



University of Applied Sciences Osnabrück

Dept. Business Management and Social Sciences
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IT-Report Healthcare 2007

Nursing in the Information Age

www.it-report-healthcare.info

Please read the questions carefully.



Demographic data

1	ZIP code, city, state						
2	Did you participate in the 2002 survey "Nursing in the Information Age"? YES NO ☐ ☐						
3	What is your position in the hospital?						
4	Type of hospital <categories are country-specific> General hospital Other hospital Clinic (please specify) ☐ hospital type A ☐ hospital type B ☐ hospital type C ☐ other hospital						
5	Ownership <categories are country-specific> not-for profit for profit other ☐ ☐ ☐						
6	System affiliation stand-alone hospital network hospital ☐ ☐						
7	Number of beds -49 50 100 150 200 300 -99 -149 -199 -299 -399 ☐ ☐ ☐ ☐ ☐ ☐ 400 500 600 800 1000 -499 -599 -799 -999 and larger ☐ ☐ ☐ ☐ ☐						
8	IT-systems within the hospital information system (HIS) accounting controlling human resources materials management asset management medical controlling multiple answers possible ☐ ☐ ☐ ☐ ☐ ☐ patient-management (adm/dis/trans) clinical work-station ordering supplies & examinations intensive care record nursing documentation minimum data set multiple answers possible ☐ ☐ ☐ ☐ ☐ ☐ surgery information anesth. documentation laboratory radiology information PACS² electronic archive multiple answers possible ☐ ☐ ☐ ☐ ☐ ☐ outpat. management staff scheduling time recording quality management meal ordering device management multiple answers possible ☐ ☐ ☐ ☐ ☐ ☐ others others multiple answers possible						

¹ Diagnosis Related Group

² Picture Archiving and Communication System



9	The HIS is an all-in-one solution.	NO	YES
	(continue with 9a-b)	☐	☐
			_____ vendor
9a	The clinical system is an all-in-one solution.	NO	YES
		☐	☐
			_____ vendor
9b	The administrative system is an all-in-one solution.	NO	YES
		☐	☐
			_____ vendor

10	How satisfied are you with the IT-products and services?	very satisfied	satisfied	neutral	dissatisfied	very dissatisfied
		☐	☐	☐	☐	☐

IT-infrastructure

11	Is there a central IT-department in your hospital?	NO	YES				
		☐	☐				
12	Is there a nursing informatics specialist in your hospital?	NO	YES				
		☐	☐				
13	What is the average number of PCs on the wards, e.g. desktops, notebook?	1	2	3	4	5	more
		☐	☐	☐	☐	☐	_____ number

14	What is the most significant barrier to successfully implementing IT for NURSING in your institution today?	
Please select only ONE line.	Lack of strategic IT plan	☐
	Lack of IT staff	☐
	Lack of a nursing informatics specialist	☐
	Difficulty in proving IT quantifiable benefits / return on investment	☐
	Lack of common data standards	☐
	Lack of support from hospital executives	☐
	Difficulty in achieving end-user acceptance or use	☐
	Lack of adequate financial support for IT	☐
	Vendor's inability to effectively deliver product or service to our satisfaction	☐
	Others	☐
Don't know	☐	

Select only one line please.



Electronic Patient Record*

15 Please describe the status of your institution's current use of an electronic patient record (EPR) system.

	We have a fully operational EPR system in place.	We have begun to install EPR software and hardware.	We already signed a contract.	We have developed a plan to implement an EPR system.	We have not yet begun to plan for the use of an EPR system.	Do not know
	☐	☐	☐	☐	☐	☐

16 What is the potential benefit of implementing an EPR system* and how large is it?

	very large	large	small	very small	do not know
influence on the quality of care (e.g. by increasing the information exchange)	☐	☐	☐	☐	☐
improvement of the data quality (e.g. by avoidance of double captures)	☐	☐	☐	☐	☐
availability of the data (e.g. simultaneous access to the EPR by different healthcare professionals)	☐	☐	☐	☐	☐
reduction of input errors (e.g. by given data types (e.g. date) or integrity checks)	☐	☐	☐	☐	☐
reporting (e.g. medical and nursing summaries)	☐	☐	☐	☐	☐
quality assurance (e.g. monitoring and analysing of quality indicators)	☐	☐	☐	☐	☐
education / research (e.g. retrieval of patient records for research purposes)	☐	☐	☐	☐	☐
increased staff satisfaction (e.g. reduction of extra work such as retrieval of patient records)	☐	☐	☐	☐	☐

Please answer every question.

Nursing information system**

** A nursing information systems includes the legally required documentation of the nursing process. It furthermore allows the analysis of quality data and economic nursing data for management purposes. It may consist of one or more subsystems of a hospital information system. (after Schrader, U. and Ammenwerth, E., 2004)

17 Do you use IT-modules of a nursing information system?

→ ☐ YES Please continue with question 18.

→ ☐ NO Please continue with question 29.

18 Is the nursing documentation system integrated in the HIS?

YES NO

☐ ☐

IF YES please continue with 18a.

18a Is the nursing documentation system integrated in the EPR?

YES NO

☐ ☐

19 Is the staff scheduling system integrated in the HIS?

YES NO

☐ ☐

* EPR Definition:

An EPR is an electronically originated and maintained clinical health information system, delivered from multiple sources, about an individuals lifetime health status and health care. An EPR is supported by clinical decision systems and replaces the paper medical record as the primary source of patient information.



20	The software supports the following phases of the nursing process, i.e. documentation of ...	general assessment	assessment scales	diagnoses / problems	resources	
	multiple answers possible	☐	☐	☐	☐	
		goals	interventions	evaluation	others	
	multiple answers possible	☐	☐	☐		
		_____ please specify				
21	The following scales are integrated	Braden-scale	Norton-scale	Barthel-index	FIM ⁴	others
	multiple answers possible	☐	☐	☐	☐	
		_____ please specify				
22	Problems and diagnoses are described/coded by	free text	proprietary catalogue	catalogue based on the ICNP ⁵	NANDA ⁶ catalogue	others
	Please choose one item only.	☐	☐	☐	☐	
		_____ please specify				
23	Resources are described/coded by	free text	proprietary catalogue	catalogue based on the ICNP ⁵		others
	Please choose one item only.	☐	☐	☐		
		_____ please specify				
24	Interventions are described/coded by	free text	proprietary catalogue	catalogue based on the ICNP ⁵	LEP ⁷ Nursing 2	LEP ⁷ Nursing 3
	Please choose one item only.	☐	☐	☐	☐	☐
		others	_____ please specify			
25	Goals and outcomes are described/coded by	free text	proprietary catalogue	catalogue based on the ICNP ⁵		others
	Please choose one item only.	☐	☐	☐		
		_____ please specify				
26	Data are entered using ...	PCs on the ward	computer on wheels	PDA ⁸ e.g. Palm	Barcode device at point of care	special device at point of care
	multiple answers possible	☐	☐	☐	☐	☐
		others	_____ please specify			

⁴ Functional Independence Measure (FIM)

⁶ North American Nursing Diagnosis Association (NANDA)

⁸ Personal Digital Assistant (PDA)

⁵ International Classification of Nursing Practice (ICNP)

⁷ Leistungserfassung in der Pflege (LEP)



27 **The nursing information system is used for ...**

quality assurance	analysing patient needs	analysing nursing workload	Long-term planning of staff	recording information relev. to DRG/LKF syst.
☐	☐	☐	☐	☐

multiple answers possible

account. using case-based nursing inform.	accounting of optional nursing services	research / education	others
☐	☐	☐	

multiple answers possible

please specify _____

28 **Are you using LEP⁷ (Nursing 2 oder 3)?**

YES	YES, but we are still implementing LEP.	NO
☐	☐	☐

(If YES please continue with 28a-e)

If YES, please answer every question.

28a **LEP⁷ is used for ...**

analysing the nursing workload	YES	NO
☐	☐	☐

28b **LEP⁷ is used for ...**

short-term planning of staff	YES	NO
☐	☐	☐

28c **LEP⁷ is used for ...**

long-term planning of staff	YES	NO
☐	☐	☐

28d **LEP⁷ is used for ...**

controlling in nursing	YES	NO
☐	☐	☐

28e **LEP⁷ is used for ...**

analysis of the C-value	YES	NO
☐	☐	☐

Plans about implementing software used by nurses

(Please answer the question regardless of whether you are already using a nursing information system or not.)

29 **We plan to implement the following IT-systems**

this year	in two years	yes, but not specified when	no	do not know
☐	☐	☐	☐	☐

staff scheduling	☐	☐	☐	☐
quality management	☐	☐	☐	☐
patient management	☐	☐	☐	☐
nursing documentation	☐	☐	☐	☐
nursing workload analysis	☐	☐	☐	☐
surgery information	☐	☐	☐	☐
anesthesia documentation	☐	☐	☐	☐
intensive care record	☐	☐	☐	☐
ordering supplies and examinat.	☐	☐	☐	☐
time recording	☐	☐	☐	☐
meal ordering	☐	☐	☐	☐
others	☐	☐	☐	☐



Requirements of a good nursing information system**

(Please answer the question regardless of whether you are already using a nursing information system or not.)

30 **The software should support the following phases of the nursing process, i.e. documentation of ...**

	very important	important	less important	not important	do not know
general assessment	☐	☐	☐	☐	☐
assessment scales	☐	☐	☐	☐	☐
nursing diagnoses / problems	☐	☐	☐	☐	☐
resources	☐	☐	☐	☐	☐
goals	☐	☐	☐	☐	☐
interventions	☐	☐	☐	☐	☐
evaluation	☐	☐	☐	☐	☐
others: _____	☐	☐	☐	☐	☐

Please fill in every line.

31 **Problems and diagnoses should be described/coded by ...**

	free text	proprietary catalogue	catalogue based on the ICNP ⁵	NANDA ⁶ catalogue	others
Please choose one item only.	☐	☐	☐	☐	_____ please specify

32 **Resources should be described/coded by ...**

	free text	proprietary catalogue	catalogue based on the ICNP ⁵	others
Please choose one item only.	☐	☐	☐	☐ _____ please specify

33 **Interventions should be described/coded by ...**

	free text	proprietary catalogue	catalogue based on the ICNP ⁵	LEP ⁷ Nursing 2	LEP ⁷ Nursing 3
Please choose one item only.	☐	☐	☐	☐	☐
others: _____	_____ please specify				

34 **Goals and outcomes should be described/coded by ...**

	free text	proprietary catalogue	catalogue based on the ICNP ⁵	others
Please choose one item only.	☐	☐	☐	☐ _____ please specify

35 **The software should include clinical pathways for ...**

	YES	NO
(If YES, please continue with 35 a-d)	☐	☐
35a process descriptions and to-do-lists	YES ☐	NO ☐
35b documentation	YES ☐	NO ☐
35c steering the processes	YES ☐	NO ☐
35d other purposes: _____	_____ please specify	

If YES, please answer every question.

34 **Data should be entered using ...**

	PCs on the ward	computer on wheels	PDA ⁸ e.g. Palm	Barcode device at point of care	special device at point of care
multiple answers possible	☐	☐	☐	☐	☐
others: _____	_____ please specify				



35 **The nursing information system should be used for ...**

	very important	important	less important	not important	do not know
quality assurance	☐	☐	☐	☐	☐
analysing patient needs	☐	☐	☐	☐	☐
analysing the nursing workload	☐	☐	☐	☐	☐
long-term staff scheduling	☐	☐	☐	☐	☐
short-term staff scheduling	☐	☐	☐	☐	☐
recording information relevant to DRG/LKF system	☐	☐	☐	☐	☐
accounting using case-based nursing information	☐	☐	☐	☐	☐
accounting of optional nursing services	☐	☐	☐	☐	☐
research	☐	☐	☐	☐	☐
other: _____	☐	☐	☐	☐	☐

Please fill in every line.

Access to eHealth applications

36 **How important is the access to patient data in eHealth applications for nurses ...**

	very important	important	less important	not important	do not know
	☐	☐	☐	☐	☐

37 <This question was country specific.>

	YES	NO
Option A	☐	☐
Option B	☐	☐

38 <This question was country-specific.>

☐	☐	☐
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Finances

39 **How does the DRG/LKF-system influence the economic situation of your hospital?**

	positively	negatively	not at all
	☐	☐	☐

40 **What is your IT-Budget (as percent of your yearly turnover)?**

_____ %

Thank you for your time.