined in Table 1, below.

Year	Study	Authors
2003	Survey of sedation practices at Danish ICUs	Egerod et al. 2006a; Egerod et al. 2006b
2004	Survey of evidence-based practice among intensive care nurses	Egerod 2004
2006	The extent and application of patient diaries in Danish ICUs	Egerod et al. 2007
2006	The extent and application of basic stimulation in Danish ICUs	Egerod et al. 2009
2008	Cross-sectional study of sedation and pain in Danish ICUs	Egerod and Risom 2009
2009	Incidence of intensive care delirium in Denmark	Svenningsen and Tonnesen 2009
2009	International weaning survey	Rose et al. 2011b
2010	Study of emergence and evolution of patient diaries in Scandinavia	Egerod et al. 2011

Table 1. Research studies

Blogs

The home page served as a blog for a group of ICU nurses writing a national guideline for intensive care diaries (Egerod 2008). Meetings for interest groups have been announced and slideshows made accessible.

Demographics

The home page gives a list of each ICU in the country with address, contact person, and local demographics such as the size of unit, equipment, monitoring systems, nursing practice, and research projects.

Status

We have compiled some of the data from the home page to show the distribution of scoring systems, therapies, and practice in Danish ICUs in 2010 (Table 2). The table shows the variability of interventions and monitoring, but does not show the distribution of therapies at each hospital. The main limitation of the table is that nurses might not have answered our questionnaires systematically. Each time the questionnaire is sent, the questions become more accurate. Interestingly, the table shows that nurses in many units relied on professional judgment rather than systematic patient assessment.

Research and development

On the home page research is presented in three categories: Patient related, Family related, and Nurse related. Abstracts, articles and links are available.

Maintaining the network

The network has been maintained by the webmasters and it has been a challenge to sustain continuity with ever changing webmasters and contact persons. Updating the ICU demographics is an ongoing project that is affected by the constant turnover of contact persons. Unfortunately the nurses forget to notify the webmaster when they leave their job and a new contact has to be found, thus interrupting the chain of information. Another challenge is hospital fusions, which means that ICUs close or move according to the national hospital plan. It is important to keep ICU nurses (not only contact persons) aware of the network and interested in activities. Timely notifications of events on the home page keep people interested in the network. The contact persons receive e-mails and reminders. If these are too frequent they become a nuisance, but if they are infrequent the network is forgotten. Ongoing research and study groups increase awareness of the network.

Rethinking the network

The network has existed for eight years and it is time to rethink the concept. Danish intensivists started a database of clinical data in 2005, the Danish Intensive Database (DID) (Ronholm et al. 2007). In the long run it would make sense to combine the nurses' and doctors' databases to encourage interdisciplinary networking within the specialty of intensive care. DID has more clinical data, whereas FSAIO.NET has more practice data. In the future I encourage nurses to participate in collecting clinical data relevant to nursing. The following items are examples of data in the DID in 2009 annual report (Ronholm 2009):

- Number of patients treated annually at each ICU
- Completeness of database at each ICU
- Length of stay at each ICU
- Mechanical ventilation, non-invasive ventilation and dialysis
- Mortality, co-morbidity, COPD

ITEMS		Number of ICUs (%)
Scoring systems		
Sedation	Cook: Newcastle or Cook Sedation Score	1 (2%)
	MAAS: Motor Activity Assessment Scale	3 (7%)
	Ramsay: Ramsay Sedation Scale	15 (34%)
	RASS: Richmond Agitation Sedation Scale	5 (11%)
	SAS: Riker Sedation Agitation Scale	3 (7%)
	Professional judgment: Sedation	10 (23%)
Central nervous system	Bartels: Cognitive testing	1 (2%)
	CAM-ICU: Confusion Assessment Method	4 (9%)
	EFA: Early Functional Measure	1 (2%)
	GCS: Glasgow Coma Scale	15 (34%)
	GOAT: Galveston Orientation and Amnesia Test	1 (2%)
	RLAS: Rancho Los Amigos Scale	1 (2%)
	SSS: Scandinavian stroke scale	1 (2%)
	Withdrawal score	4 (9%)
	Professional judgment: Delirium	5 (11%)
	Pain	BPS: Behavioral Pain Scale
NRS: Numeric Rating Scale		2 (5%)
OSIS: Objective pain indicator scale		1 (2%)
VAS: Visual Analog Scale		21 (48%)
VDS: Verbal Descriptive Scale		1 (2%)
Professional judgment: Pain		6 (14%)
Other	CPIS: Clinical Pulmonary Infection Score	1 (2%)
	Braden: Decubitus ulcer scale	3 (7%)
	Professional judgment: Nutrition	22 (50%)
Therapies		
Aftercare (follow-up)		4 (9%)
Awake ventilator patients		1 (2%)
Basic stimulation		19 (43%)
Dialysis (CVVH n=5, CRRT n=17, HEMO n=8)		33 (75%)
Mouth care		1 (2%)
Music therapy		4 (9%)
Patient diaries		23 (52%)
Prone positioning		29 (66%)
Therapeutic hypothermia		5 (11%)
Practice		
Clinical practice guidelines		31 (71%)
Computerized documentation		21 (48%)
NAS: Nursing Activities Score		1 (2%)
NCI: Nursing workload		1 (2%)
NEMS: Nursing workload		4 (9%)
Nursing rounds		4 (9%)
Simulation training		25 (57%)

Table 2. Distribution of scoring systems, therapies and practice in Danish ICUs in 2010 (n = 44)

International databases

Databases need to be standardised to enable international collaboration. In our work on "International perspectives on the influence of structure and process of weaning from mechanical ventilation", we discovered how difficult it was to compare across

nations and continents due to variability of terms and definitions (Rose et al. 2011a). The following list is an example of intensive care databases in various countries (Ronholm et al. 2007):

- 1992: Australian and New Zealand Intensive Care Society Audit Patient Database (ANZICS APD).
- 1992: Scottish Intensive Care Society Audit Group (SICSAG)
- 1994: Austrian Center for Documentation and Quality Assurance in Intensive Care (ASDI)
- 1994: Dutch National Intensive Care Evaluation (NICE)
- 1994: UK Intensive Care National Audit and Research Centre (ICNARC)
- 1996: Project IMPACT in USA
- 2002: Norwegian Intensive Care Register (NIR)
- 2001: Swedish Intensive Care Registry (SIR)
- 2004: Intensive Care Nurses' Research Network in Denmark, FSAIO.NET
- 2005: Danish Intensive Database (DID)

Databases are becoming more common in health care as a systematic way of accumulating knowledge, facilitating retrospective analysis and epidemiologic research. Databases are valuable instruments of evidence-based practice and need to be accessible for researchers. A large database consisting of 25,328 intensive care unit stays in 2001-2007 has become available upon request since 2010; the Intelligent Monitoring in Intensive Care II (MIMIC-II) is a research database with various types of clinical documentation, including bedside monitor trends and waveforms (Saeed et al. 2011).

CLOSING REMARKS

Denmark is a small country with a relatively small population of 5.5 million, which enables communication among ICUs. Conversely, we met obstacles in a survey in Germany with its population of over 80 million and its vast number of ICUs (Nydahl et al. 2010). These obstacles were overcome by reducing the study to two federal states. But still, the trend is moving toward interdisciplinary and international collaboration as databases become more comprehensive. Innovation and networking are necessary to improve our knowledge, and intensive care nurses are in a good position to participate; we need to stay connected.

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