

Klinisk Patientnära Forskning 13

Hygiene standards and wound microbiology

at Fjordungssjúkrahúsíð, Iceland, in cooperation with Kristianstad
University, October 2006

Christina Lindholm, Professor Clinical Nursing
Ólína Torfadóttir, Director for Nursing, Fjordungssjúkrahúsíð, Akureyri
Carolina Axelsson, Coordinator
Kerstin Ulander, Senior Lecturer Clinical Nursing

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The research team "Patient Focused Clinical Research" is located at Kristianstad University and performs research and development within the area of patient-safety.

Overall objective of the group:

To enhance patient security by focussing on prevalence of certain indicators such as pressure ulcers, malnutrition/eating difficulties, hospital hygiene and wound microbiology and ulcer-related pain.

To implement interventions and to measure the potential effects on prevalence and prevention of these interventions.



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Christina Lindholm, Professor Clinical nursing
Ólína Torfadóttir, Director for Nursing
Carolina Axelsson, Coordinator
Kerstin Ulander, Senior Lecturer Clinical Nursing

* Kristianstad University, Department of Health Sciences
SE - 291 88 Kristianstad, Sweden
christina.lindholm@hkr.se
+46 (0) 44 - 20 85 50

Contact research team:

carolina.axelsson@hkr.se
Kristianstad University, Department of Health Sciences
SE - 291 88 Kristianstad +46 (0) 44 - 20 85 70 – Sweden



Abstract

Objectives: To study the availability of, and compliance to hygiene recommendations i) general ii) in staff iii) at wound dressing changes, and to study the microbiology of wounds with a focus on MRSA, VRE and multiresistant Gram-negative species.

Method: Questionnaires were developed according to present guidelines to capture: general hygiene standard (ward level (A)), individual staff hygiene, observational scheme (B), hygiene at wound dressing changes, observational scheme (C). Validated forms to register different types of wounds and the care of these wounds were utilized (D-F). One research nurse/ward had the responsibility for the data collection which took part at one specific day in October 2006.

Results: Ten wards participated in the study, and 159 staff were inspected, 36% were nurses, 18% MD:s and 45% other staff. Staff had M= 18,6 years of work experience. Thirteen wounds were registered. Recommendations for general hygiene was available in 9/10 wards, most commonly as a poster. There was M= 1,1 hand disinfection dispenser per staff and 1,3 per patient. In 98% of the cases, staff wore working clothes, in 21 % these had long sleeves. In 72% of the cases, the working clothes had been changed the same day, in 11% more than 2 days ago. In 45% the staff were wearing jewelry, and in 30% bracelets/wristwatches. Facial piercing was present in n= 6 staff. Nails were not short cut in 27% of the staff and n=12 had eczema/nailbed infections. Two staff had cosmetic nails and n=15 had nail polish.

Eleven wound dressing changes were observed with 13 personnel involved in changing the dressings. In 9/13 cases rings were removed before dressing change, and in 1/13 cases bracelets/wristwatches were removed. Hand disinfection was performed in 6/13 cases before, and 6/13 cases after dressing change. Gloves were used in 11/13 cases, and plastic aprons were never used.

There were a total number of eleven ulcers, three leg-and foot ulcers, three surgical wounds, two traumatic wounds and three other types of wounds. No pressure ulcer was identified. Wounds were cleansed with tap water (n=5), NaCl (n=4), iodine (n=1) and Chlorhexidine (n=1). No MRSA or multiresistant Gram-negative bacteria were identified but one case of *beta-haemolytic streptococcus*. Dressings were changed between 0-7 times per week.

There was no noticeable difference in growth of bacteria before and after wound cleansing.

Key words

Bacteria, compliance, hospital, hygiene, MRSA, Prevalence, ulcer, wound, wound care, wound cleansing

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For us as researchers coming from outside the hospital, we would finally like to forward our most sincere thanks to Ólína Torfadóttir for making this joint research project between the University of Kristianstad/Kristianstad General Hospital and Fjordungssjúkrahúsið possible.

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Christina Lindholm
Professor

Kerstin Ulander
Senior Clinical Lecturer

Background

The hygienic standard of a hospital is one of the most important factors contributing to limiting the threat of infections as a complication to care. Guidelines and recommendations are available on national basis. However, it is well known that compliance to these recommendations vary in different wards [1].

The spread of methicillin-resistant *Staphylococcus aureus* has become a serious threat to the care in numerous countries around the world. However, in the Nordic countries, MRSA is not endemic, but still outbreaks are reported occasionally. One important site harbouring MRSA is wounds. Recently there has also been alarming concern about wounds harbouring multiresistant Gram-negative species.

Chronic wounds are reported to be present in every fifth patient in hospital care [2]. In a point prevalence study including four hospitals and four communities in the Northeast of Skåne 2005 [3], it was reported a mean of 18% pressure ulcers (r=11-100%). In a study in Stockholm (2003-2004), the frequency was found to be 9-12% of the patient population in two hospitals, 36% of the geriatric clinics and 25% in the community elderly special accommodations [4].

A study was performed in Fjordungssjukrahusid in 2006 and 17% (18 patients) of the patients (n=119) were found to have pressure ulcers, the great majority (88%) Grade 1 and none grade 3 or 4 [5].

Patients with chronic wounds, such as leg and foot ulcers and pressure ulcers, are often repeatedly treated with antibiotics and there is a risk that some of these wounds host bacteria that have developed antibiotic resistance [6]. In a study from Uppsala [7], it has been reported that 60% of the patients with chronic wounds had repeated treatments with antibiotics during the last six months. In a point prevalence study at the Karolinska University hospital [4], two unknown cases of MRSA were identified.

Today, it is recommended to cleanse wounds before swabbing them. There is however weak evidence for this practice

Aims

- To investigate the availability and compliance of hygiene recommendations i) generally ii) in all staff iii) at wound dressing changes
- To investigate the frequency of wounds of different etiologies, wound treatment routines for these wounds and the frequency of multi resistant gram-negative bacteria, methicillin resistant *Staphylococcus aureus* (MRSA), Vancomycin Resistant Enterococker, (VRE) and *Pseudomonas aeruginosa* and other potentially pathogenic wound bacteria.
- To investigate bacterial loads before and after wound cleansing.

Research Questions

1. Are hygiene guidelines available at the ward?
2. What are the general and staff-related hygiene standards at the respective ward, and what hygiene standards are present at wound dressing changes?
3. What is the frequency of leg-, foot-, pressure ulcers and other wounds in the hospital, and how are these wounds treated?
4. Can multi resistant Gram-negative bacteria, methicillin resistant *Staphylococcus aureus* (MRSA), Vancomycin Resistant Enterococci, (VRE) and other potentially pathogenic bacteria be identified in these wounds?
5. Is there a difference in microbiological quantity and quality before and after wound cleansing?

Method

The study was designed as a point-prevalence study and took place at one preset day in October 2006.

Prior to the present study, information was given to the Management and all wards (N=10) in Fjordungssjúkrahúsíð (Ólína Torfadóttir).

One research nurse/ward was allocated to perform the data collection during one pre-set day. These nurses were carefully instructed, and forms were test-filled in and questions answered by researchers from Kristianstad University and by the director of Nursing in Fjordungssjúkrahúsíð (Ólína Torfadóttir).

During the day of the study, the researchers from Kristianstad, Christina Lindholm and Kerstin Ulander, and the Director of Nursing were available for solving potential problems. The questionnaires were collected and distributed to the research coordinator at the University of Kristianstad for data-analysis.

Hygiene routines

Inclusion

All units/wards (N= 10) at Fjordungssjúkrahúsíð in Akureyri participated. One research nurse on each ward was responsible for the study on that specific ward and performed the data collection (Forms A-F). Form A comprised availability of general hygiene routines of the ward and actual performance, Form B was an observational scheme aimed at capturing the basic hygiene standards in all staff working on the specific study day. Form C was an observational scheme comprising hygiene routines at wound dressing changes.

Wounds

Definition of wounds

Pressure ulcers grade 2-4 and leg- and foot-ulcers. Other wounds: post surgical wounds, abdominal wounds, traumatic wounds, burns and other wounds.

All wounds which were present on the study day were included. Forms E-F were designed to capture data on diagnosis and care of leg-and foot ulcers, pressure ulcers and other wounds. All wounds were swabbed for bacterial growth pre- and post cleansing.

The hospital and the units/wards received their results after the study, and could take actions considering findings that were shown in the study.

The total report will be available for the Management of the hospital.

Previous experience of the study methodology

The methodology for collecting data and swabs from wounds has previously been practiced by the first author in Uppsala University hospital [8] and in Karolinska University Hospital, Solna [2]. The technique with point prevalence studies has also been used in Skåne [3, 9, 10] in Stockholm [2, 11] and in Akureyri, Iceland [5, 12]. One responsible nurse per ward has been responsible for the datacollection in all these pre-study cases, in some cases assisted by nurse students. The methodology needs careful information, preparation and education of the data collecting nurses.

Results

A total number of 159 staff from 10 wards participated in the study. A total number of 11 patients with wounds participated in the study.

Scheme A, General questions about the ward

Table 1, Participating wards

Unit/Ward	Number of patients at the ward	Number of staff daytime	Number of staff evening	Number of staff on every patient
Bäklunardeild	10	11	5	1,6
Childrenadeild	10	10	2	1,2
Endurhæfingadeild	19	7	2	0,5
Gjöräsla	5	12	4	3,2
Handlækningadeild	11	18	3	1,9
Kvennadeild	11	12	4	1,5
Lyflækningadeild 1	24	22	9	1,3
Lyflækningadeild 2	9	6	1	0,8
SEL - sjukhem	21	15	6	1,0
Öldrunarlækninadeild	19	6	3	0,5
Total	139	119	39	
Mean	13,9	11,9	3,9	1,3

Number of personnel on every patient

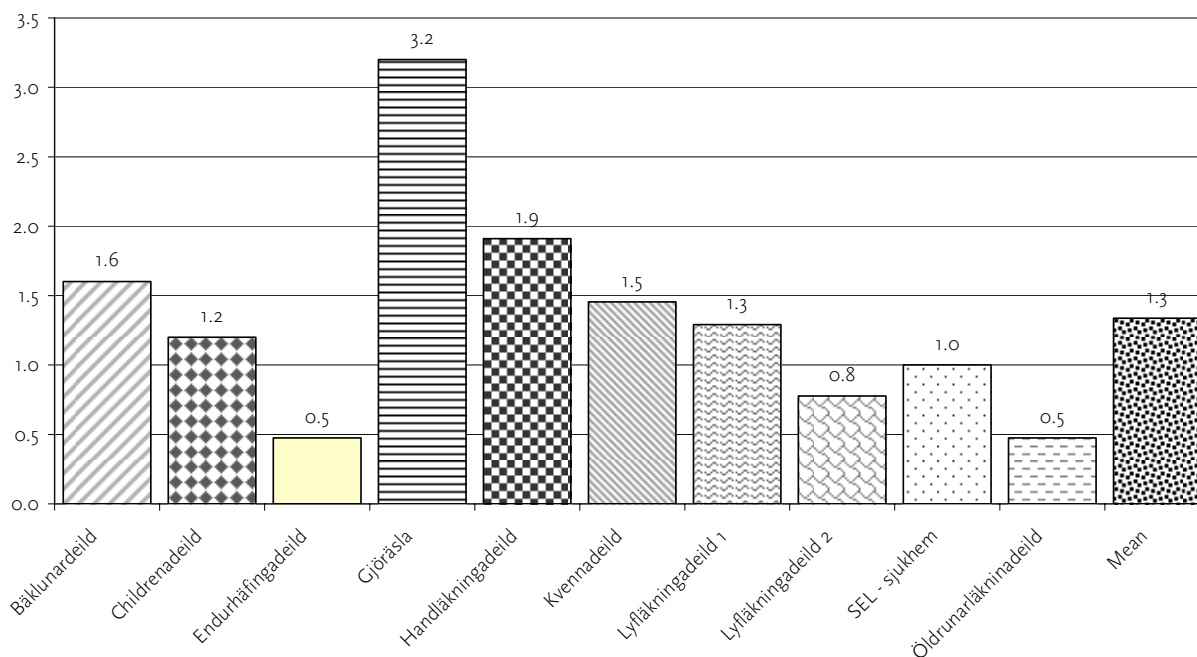


Figure 1, Number of personnel on every patient

Table 2, Professional background

Unit/Ward	Number of registered nurses	% of registered nurses of the personnel	Number of other nurses	Number of other personnel
Bäcklunardeild	5	31%	3	8
Childrenadeild	6	50%	4	2
Endurhæfingadeild	4	44%	2	3
Gjörašla	9	56%	2	5
Handlækningadeild	6	29%	2	13
Kvennadeild	7	44%	2	7
Lyflækningadeild 1	9	28%	9	14
Lyflækningadeild 2	5	63%	0	3
SEL - sjúkhem	3	14%	10	8
Öldrunarlækninadeild	3	30%	4	3
Total	57	35%	38	66

Table 3, Number of automats/dispensers with hand-disinfection at the wards

Unit/Ward	Total	Number of hand-disinfection automats per personnel	Number of hand-disinfection automats per patient
Bäklunardeild	14	0,9	1,4
Childrenadeild	23	1,9	2,3
Endurhæfingadeild	16	1,8	0,8
Gjöræsla	20	1,3	4,0
Handlækningadeild	15	0,7	1,4
Kvennadeild	22	1,4	2,0
Lyflækningadeild 1	22	0,7	0,9
Lyflækningadeild 2	9	1,1	1,0
SEL - sjukhem	27	1,3	1,3
Öldrunarlækninadeild	13	1,3	0,7
Total	181	1,1	1,3

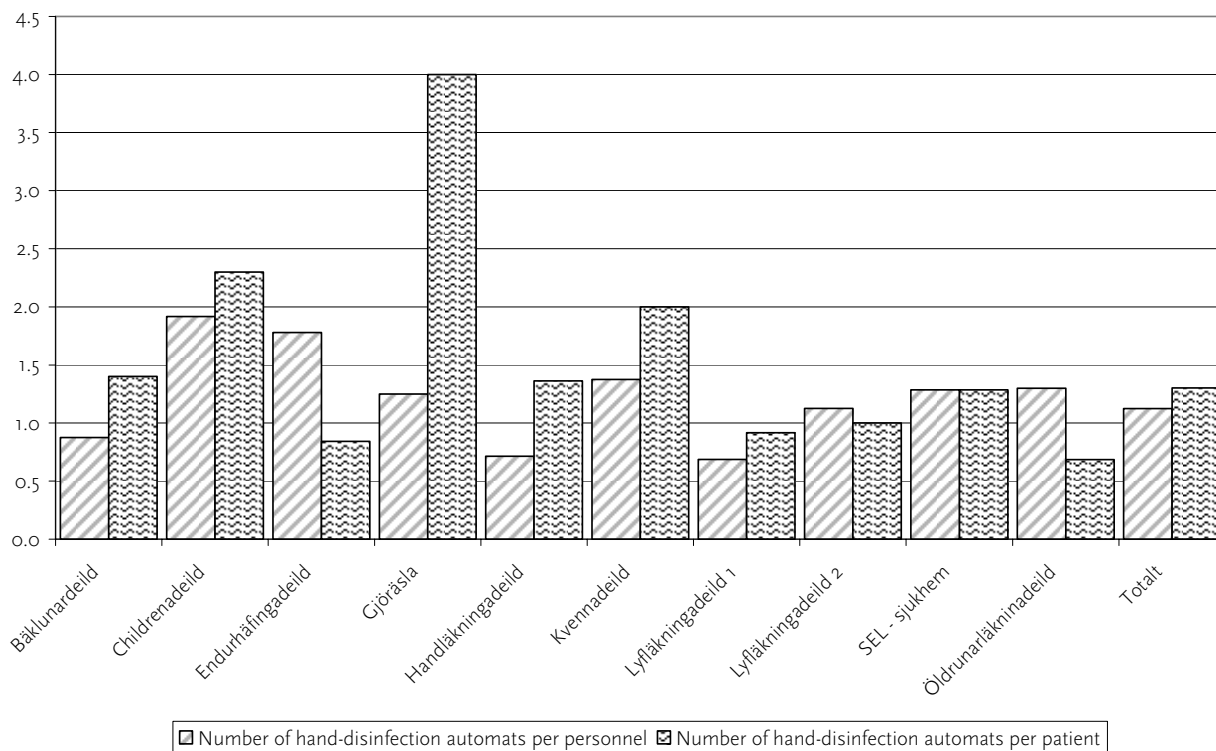


Figure 2, Hand disinfection automats

Table 4, Instructions available for general hygiene routines*

	In a file or electronically instructions?	Instructions as a poster?	Instructions for newly employed personnel?
Bäklunardeild	1		
Childrenadeild		1	1
Endurhæfingadeild		1	1
Gjöräsla		1	
Kvennadeild		1	
Lyfläkningadeild 1		1	1
Lyfläkningadeild 2		1	
Öldrunarläkninadeild		1	1
Total	1	7	4

* No instructions available recorded in Handlækningadeild and SEL – sjukhem.

Table 5, Apron in use

	Type of protective apron		Change of apron		Total
	Plastic apron	Plastic apron and other protective apron	No apron	No apron	
Unit/Ward	Every occasion	Every occasion	Occasionally	No apron	
Bäklunardeild			1		1
Childrenadeild		1			1
Endurhæfingadeild				1	1
Gjöräsla			1		1
Handlækningadeild			1		1
Kvennadeild	1				1
Lyfläkningadeild 1			1		1
Lyfläkningadeild 2				1	1
SEL - sjukhem			1		1
Öldrunarläkninadeild				1	1
Total	1	1	5	3	10

Type of apron and changing routines, number of wards

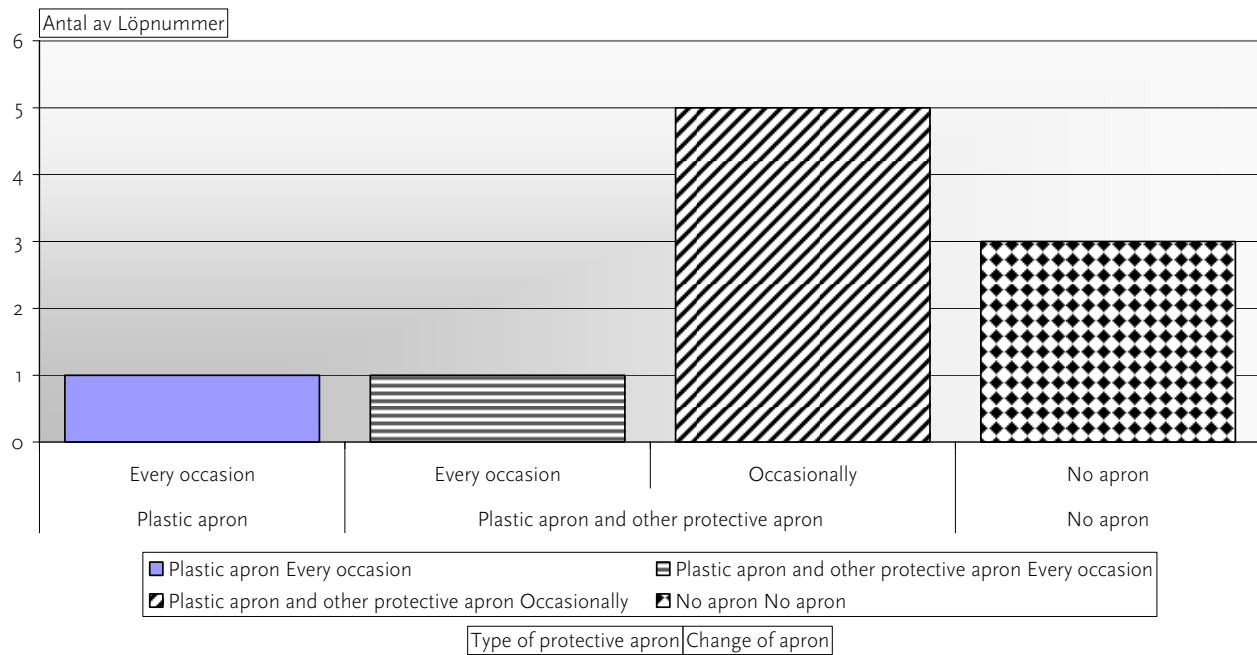


Figure 3, Type of apron and changing routines

Scheme B, Individual observations of hygiene for each staff

Table 6, Total number of observed staff (N=159)

Unit/Ward	Total	%
Barnadeild	12	8%
Bäklunardeild	16	10%
Endurhæfingadeild	9	6%
Gjörsla	16	10%
Handlækningadeild	20	13%
Kvennadeild	16	10%
Lyflækningadeild 1	32	20%
Lyflækningadeild 2	7	4%
SEL - sjukhem	21	13%
Öldrunarlækninadeild	10	6%
Total	159	100%

Table 7, Working shift

Unit/Ward	08-16	% daytime	16-21	% evening shift	Total
Barnadeild	10	83%	2	17%	12
Bäklunardeild	11	69%	5	31%	16
Endurhäfingadeild	7	78%	2	22%	9
Gjörsla	12	75%	4	25%	16
Handlækningadeild	17	85%	3	15%	20
Kvennadeild	12	75%	4	25%	16
Lyflækningadeild 1	23	72%	9	28%	32
Lyflækningadeild 2	6	86%	1	14%	7
SEL - sjukhem	14	67%	7	33%	21
Öldrunarlækninadeild	7	70%	3	30%	10
Total	119	75%	40	25%	159

Table 8, Profession

Unit/Ward	Registered nurse	MD	Other Nurse	Other staff	No answer	Total	% Registered nurses	% MD	% Other nurses	% Other staff
Bäklunardeild	5	4	3	4		16	31%	25%	19%	25%
Childrenadeild	6	4		2		12	50%	33%	0%	17%
Endurhäfingadeild	4	1	2	2		9	44%	11%	22%	22%
Gjörsla	9	4	2	1		16	56%	25%	13%	6%
Handlækningadeild	6	4	3	7		20	30%	20%	15%	35%
Kvennadeild	9	2	2	3		16	56%	13%	13%	19%
Lyflækningadeild 1	9	9	5	9		32	28%	28%	16%	28%
Lyflækningadeild 2	4			2	1	7	57%	0%	0%	29%
SEL - sjukhem	3		10	8		21	14%	0%	48%	38%
Öldrunarlækninadeild	3		5	2		10	30%	0%	50%	20%
Total	58	28	32	40	1	159	36%	18%	20%	25%

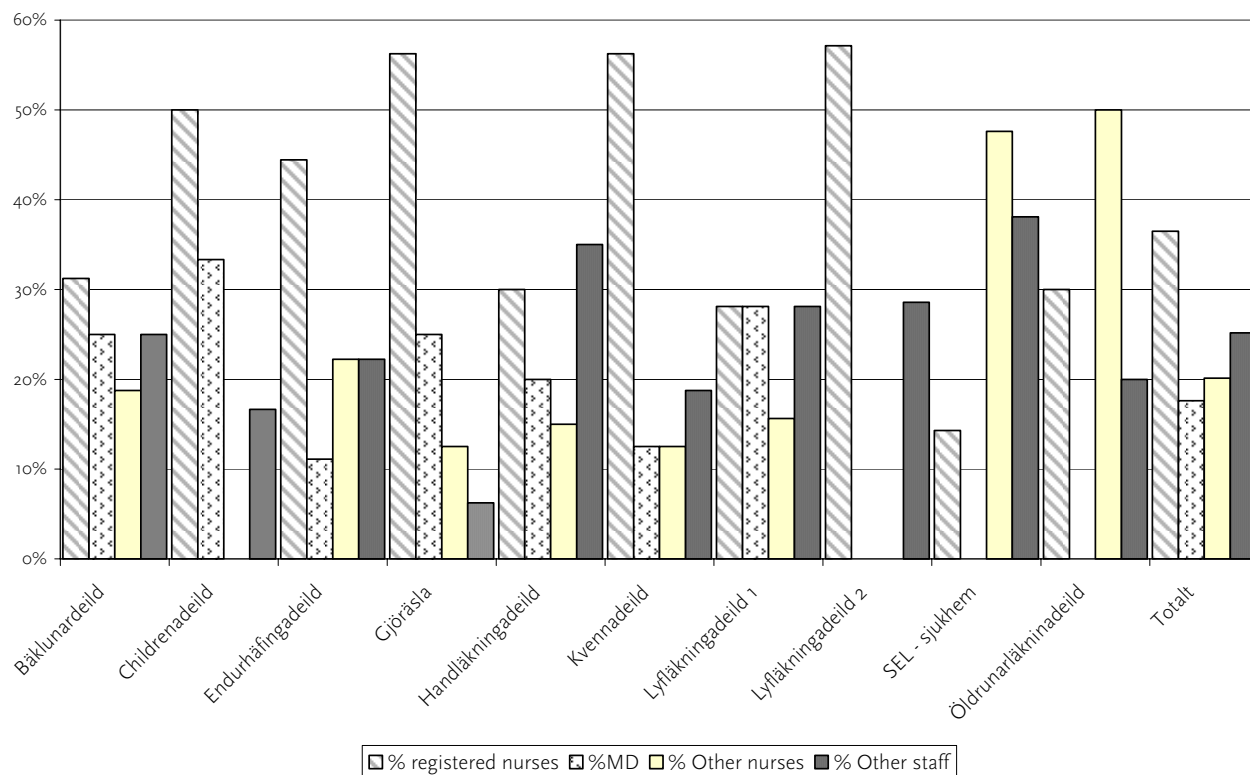


Figure 4, Profession

Table 9, Gender of the personnel

Unit/Ward	Female	Male	Total	% Female
Bäcklunardeild	13	3	16	81%
Childrenadeild	10	2	12	83%
Endurhæfingadeild	8	1	9	89%
Gjörsla	13	3	16	81%
Handlækningadeild	17	3	20	85%
Kvennadeild	15	1	16	94%
Lyflækningadeild 1	23	9	32	72%
Lyflækningadeild 2	7	0	7	100%
SEL - sjúkhem	21	0	21	100%
Öldrunarlækninadeild	10	0	10	100%
Total	137	22	159	86%

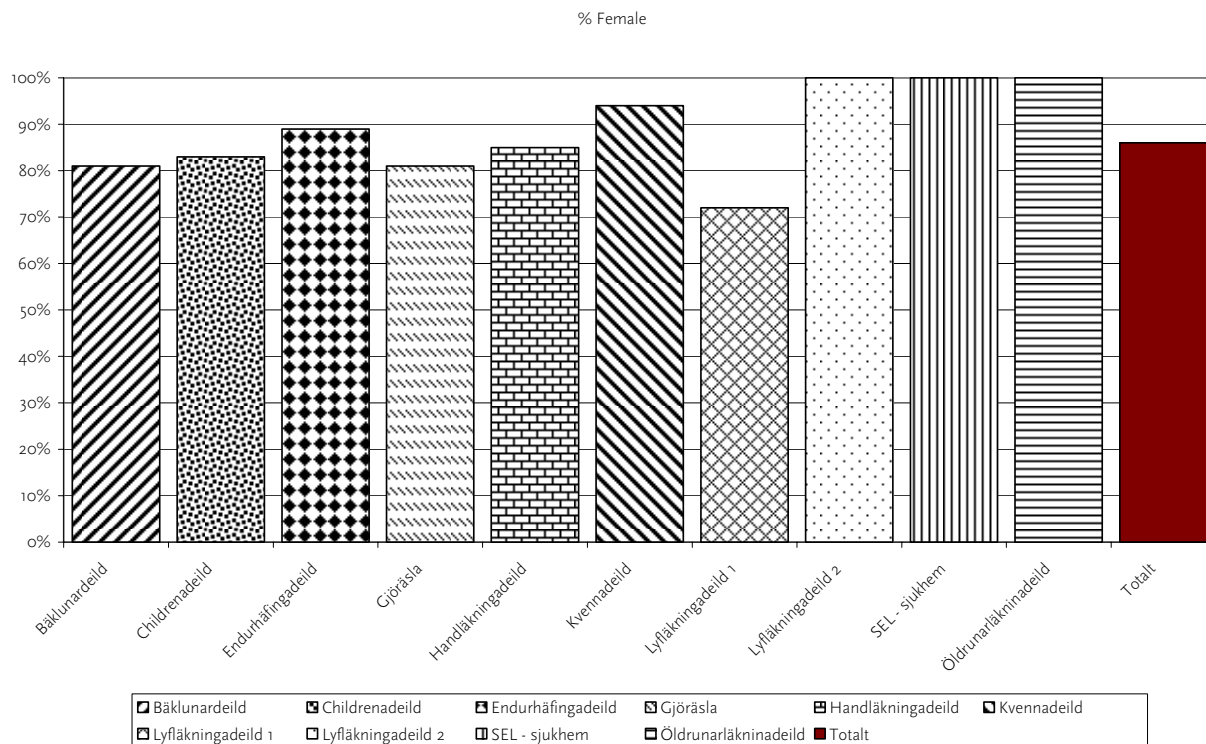


Figure 5, Gender

Table 10, Working experience, number of years in care-profession

Unit/Ward	Mean	Number of answers	% of answers
Bäcklunardeild	18,2	12	75%
Childrenadeild	15,3	12	100%
Endurhæfingadeild	23,7	9	100%
Gjørásla		0	0%
Handlækningadeild	14,7	17	85%
Kvennadeild	17,3	16	100%
Lyflækningadeild 1	12,7	11	34%
Lyflækningadeild 2		0	0%
SEL - sjukhem	22,2	21	100%
Öldrunarlækninadeild	25,9	10	100%
Total	18,6	108	68%

Table 11, Uniform (working clothes) at work

Unit/Ward	Yes	No	Total	% Yes	Long sleeves	Short sleeves	No answer	% of short sleeves
Báklunardeild	16		16	100%	6	10		63%
Childrenadeild	11	1	12	92%	3	8		73%
Endurhæfingadeild	8	1	9	89%		8		100%
Gjöræsla	16		16	100%	2	14		88%
Handlækningadeild	20		20	100%	5	14	1	70%
Kvennadeild	15	1	16	94%	2	13		87%
Lyflækningadeild 1	32		32	100%	8	24		75%
Lyflækningadeild 2	7		7	100%		7		100%
SEL - sjúkhem	21		21	100%	6	15		71%
Öldrunarlækninadeild	10		10	100%	1	9		90%
Total	156	3	159	98%	33	122	1	78%

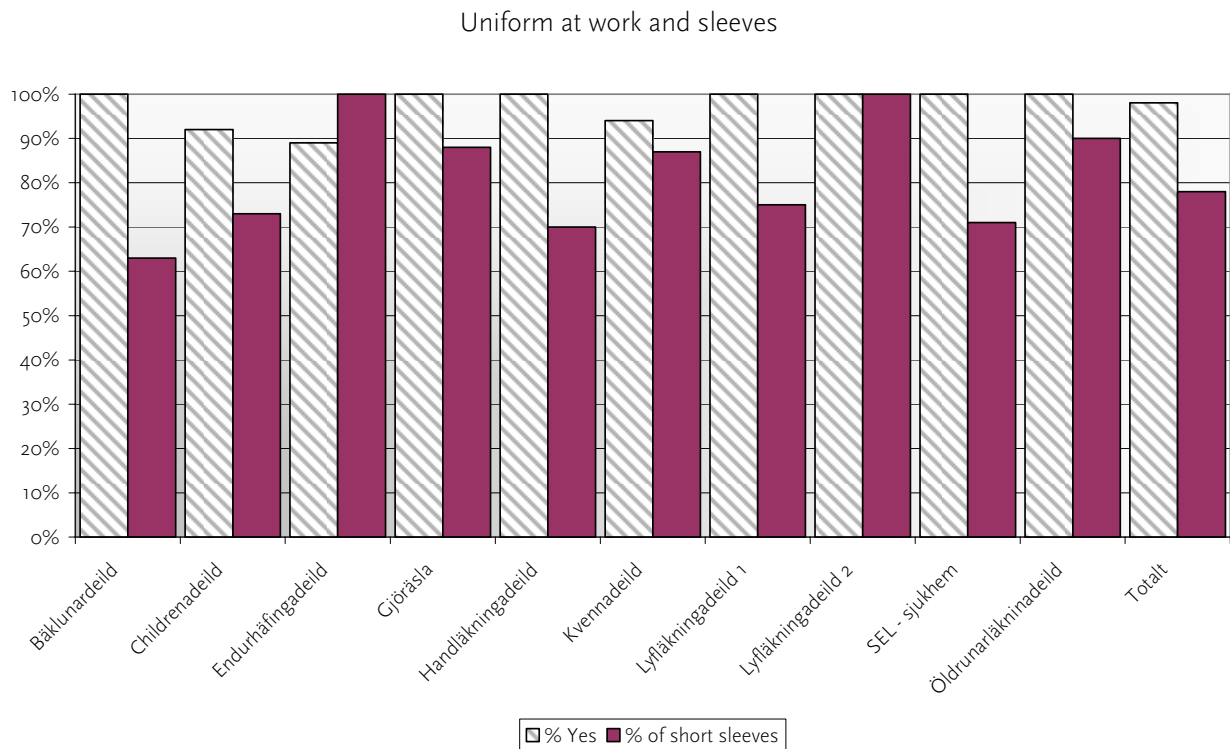


Figure 6, Uniform and sleeves

Table 12, Last change of working clothes

Unit/Ward	Today	Yesterday	2 days ago	More than 2 days ago	No answer	% Today
Bäklunardeild	11	1	2	2		69%
Childrenadeild	8			3		73%
Endurhæfingadeild	7	1				88%
Gjöräsla	13	1		2		81%
Handlækningadeild	12	3	2	3		60%
Kvennadeild	11	2		2		73%
Lyflækningadeild 1	19	5	2	5	1	59%
Lyflækningadeild 2	6	1				86%
SEL - sjukhem	19	1	1			90%
Öldrunarlækninadeild	9			1		90%
Total	115	15	7	18	1	74%

Change of uniform

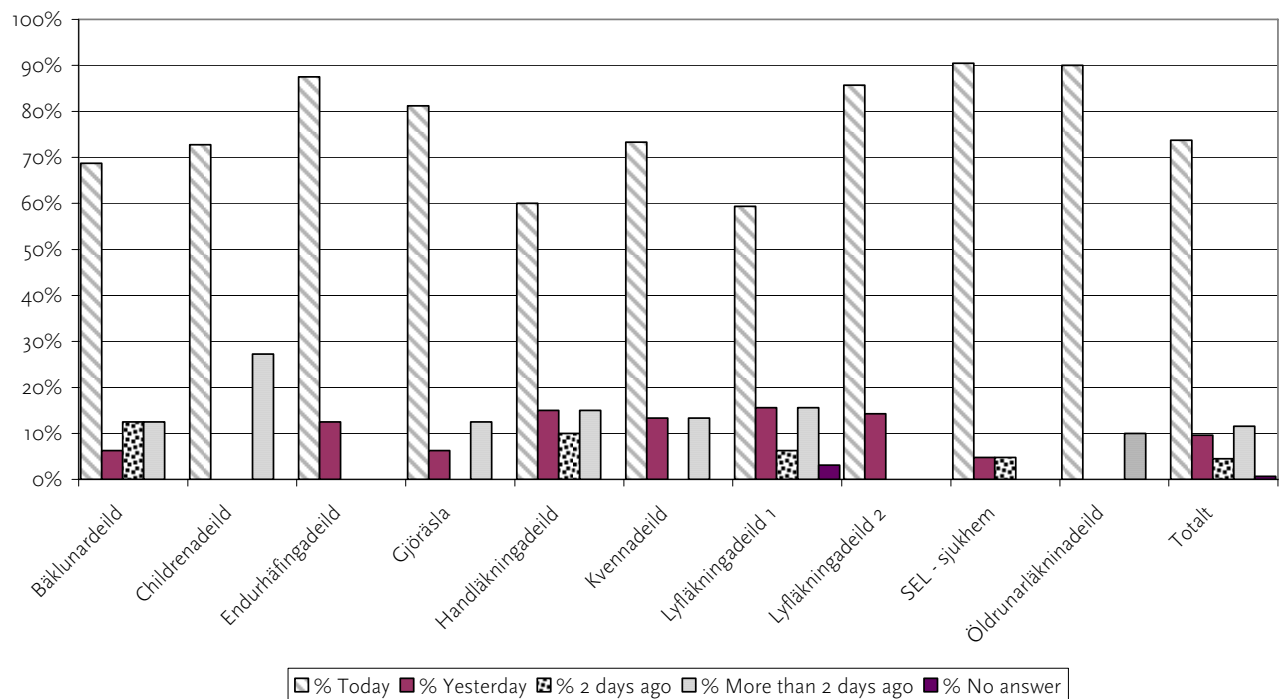


Figure 7, Changing of uniform

Table 13, Use of private clothes at work

Unit/Ward	Yes	No	No answer	Total	Long sleeves	Short sleeves	% short sleeves
Bäklunardeild	9	7		16	7	2	22%
Childrenadeild	8	4		12	7	1	13%
Endurhæfingadeild	2	7		9	2		0%
Gjöräsla	2	14		16	2		0%
Handlækningadeild	6	13	1	20	5	1	17%
Kvennadeild	4	12		16	3	1	25%
Lyflækningadeild 1	11	21		32	9	2	18%
Lyflækningadeild 2		7		7			
SEL - sjukhem	5	16		21	4	1	20%
Öldrunarlækninadeild	2	7	1	10	1	1	50%
Total	49	108	2	159	40	9	18%

Table 14, Presence of long hair

Unit/Ward	Yes	No	No answer	Total	% Long hair
Bäklunardeild	9	7		16	56%
Childrenadeild	7	4	1	12	58%
Endurhæfingadeild	1	8		9	11%
Gjöräsla	2	13	1	16	13%
Handlækningadeild	5	12	3	20	25%
Kvennadeild	3	12	1	16	19%
Lyflækningadeild 1	11	21		32	34%
Lyflækningadeild 2	2	5		7	29%
SEL - sjukhem	5	16		21	24%
Öldrunarlækninadeild	2	6	2	10	20%
Total	47	104	8	159	30%

Long hair and wearing it up

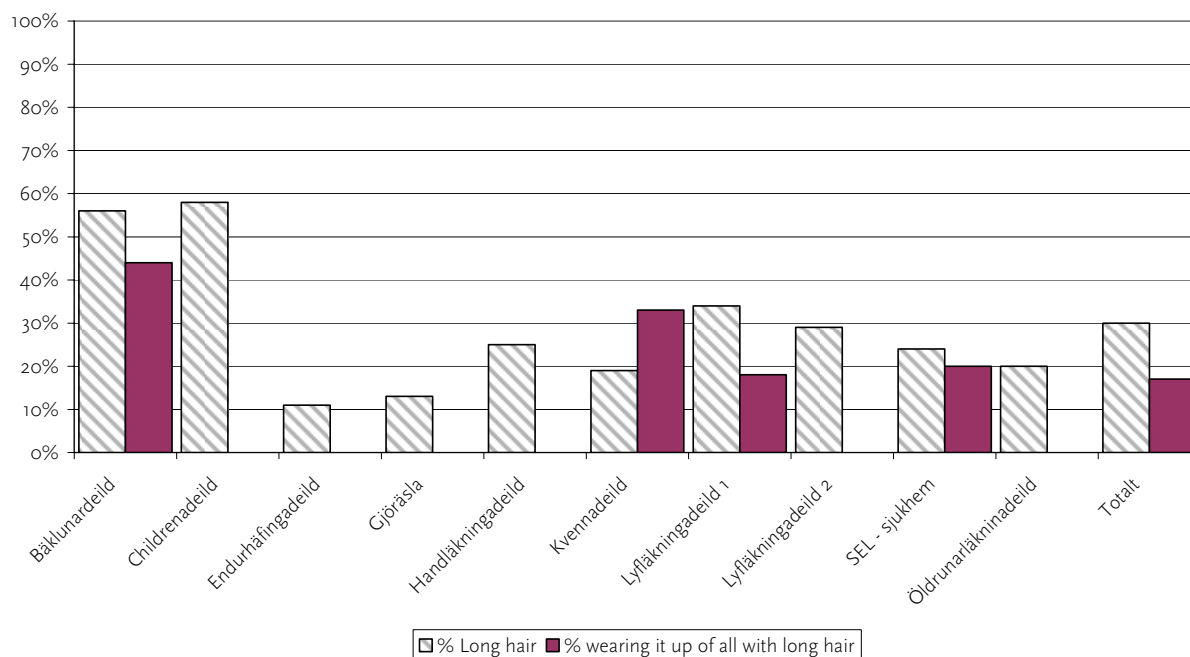


Figure 8, Long hair and wearing it up

Table 15, Presence of wearing the long hair up

Unit/Ward	Yes, wearing it up	No, not up	No answer	Total	% wearing it up of all with long hair
Bäklunardeild	4	1	4	9	44%
Childrenadeild		3	4	7	0%
Endurhæfingadeild			1	1	0%
Gjørásla			2	2	0%
Handlækningadeild			5	5	0%
Kvennadeild	1		2	3	33%
Lyflækningadeild 1	2		9	11	18%
Lyflækningadeild 2			2	2	0%
SEL - sjúkhem	1		4	5	20%
Öldrunarlækninadeild		1	1	2	0%
Total	8	5	34	47	17%

Table 16, Presence of rings, jewels

Unit/Ward	Yes	No	No answer	Total	% wearing jewels
Bäklunardeild	8	8		16	50%
Childrenadeild	9	3		12	75%
Endurhæfingadeild	4	5		9	44%
Gjørásla	10	6		16	63%
Handlækningadeild	6	13	1	20	30%
Kvennadeild	6	10		16	38%
Lyflækningadeild 1	15	17		32	47%
Lyflækningadeild 2	4	3		7	57%
SEL - sjúkhem	9	12		21	43%
Öldrunarlækninadeild	1	9		10	10%
Total	72	86	1	159	45%

Jewels

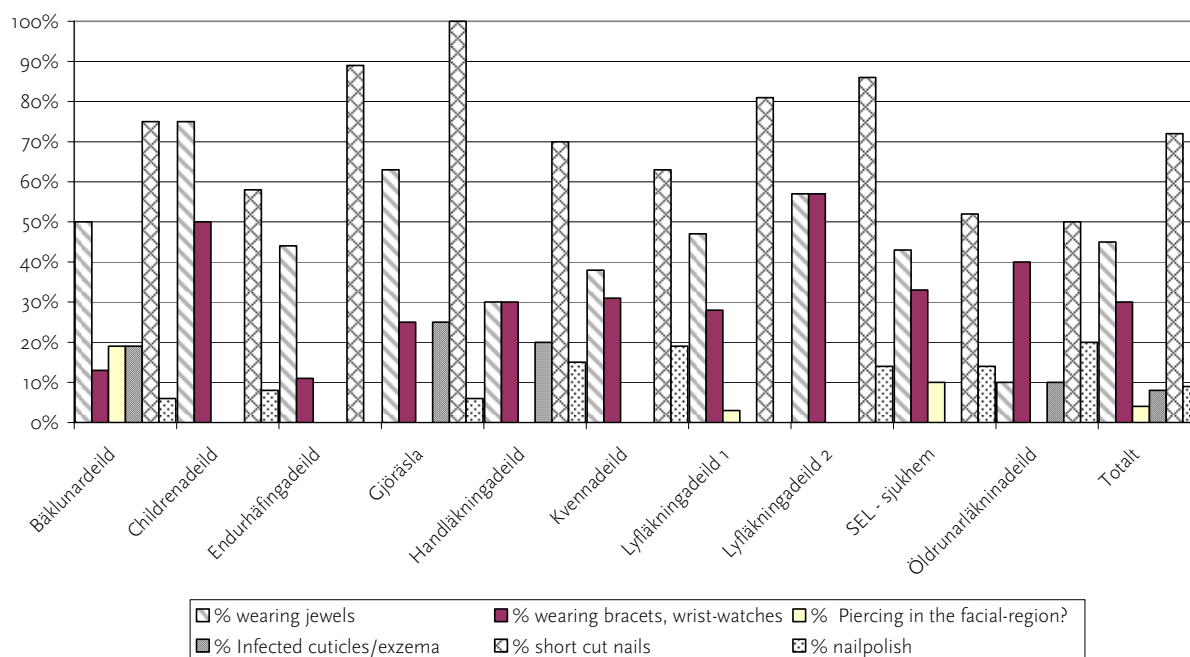


Figure 9, Jewellery

Table 17, Presence of bracelets, and/or wrist-watches

Unit/Ward	Yes	No	No answer	Total	% wearing bracelets, wrist-watches
Bäcklunardeild	2	14		16	13%
Childrenadeild	6	6		12	50%
Endurhæfingadeild	1	8		9	11%
Gjørásla	4	12		16	25%
Handlækningadeild	6	13	1	20	30%
Kvennadeild	5	11		16	31%
Lyflækningadeild 1	9	23		32	28%
Lyflækningadeild 2	4	2	1	7	57%
SEL - sjúkhem	7	14		21	33%
Öldrunarlækninadeild	4	6		10	40%
Total	48	109	2	159	30%

Table 18, Piercing in the facial-region

Unit/Ward	Yes	No	No answer	Total	% Piercing in the facial-region?
Bäklunardeild	3	12	1	16	19%
Childrenadeild		12		12	0%
Endurhäfingadeild		9		9	0%
Gjöräsla		16		16	0%
Handlækningadeild		19	1	20	0%
Kvennadeild		16		16	0%
Lyflækningadeild 1	1	30	1	32	3%
Lyflækningadeild 2		6	1	7	0%
SEL - sjukhem	2	19		21	10%
Öldrunarlækninadeild		10		10	0%
Total	6	149	4	159	4%

Table 19, Infected nailbeds/eczema

Unit/Ward	Yes	No	Total	% Infected cuticles/exzema
Bäklunardeild	3	13	16	19%
Childrenadeild		12	12	0%
Endurhäfingadeild		9	9	0%
Gjöräsla	4	12	16	25%
Handlækningadeild	4	16	20	20%
Kvennadeild		16	16	0%
Lyflækningadeild 1		32	32	0%
Lyflækningadeild 2		7	7	0%
SEL - sjukhem		21	21	0%
Öldrunarlækninadeild	1	9	10	10%
Total	12	147	159	8%

Table 20, Presence of short cut nails, cosmetic nails and nailpolish

Unit/Ward	Yes	No	No answer	Total	% short cut nails	Cosmetic nails?	Nailpolish?	% nailpolish
Bäklunardeild	12	4		16	75%		1	6%
Childrenadeild	7	5		12	58%		1	8%
Endurhäfingadeild	8	1		9	89%			0%
Gjöräsla	16			16	100%		1	6%
Handlækningadeild	14	5	1	20	70%	2	3	15%
Kvennadeild	10	6		16	63%		3	19%
Lyflækningadeild 1	26	6		32	81%			0%
Lyflækningadeild 2	6	1		7	86%		1	14%
SEL - sjukhem	11	10		21	52%		3	14%
Öldrunarlækninadeild	5	5		10	50%		2	20%
Total	115	43	1	159	72%	2	15	9%

Table 21, Use gloves when in contact with body-fluids

Unit/Ward	Yes	Occasionally	No	No answer	Total	% using gloves Yes	% wearing gloves occasionally	% not wearing gloves
Báklunardeild	8	8			16	50%	50%	0%
Childrenadeild	9	1	1	1	12	75%	8%	8%
Endurhæfingadeild	9				9	100%	0%	0%
Gjörásla	14	2			16	88%	13%	0%
Handlækningadeild	7	10	3		20	35%	50%	15%
Kvennadeild	15			1	16	94%	0%	0%
Lyflækningadeild 1	29	3			32	91%	9%	0%
Lyflækningadeild 2	7				7	100%	0%	0%
SEL - sjúkhem	16	4	1		21	76%	19%	5%
Öldrunarlækninadeild	10				10	100%	0%	0%
Total	124	28	5	2	159	78%	18%	3%

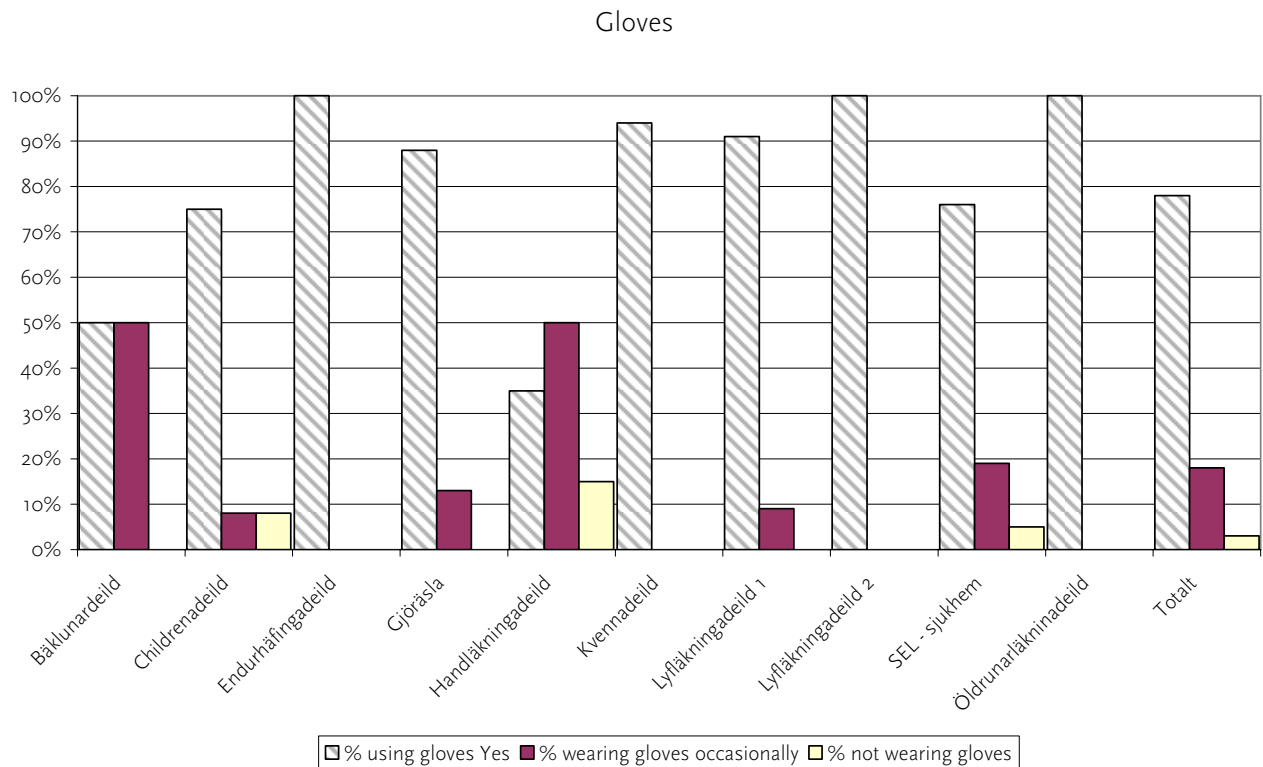


Figure 10, Gloves

Scheme C, Observation of staff involved in wound treatment

Table 22, Number of observed staff involved in wound treatment, (N=13)

Unit/Ward3	Total
Endurhäfingadeild	1
Handlækningadeild	1
Kvennadeild	2
Lyflækningadeild	8
SEL - sjukhem	1
Total	13

Table 23, Professional background

Unit/Ward3	Registered Nurse	MD	Total
Endurhäfingadeild	1		1
Handlækningadeild	1		1
Kvennadeild	1	1	2
Lyflækningadeild	6	2	8
SEL - sjukhem	1		1
Total	10	3	13

Table 24, Gender/profession

Gender/profession	Female	Male	Total
Unit/Ward	Registered Nurse	MD	
Endurhäfingadeild	1		1
Handlækningadeild	1		1
Kvennadeild	1	1	2
Lyflækningadeild	6	2	8
SEL - sjukhem	1		1
Total	10	3	13

Table 25, Number of patients with wounds

Unit/Ward3	Total
Endurhäfingadeild	1
Handlækningadeild	1
Kvennadeild	1
Lyflækningadeild	7
SEL - sjukhem	2
Total	12

Table 26, Long hair wearing up

Unit/Ward3	Yes	No	No answer	Total	% Yes
Endurhäfingadeild		1		1	0%
Handlækningadeild		1		1	0%
Kvennadeild	1	1		2	50%
Lyflækningadeild	3	1	4	8	38%
SEL - sjukhem			1	1	0%
Total	4	4	5	13	31%

Do you wear your hair up? If long hair only.

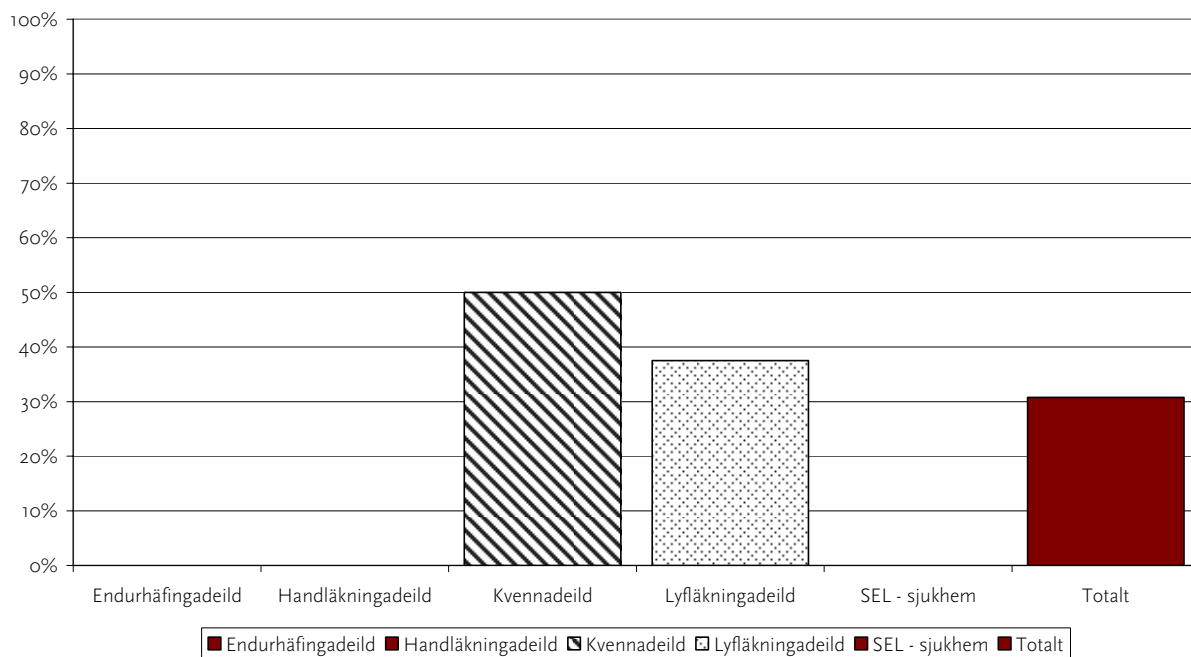


Figure 11, Wearing the long hair up

Table 27, Removal of rings/jewelry before handling the wounds

Unit/Ward3	Yes	No	Total	% Yes
Endurhäfingadeild		1	1	0%
Handlækningadeild		1	1	0%
Kvennadeild	1	1	2	50%
Lyflækningadeild	3	5	8	38%
SEL - sjukhem		1	1	0%
Total	4	9	13	31%

Table 28, Removal of wrist watch/bracelets before handling the wound

Unit/Ward3	Yes	No	Total	% Yes
Endurhäfingadeild		1	1	0%
Handlækningadeild		1	1	0%
Kvennadeild		2	2	0%
Lyflækningadeild	1	7	8	13%
SEL - sjukhem		1	1	0%
Total	1	12	13	8%

Removal of jewels

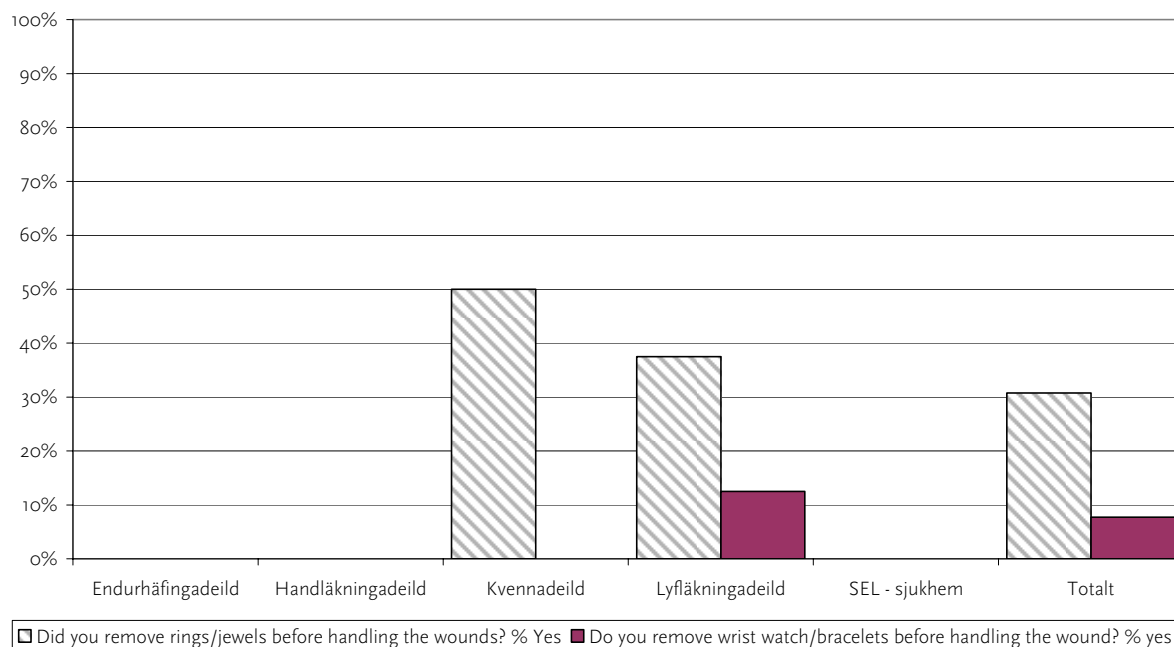


Figure 12, Removal of jewels

Table 29, Disinfection of hands with alcohol-based disinfection before handling the wound?

Unit/Ward3	Yes	No	Total	% Yes
Endurhäfingadeild	1		1	100%
Handlækningadeild	1		1	100%
Kvennadeild		2	2	0%
Lyflækningadeild	3	5	8	38%
SEL - sjukhem	1		1	100%
Total	6	7	13	46%

Table 30, Disinfection of hands with alcohol-based disinfection after handling the wound?

Unit/Ward ₃	Yes	No	Total	% Yes
Endurhäfingadeild	1		1	100%
Handlækningadeild	1		1	100%
Kvennadeild	1	1	2	50%
Lyflækningadeild	3	5	8	38%
SEL - sjukhem		1	1	0%
Total	6	7	13	46%

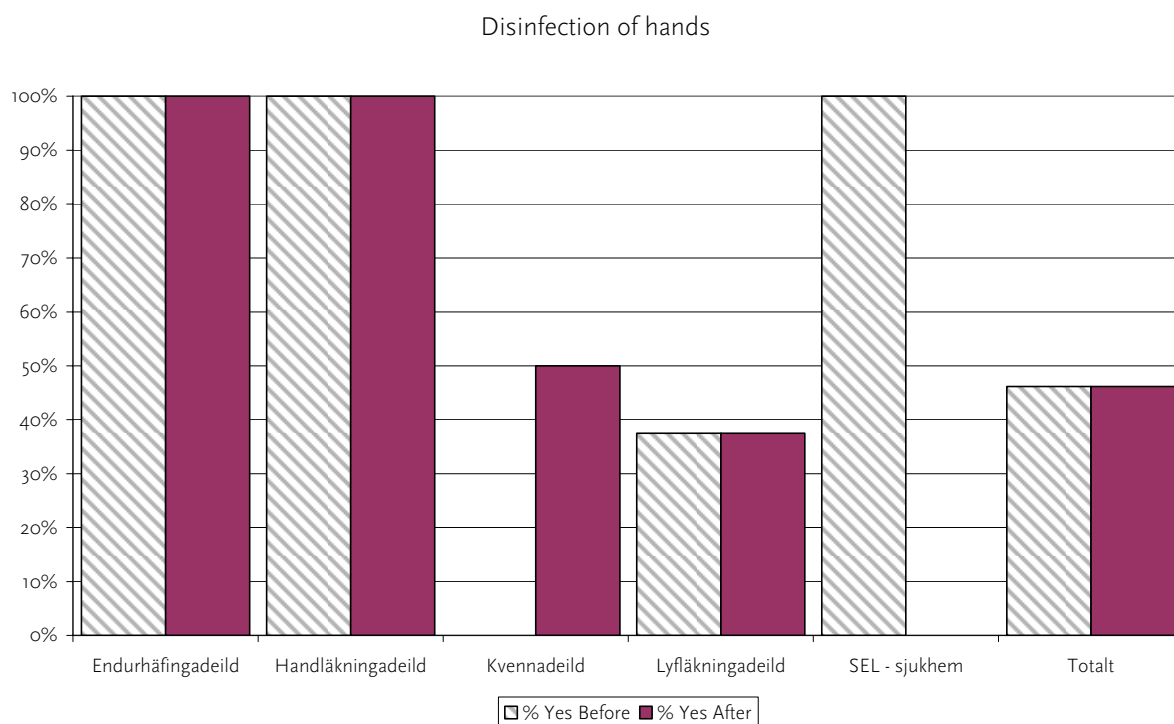


Figure 13, Disinfection of hands

Table 31, Application of hand disinfectant (alcohol)

Unit/Ward ₃	The disinfection is carefully applied on the hands from the tip of the fingers, Yes	in between the fingers, Yes	in the thumb-region, Yes	on the forearms, Yes
Endurhäfingadeild	1	1	1	
Handlækningadeild		1	1	
Kvennadeild	1	1	1	1
Lyflækningadeild	3	3	2	2
SEL - sjukhem				
Total	5	6	5	3

Table 32, Method used for hand disinfection

Unit/Ward ₃	One press	Two presses	Automatic dispenser	No answer	Total
Endurhäfingadeild	1				1
Handlækningadeild		1			1
Kvennadeild	1			1	2
Lyflækningadeild	1	1	1	5	8
SEL - sjukhem		1			1
Total	3	3	1	6	13

Table 33, Gloves at wound dressing changes

Unit/Ward ₃	Yes	No	Total	Do you use gloves when changing wound dressing/handling the wound?, % Yes
Endurhäfingadeild	1		1	100%
Handlækningadeild	1		1	100%
Kvennadeild	1	1	2	50%
Lyflækningadeild	7	1	8	88%
SEL - sjukhem	1		1	100%
Total	11	2	13	85%

Do you use gloves when changing wound dressing/handling the wound?, % Yes

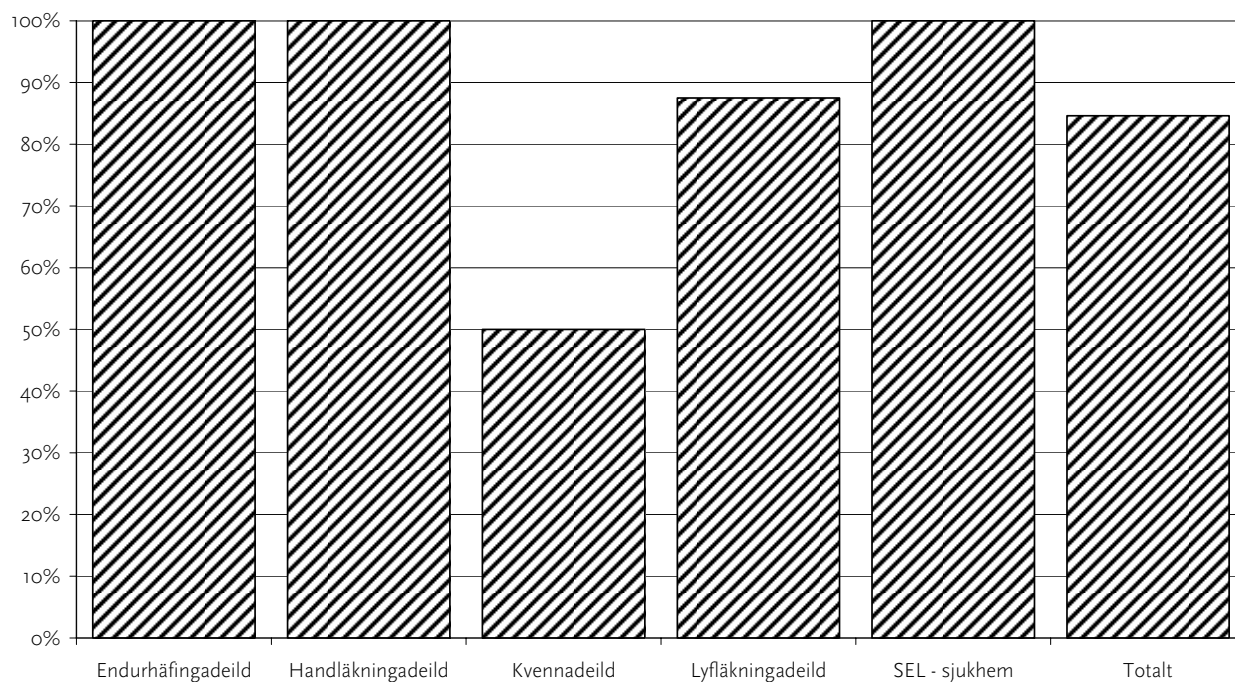


Figure 14, Gloves when handling the wound

Table 34, Gloves at wound dressing changes

Unit/Ward ³	No	Total	% No
Endurhäfingadeild	1	1	100%
Handlækningadeild	1	1	100%
Kvennadeild	2	2	100%
Lyflækningadeild	8	8	100%
SEL - sjukhem	1	1	100%
Total	13	13	100%

Table 35, Use of other protective apron when handling the wound?

Unit/Ward ³	No	No answer	Total	% No
Endurhäfingadeild	1		1	100%
Handlækningadeild	1		1	100%
Kvennadeild	2		2	100%
Lyflækningadeild	8		8	100%
SEL - sjukhem		1	1	0%
Total	12	1	13	92%

Wound characteristics

Scheme D+E+F, Pressure ulcers (none), Leg and Foot ulcers, Other type of ulcers/wounds

Table 36, frequencies of wounds

Unit/Ward	Scheme E, Leg and Foot ulcers	Scheme F, Other ulcer/wound	Total amount of wounds/ulcers
Endurhäfingadeild		1	1
Handlækningadeild		1	1
Kvennadeild		1	1
Lyflækningadeild	2	4	6
SEL - sjukhem	1	1	2
Total	3	8	11

Table 37, Type of wound

Table 35, Type of wound

Unit/Ward	Scheme E, Leg and Foot ulcers	Postsurgical wound	Traumatic wound	Other type of wound	Total amount of wounds/ulcers
Endurhäfingadeild		1			1
Handlækningadeild			1		1
Kvennadeild		1			1
Lyflækningadeild	2	1	1	2	6
SEL - sjukhem	1			1	2
Total	3	3	2	3	11

Table 38, Immunosuppressant drugs (cortison, cytostatic)?

Unit/Ward	No answer, Scheme F	No, Scheme E + F	Yes, scheme F	Total
Endurhäfingadeild		1		1
Handlækningadeild		1		1
Kvennadeild		1		1
Lyflækningadeild	1	4	1	6
SEL - sjukhem		2		2
Total	1	9	1	11

Table 39, Wound cleansing

Unit/Ward	Type of wound	Cause of wound?	The wound is cleansed with?				Total
			Tap water	NaCl	Iod	Klorhexidin	
Endurhäfingadeild	Other kind of wound/ulcer	Postsurgical woundinfection		1			1
Handlækningadeild	Other kind of wound/ulcer	Traumatic wound		1			1
Kvennadeild	Other kind of wound/ulcer	Postsurgical woundinfection				1	1
Lyflækningadeild 1	Leg/foot ulcer	Diabetes	1				1
		Mixed venous/arterial	1				1
	Other kind of wound/ulcer	Other wound		1	1		2
		Postsurgical woundinfection	1				1
		Traumatic wound		1			1
SEL - sjukhem	Leg/foot ulcer	Mixed venous/arterial	1				1
	Other kind of wound/ulcer	Traumatic wound	1				1
Total			5	4	1	1	11

Type of wound	Cause of wound?	The wound is cleansed with?				Total
		Tap water	NaCl	Iod	Chlorhexidin	
Leg/foot ulcer	Diabetes	1				1
	Mixed venous/arterial	2				2
Other kind of wound/ulcer	Other wound		1	1		2
	Postsurgical woundinfection	1	1		1	3
	Traumatic wound	1	2			3
Total		5	4	1	1	11
% of total		45%	36%	9%	9%	100%

Table 40, Wound cleansing agent

Unit/Ward	NaCl	Iod	Tap water	Chlorhexidin	Total
Endurhæfingadeild	1				1
Handlækningadeild	1				1
Kvennadeild				1	1
Lyflækningadeild	2	1	3		6
SEL - sjukhem			2		2
Total	4	1	5	1	11
%	36%	9%	45%	9%	100%

Wound cleansing with (% n=11)

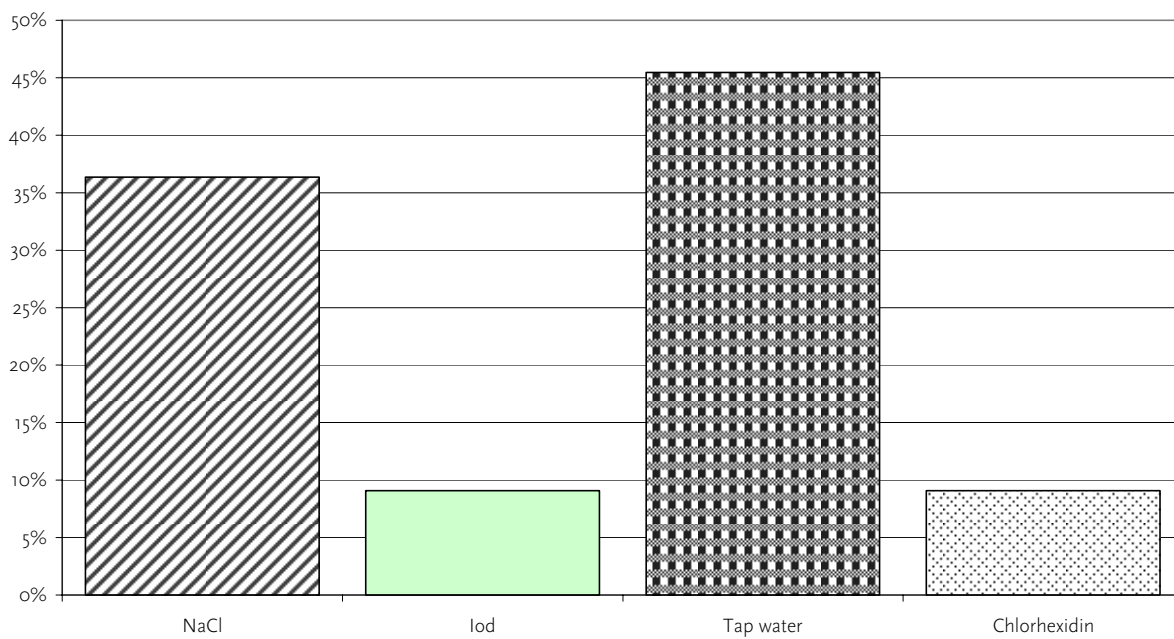


Figure 15, Wound cleansing

Table 41, Type of dressing

Unit/Ward	% vmb	Aquacel, Teqaderm	Atrauman, pvrr grisja, peahaft (Kling bindi)	Gas dressing	Mepore	Opsite postop, Smith Nephew	purrar grisjur + umbidapudi + mefix	Vaselin grisjur + mefix plástur	Allewyn	contreet pisti	Total
Endurhæfingadeild		1									1
Handlækningadeild								1			1
Kvennadeild				1							1
Lyflækningadeild	1		1		1		1		1	1	6
SEL - sjukhem						1			1		2
Total	1	1	1	1	1	1	1	1	2	1	11

Table 42, Number of dressing changes during one week

Unit/Ward	0	1	2	7	No record	Total
Endurhäfingadeild				1		1
Handlækningadeild					1	1
Kvennadeild				1		1
Lyflækningadeild	1		1	4		6
SEL - sjukhem		1	1			2
Total	1	1	2	6	1	11

Number of wound dressing changes during one week

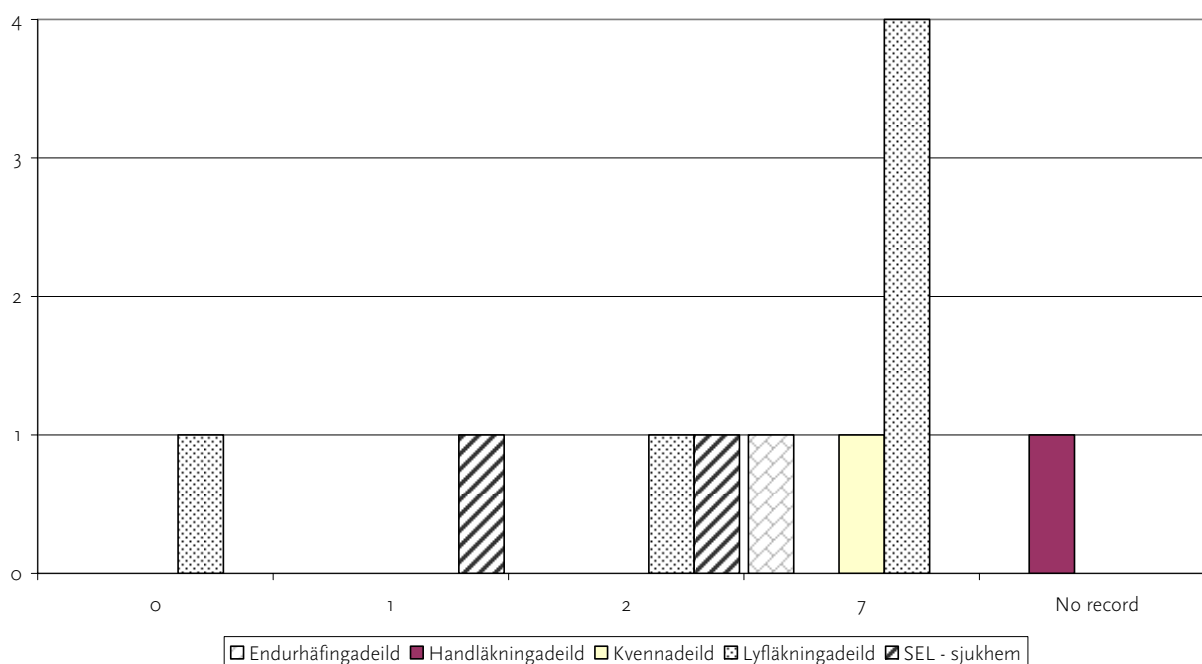


Figure 16, Wound dressing changes

Table 43, Wound microbiology pre- and post (inside brackets) cleansing

Type of wound	Cause of wound?	--- No growth	No cultivation made	Staph aureus +++	Staph aureus hemol gr A +++	Only after cleansing, (staph coag neg (+))	Non hemol enteroc sp +++ (++)	E coli +++ (++)	Non hemol. enteroc. sp. ++ (+)	Staph coag neg + ((+))	Total
Leg/foot ulcer	Diabetes					1					1
	Mixed venous/arterial			1	1						2
Other kind of wound/ulcer	Other wound	1							1		2
	Postsurgical wound/infection	1					1			1	3
	Traumatic wound	1	1	1							3
Total		3	1	2	1	1	1	1	1	1	11

Type of wound	The wound is cleansed with?	--- No growth	No cultivation made	Staph aureus +++	Staph aureus hemol gr A +++	Only after cleansing, (staph coag neg (+))	Non hemol enteroc sp +++ (+)	E coli +++ (++)	Non hemol. enteroc. sp. ++ (+)	Staph coag neg + ((+))	Total
Leg/foot ulcer	Tap water			1	1	1					3
Other kind of wound/ulcer	Iod	1									1
	Klorhexidin	1									1
	NaCl	1	1				1	1			4
	Tap water			1						1	2
Total		3	1	2	1	1	1	1	1	1	11

The wound is cleansed with?	<i>Staph aureus</i> +++	Only after cleansing, (staph coag neg (+))	Non hemol enteroc sp +++ (++)	Non hemol. enteroc. sp. ++ (+)	Staph coag neg + ((+))	--- No growth	No cultivation	Total
Iod						1		1
Klorhexidin						1		1
NaCl			1	1		1	1	4
Tap water	2	1	1		1			5
Total	2	1	1	1	1	3	1	11

Endurhäfingadeild	Non hemol enteroc sp +++ (++)	1
Handlækningadeild	No cultivation made	1
Kvennadeild	--- No growth	1
Lyflækningadeild 1	<i>Staph aureus</i> +++	1
	strept hemol gr A +++	1
	Only after cleansing, (staph coag neg (+))	1
	E coli +++ (++)	1
	Non hemol. enteroc. sp. ++ (+)	1
	Staph coag neg + ((+))	1
	--- No growth	2
SEL - sjukhem	<i>Staph aureus</i> +++	2
Total		11

<i>Staph aureus</i> +++	SEL - sjukhem	2
<i>Staph aureus</i> +++, strept hemol gr A +++	Lyfläkningadeild 1	1
Only after cleansing, (staph coag neg (+))	Lyfläkningadeild 1	1
Non hemol enteroc sp +++ (++)	Endurhæfingadeild	1
E coli +++ (++) , Non hemol. enteroc. sp. ++ (+)	Lyfläkningadeild 1	1
Staph coag neg + ((+))	Lyfläkningadeild 1	1
--- No growth	Kvennadeild	1
	Lyfläkningadeild 1	2
No cultivation made	Handlækningadeild	1
Total		11

Discussion

The present study gave important information regarding availability of, and compliance to hygiene routines. One limitation was that the study was performed during one day (point prevalence study), but it is not likely that the results should have differed substantially with another technique. Another limitation was that the hygiene norms were set by Swedish standards which might differ somewhat from Icelandic guidelines. However, the mother study was designed in Sweden, and the value of the possibility of a comparison between the two countries overshadowed this weakness.

All the ten wards participated and n=159 staff (all staff on duty) were observed during the study day. Only n=11 wounds were identified, and 11 dressing changes were observed (13 personnel involved in the changing). No cases of MRSA, VRE or multi-resistant Gram-negative bacteria were identified.

The mean time of experience of working in hospital was 18,6 years, varying per ward from mean 12,7- 25,9 years.

Only in one ward there were no recommendations/guidelines available, however in a few wards, such recommendations were not present in introduction programmes for new staff members.

The majority of staff wore working clothes, and in most cases, these were changed daily. In a few cases, however, the working coats of the MD:s were more irregularly changed. Long-sleeved working clothes which are to-day banned by most hospitals in Sweden were used in 21% of the cases. Jewellery was present in 45% and wristwatches in 30% of the staff. It is well documented that rings and bracelets/wristwatches harbour billions of microorganisms and that they should not be worn by staff involved in the care of patients [13].

Long hair was most common in the childrens' ward, and in many cases it was not worn up.

In 27% of the staff, nails were not shortcut, which represents a potential threat to the spread of micro organisms. There were cases of nail polish and presence of cosmetic nails as well as nail bed infection/eczema present. Facial piercing was rare.

There were numerous hand disinfection dispensers available, in general more than 1 per staff and 1,3 per patient, which was satisfactory. Hand disinfection was performed according to different routines in the different wards, but there was a lack of hand disinfection before and after wound dressing changes in almost half of the cases. Forearms were also only sparsely disinfected.

Plastic aprons were not used in connection with wound dressing changes, which might be a weakness in the hygienic standards.

There was no single pressure ulcer present, which is a sign of good quality of care.

There were three leg-and foot ulcers and eight wounds of other origin. No MRSA, VRE or multi-resistant Gram negative bacteria were identified, but one case of *beta-haemolytic streptococcus*. The wounds were cleansed with either tap water, NaCl or Iodine (one case) or Chlorhexidine (one case). The dressings were changed between none and seven times a week, the latter is far too frequent for most non-infected wounds.

Generally, the data were of superb quality, compliance to the instructions seems to have been optimal, and inclusion of staff was 100% (in form A, only 158 personnel was told to be working day- or evening shift, but 159 personnel was observed according to form B). Even if the hygienic standard was generally satisfactory, there is potential for improvements in a few areas.

Nosocomial infections include both infections which patients acquire at hospital or care in community and infections acquired by the staff which is caused by the working conditions. Nosocomial infections can delay hospital stay and renders extremely high costs. In Sweden, it has been calculated that postoperative wound infections cost approximately SEK 500.000 per year in direct costs, and that an additional 175 million SEK are added for indirect costs. It has been estimated that all nosocomial infections in Sweden render a cost of 3,7 billion SEK annually [13]. Nosocomial infections are also a common cause of mortality [14].

The hands of staff carry numerous micro organisms which, if transmitted to a fragile patient, can cause a life-threatening infection. Barrier care including hand hygiene, hand disinfection and use of gloves can reduce the number of nosocomial infections [15] and should be practised before and after all patient contacts [14].

It has been described how rings, bracelets and infected nail beds harbour billions and billions of bacteria [16]. Compliance to hygiene guidelines is therefore mandatory to protect the patients from infections. Reasons for lack of compliance to hygiene guidelines have been reported to be fear of drying out the skin and allergy [17] but also that the work is stressful and that one forgets to disinfect the hands.

When staff is asked about their frequency of hand disinfection, they tend to overestimate their performance [18]. It is therefore recommended that compliance is studied by observation [19]. The present study did probably give a true picture of the situation and provides an excellent baseline for further improvements.

It has been reported that the effects of intervention studies on improvement of hygiene routines not has had long-term effects of improvements of hygiene routines [20]. However, by illuminating the problem and by performance of repeated prevalence studies it is our hope to achieve excellence in the Fjordungssjukrahusid. One plan might be to certify wards which demonstrate excellence in hospital hygiene standards. An intervention in the form of posters to all wards is planned. Next study will be performed in April 2008.

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Attachment 1. Scheme A



HÖGSKOLAN
KRISTIANSTAD

Institutionen för hälsovetenskaper, Sjuksköterskeprogrammet
Christina Lindholm



Fjórúngssjúkrahúsið á Akureyri

Blað A:..... Úttekt á almennum grundvallar hreinlætisreglum– eitt blað fyrir einingu – sjúkradeild.

Dagsetning Staður.....

1. a Deild..... 1. b sérsvið (t.d. handl. deild)

2. Fjöldi sjúklinga á deildinni eða komur

3. a Fjöldi starfsmanna á morgunvakt (08.00 – 16.00) 3. b Fjöldi starfsmanna á kvöldvakt (16.00 – 24.00).

4. Sveitarfélag Sjúkrahús Heilsugæsla Annað

Almennar spurningar um deildina:

5. Þennan dag unnu starfsmenn í

Vinnu: Af þeim voru: Hjúkrunarfræðingar

..... Læknar, Sjúkraþjálfar Iðjuþjálfar

..... Sjúkraliðar

..... Aðrir s.s. hjúkrunarnemar, ófaglaerðir stardsmenn

6. Er notaður vinnufatnaður á deildinni? Já Nei Stundum

7. Fjöldi venjulegra skammtara með handspritti á deildinni?

(Fjöldi snertifrifa skammtara með handspritti á deildinni?)

8. eru til reglur um grundvallar hreinlæti á deildinni? Já Nei Veit ekki

Ef svarið er já eru reglurnar ?

Í möppu eða rafrænt Sem veggspjald Í aðlögunaráætlun fyrir nýtt starfsfólk

9. eru plastsvuntur notaðir á deildinni? Já Nei Veit ekki

Ef já, hve oft er skipt um svuntu?

Við hvert tilfelli Hvern dag Stundum Annað

10. eru notaðir hlífðarsloppar á deildinni? Já Nei Veit ekki

Ef já, hve oft er skipt um slopp ? Við hvern sjúkling Við hverja stofu Veit ekki

11. Hve oft er skipt um plastsvuntu/slopp ?

Hvern dag Við hvert tilfelli Stundum Annað

.....
Undirskrift starfsmanns eða nemenda sem fyllir út blaðið



Fjórðungssjúkrahúsið á Akureyri

Blað B: Úttekt á almennum grundvallar hreinlætisreglum- eitt blað fyrir - Hvern starfsmann.

Dagsetning..... Staður.....

1.a Deild..... 1.b Sérsvið(t.d. handlækningssvið).....

2.a Morgunvakt (08.00 – 16.00) 2.b Kvöldvakt (16.00 – 24.00)

3.Vinnur sem Hfr..... Sjúkraliði..... Læknir
 Aðrir

4.Heilbrigðisstarfsmaðurinn sem skoðaður er

Kona Karl Starfsaldur.....

5.Eru notuð sérstök vinnuföt? Já Nei

Ef vinnuföt eru notuð: Eru þau ? Með stuttum ermum? Með löngum ermum?

6.Hvenær var skipt um síðast?

Í dag Í gær Fyrir tveimur dögum Fyrir meira en tveimur dögum

7.Eru notuð eigin föt? Já Nei

Eru þau ? Með stuttum ermum? Með löngum ermum?

8.Eru notuð vinnuföt og eigin föt? Já Nei

9.Hafi starfsmaðurinn sítt hár:
Er hárið uppsett/ eða í stert? Já Nei

10.Hringir og skartgripir

a.Er starfsmaðurinn með hringi og skartgripum? Já Nei
b.Er starfsmaðurinn með armband/ armbandsúr Já Nei
c.Er starfsmaðurinn með göt í andliti? Já Nei

11.Hendur, Neglur

a.Eru sýkt sár á höndum/naglaböndum eða exsem? Já Nei
b.Eru neglur starfsmannsins stuttklipptar? Já Nei
c.Er starfsmaðurinn með gervineglur? Já Nei
d.Er starfsmaðurinn með lakkaðar neglur? Já Nei

12.Handskar

Eru notaðir hanskar í snertingu við líkamsvessa? Já Nei Stundum

Undirskrift starfsmanns eða nemenda sem fyllir út blaðið

Attachment 3. Scheme C



Blað C: Úttekt á almennum grundvallar hreinlætisreglum- við umbúðaskipti á sárum - eitt blað fyrir - Hvern starfsmann

Dagsetning Staður

1.a Deild 1.b Sérsvið (t.d. handlæknings deild)
2.a Morgunvakt (08.00 – 16.00) 2.b Kvöldvakt (16.00 – 24.00) ..

Vinnur sem;

3. Hjfr Sjúkraliði Læknir Annað

4. Heilbrigðisstarfsmaður sem er skoðaður er?

Konu Karli Starfsaldur

5. Fjöldi sjúklinga á deild

6. Fjöldi sjúklinga með sár sem þarf umhirðu/skiptingu

7. Starfsmaður með sttt há;

Er hárið uppsett eða í stert? Já Nei

8. Er starfsmaðurinn sem skiptir með sjúkt sár

Sjúkt sár/ eða sýking í naglaböndum Já Nei

9. Grundvallar sýkingavarnir við skiptingu á sárinu (umbúðaskipti)

a. Eru neglur stuttklipptar? Já Nei

b. Er starfsmaðurinn með gervineglur? Já Nei

c. Eru neglur lakkaðar? Já Nei

d. Er starfsmaðurinn með hringi og skartgrip? Já Nei

e. Er starfsmaðurinn með armband/armbandsúr? Já Nei

10. Handþvottur

Eru hendur þvegnar með sápu og vatni fyrir umbúðaskipti? Já Nei

11. Sóttþreinsun handa

a. Eru hendur sóttþreinsaðar með efni sem inni heldur alkohol fyrir umbúðaskiptingu? Já Nei

b. Eru hendur sóttþreinsaðar með efni sem inni heldur alkohol eftir umbúðaskiptingu? Já Nei

12. Aðgerð við sóttþreinsun handa:

Þrýst einu sinni Þrýst tvisvar sinnum Þrýst þrisvar eða oftar (Snerifrir skammtari með handspriti)

13. Handspritið er núð um allar hendur frá fingurgómum Já Nei

a. Milli fingranna Já Nei

b. Í þumalgrópina Já Nei

c. Á framhandlegg Já Nei

14. Hanskar

Eru notaðir hanskar við umbúðaskiptin? Já Nei

15. Hlífðarföt

a. Er notað plastsvunta við umbúðaskiptin? Já Nei

b. Er notaður hlífðarsloppur? Já Nei

c. Ef já, er hlífðarsloppurinn notaður: Fyrir hvem sjúkling Fyrir hverja sjúkrafötu

.....
Undirskrift starfsmanns eða nemenda sem fyllir út blaðið

Attachment 4. Scheme D



Fjórðungssjúkrahúsið á Akureyri

Blað D: Úttekt á legusárum

Dagsetning

Úttektin gerð af:

Deild

Sími

Nafn og kennitala

1. Sjúklingur fær þjónustuna (þýr) venjulega

- Heilsugæsla
 Heima
 Sértaku búandi
 Langlegudeild (Sé)
 Bráðsjúkrahúsi
 Endurhæfingadeild
 Endurhæfing aldraðra

2. a Fjöldi sára: 2. b Stærð litilla sára mm... 2. c Stærð stærri sára x sm

3. a Við hvaða aðstæður kom sárið/sárin?

3. b Hvenær fannst/ fundust sárið/sárin í fyrsta sinn?

3. c Hvað hefur sennilega orsakað sárið/sárin?

3. d Hve lengi hefur sjúklingurinn haft sárið/sárin?

4. Hvert er stig sársins/sáranna? (sjá legusárákort) (1-4)

5. Hvenær skoðaði læknir sárið/sárin síðast?

6. Áhættustig samkvæmt Norton? (sjá legusárákort)

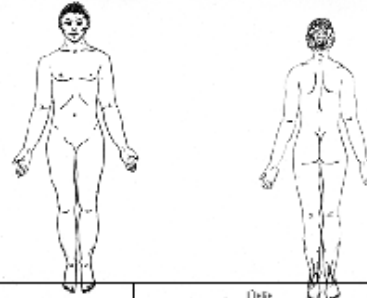
7. a Hvaða umbúðir eru notaðar? 7. b Hreinsun sársins/sáranna með?

8. Hve oft er skipt/viku?

Legu sársins/sáranna sýnd með pílu. Mörg sár, númeruð 1, 2, 3 o.s.f.

9. Skiptingin er venjulega gerð af

- Heilsugæslu hjúkr/hjúkrunarfræðing
 Sjúkraliða/ ófaglaerðum
 Aðstandanda
 Sjúklingnum
 Öðrum, hverjum?



10. Hvaða sjúkdóm er sjúklingurinn með? (fyrst aðalsjúkdómsgreiningu)

11. Á hvaða lyfjum er sjúklingurinn? Sjá bls 2

12. Krossið þar sem við á

Sár númer	Lytt			Vessi					Útít		
	Sterk	Meðal	Engin	Mikill	Útíll	Enginn	Tær	Gröftur	Svart drep	Gult lagt fibrin	Rautt gróandi

13. Fær sjúklingurinn rúkalýf núna?

- Já
 Nei

Lyfjahlætti samkvæmt FASS:

14. Tekið rúkalýf síðustu sex mánuði?

- Já
 Nei

Upplýsingar ekki til staðar

Lyfjahlætti samkvæmt FASS

15. Verkir í sári?

- Já
 Nei

Aðeins við umbúðaskiptiskipti

16. Verkir í sári núna (VAS) mm

17. Truflar verkurinn nætursvefninn? Já Nei

18. Verkjalyf eru gefin:

- Aldre
 Samfélk
 Við þörf
 Þegar skipt er á sárinu/sárunum

Önnur lyf Já

Nei (sjá spurningu nr. 11)

Lyfjahlætti samkvæmt FASS:

Undirskrift starfsmanns eða nemenda sem fyllir út blaðið

Attachment 5. Scheme E



Fjórðungssjúkrahúsið á Akureyri



Blað E: Úttekt á sárum á fótleggjum og fæti

Dagsetning _____

Úttekt gerð af _____

Deild _____

Nafn og kennitala

Sími _____

1. Sjúklingurinn fær þjónustu venjulega

- Heilsugæslu Heima Séræku búandi Langlegudeild (sel)
 Bráðasjúkrahús Endurhæfingadeild Endurhæfingadeild aldraðra

2. Fjöldi sára: _____ Hægri fótleggur/fótur _____ fj. Vinstri fótleggur/fótur _____ fj.

3. Sennilegasta ástæða fyrir sárinu/sárunum Ónógt blæðafliði
- Vegna æverka Ónógt slagæðafliði Blandað vens/arteriell
 Sykursyki Gigtar sjúkdómur Hjarta- og æðasjúkdómur
 Illkynjasjúkdómur Perifer æðasjúkdómur Taugaskaði

Athugasemdir _____

4. Fær sjúklingurinn meðferð sem veikir ónæmiskerfið (t.d. sterályf, frumdrepani lyf)?

- Já Nei

5. Með hverju hefur ástæðan verið greind (Eitt eða fleira) Cert Klinískt mat....

- Slagæðarmælingu (Doppler) Blóðflæðisrannsókn

6. Hve lengi hefur sjúklingurinn haft þetta/ þessi sár? Á r. _____ Man. _____ Dagar

Merktu með ör hvar sárið/sárin er/eru. Ef mörg sár, númeraðu 1, 2, 3 o.s.f.

7. Umbúðir
Þýstingsumþúðir? Já Nei
Tvöfalðar umbúðir? Já Nei
Teygjusokkur? Já Nei
Teygjubindi? Já Nei

8. Tegund binda?

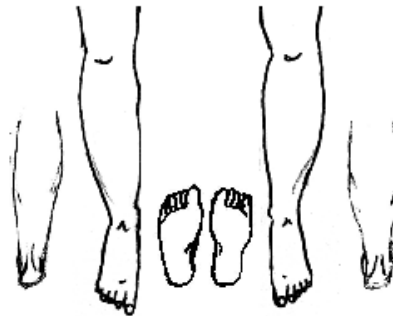
9. Hvaða umbúðir eru notaðar á sárið? _____

10. Sárið hreinsað með _____

11. Fjöldi umbúðaskiptinga/viku _____

12. Umbúðaskipti eru gerð af

- Heilsugæsluhjúfyr/Hjúkrunarfræðingi
 Sjúkrahlða/Ofaglærðum
 Aðstandanda
 Sjúklingnum
 Annar, hver? _____





Blað F: Úttekt á öðrum sárum – Dagsætning

Úttekt gerð af

Deild

Nafn og kennitala

Sími

1. Sjúklingurinn fær venjulegast þjónustu

- Heilsugæslu Heima Séræku búandi Langlegudeild (Sel)
 Bráðsjúkrahús Endurhæfingadeild Endurhæfingadeild aldraðra

2. Fjöldi sára:

3. Tegund sár

- Sárasyking eftir skurðaðgerð Hvaða aðgerð?
- Sár vegna áverka Tegund áverka?
- Húðflutningur Hvar?
- Fistlar Hvar?
- Bruni? Hvar?
- Annað? Hvað?

4. Hve lengi hefur sjúklingurinn haft sárið/sárin?

5. Hvenær gerði læknir síðast mat á sárinu?

6. Sennileg ástæða fyrir sárinu/sárunum

- Sykursýki Gigtar sjúkdómur Hjarta- æðasjúkdómur
 Illkynja sjúkdómur Perifer æðasjúkdómur Tauga skaði

Athugasemd

7. Fær sjúklingurinn meðferð sem veikir ónæmiskerfið (t.d. sterilyf, frumudrepani lyf)? Já Nei

8. Ef sykursýki, hvaða tegund?

9. Hvaða umbúðir eru notaðar á sárið/sárin?

10. Sárið hreinsað með?

11. Fjöldi umbúðaskipta /viku

12. Merktu með ör hvar sárið/sárin er/eru. Ef mörg sár, númeraðu 1, 2, 3 o.s.frv.

13. Umbúðaskipti eru gerð af

- Heilsugæsluhjúfi/ Hjúkrunarfræðingi
- Sjúkraliða/ófaglærðum
- Aðstandanda
- Sjúklingnum
- Annar, hver?



14. Verkir í sári?

- Já Nei Aðeins við umbúðaskipti skipti