

Klinisk Patientnära Forskning 7

Point prevalence study of Eating and Nutrition March 2006

at Fjordungssjúkrahúsíð, Akureyri, Iceland in
cooperation with Kristianstad University

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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.

Aim

To perform patient focused clinical research, and develop tools for patient risk evaluation and safety issues. At the same time facilitate a scientific understanding in the clinical studies for the nursing students.



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Sammanfattning

Risk för undernäring och felnäring samt implementeringen av preventiva åtgärder är indikatorer på kvalitet i vården. Data om förekomst av felnäring och frekvensen av ätsvårigheter såväl som preventiva åtgärder hade inte studerats på Fjordungssjukrahusid.

Syftet med studien var att undersöka förekomsten av ätsvårigheter och risken för felnäring såväl som preventiva åtgärder som ges åt patienter med risk för undernäring.

Genomförande: Instrumentet för datainhämtning översattes från svenska till isländska och tillbaka igen. Två punkter tillsattes till formuläret; inte tillåten att äta samt illamående.

Alla inloggande patienter på avdelningarna mellan klockan 07.00 och 21.00 på sjukhuset undersöktes och frågades om näring och ätande efter det att de givet tillstånd om deltagande. Deras längd och vikt mättes. Patienterna observerades i måltidssituationer och frågades om aptit, eventuella ätproblem och om de oavsiktligen tappat vikt. Eventuell prevention och åtgärder antecknades i formuläret.

Resultat: Av totalt 107 patienter, ville 95 (89%) delta i undersökningen. Oavsiktlig vikt förlust var fallet för 20% av patienterna (n=19) och totalt 16% av patienterna hade lågt BMI. BMI var registrerat i journalen för en patient. Högt BMI fanns i 52% av patienterna på sjukhuset. Ingen av patienterna var klassificerade som grav överviktiga, 36% hade övervikt och 16% av dessa klassades som fetma. Totalt 58% (n=55) av patienterna hade olika typer av ätproblem. Procenten varierade mellan 18-87% mellan de olika avdelningarna.

Diskussion: Resultatet av undersökningen visar på en risk för undernäring såväl som övervikt för patienterna på Fjordungssjukrahusid. Genom att använda insamlad data som underlag för förändring, finns en möjlighet att agera och hjälpa patienterna för att förhindra och minska deras risk för undernäring.

Nyckelord

Akureyri, Island, Högskolan Kristianstad, nutrition, sjukhus, undernäring, ätproblem, ätsvårigheter, övervikt



Summary

Objectives: Risk for malnutrition and implementation of preventive factors are indicators of quality of care. Data regarding prevalence of malnutrition and the frequency of eating difficulties as well as preventive actions had not been studied at Fjordungssjúkrahúsíð.

Aim: To study the prevalence of eating difficulties and risk for malnutrition as well as preventive actions taken for patients at risk for malnutrition.

Design: The instrument for data collection was translated into Icelandic and back-translated into Swedish. Two items were added – not allowed to eat and nauseated.

Measurements: All of the patients admitted to the wards between 07.00 and 21.00 at the Fjordungssjúkrahúsíð were assessed for eating difficulties and risk for malnutrition, after having given consent. Their weight and height was measured. The patients were observed while eating and asked about all types of eating difficulties and unintended weight loss. Preventive actions were recorded on the form.

Results: In total 107 patients were asked to participate and 95 patients did take part (89%). Unintended weight loss was present in 20% of the patients (n=19) and in total 16% of the patients had a low BMI. BMI was found registered for one patient in the chart. High BMI was found in 52% of the patients in the hospital. No patient was classified with severe obesity, 36% of the patients had over weight and 16% of the patients were classified as obese. In total 58% (n=55) of the patients had different types of eating difficulties. The percentage varied between 18-87% of the patients within the different wards.

Conclusion: The results of this study showed risk for undernourishment as well as over weight for patients at the Fjordungssjúkrahúsíð. By using the figures as a base for change the possibility exist to act and assist the patients more accurately to reduce their risk for malnutrition.

Key words

Akureyri, eating difficulties, Hospital, Iceland, Kristianstad University, malnutrition, nutrition, overweight, undernutrition



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Point prevalence study of Eating and Nutrition March 2006 at Fjordungssjúkrahúsíð, Akureyri, Iceland in cooperation with Kristianstad University

Background

A balance in nutritional status is important for health and well-being. To become elderly may imply difficulties to eat, especially when a person gets ill (1). Difficulties to eat, often lead to a decrease in food-intake and eventually to undernourishment (2). Eating difficulties (i. e. difficulties to swallow) may lead to undernourishment, dehydration, and mistakes in swallowing leading to pulmonary infection and increased mortality.

Also the routines concerning food and food servings in institutions (such as hospitals) may influence the food-intake of patients (3). Undernourishment increases the risk for complications such as infections, pressure ulcers and delayed wound healing, increased hospital stay and readmittance to hospital (4).

However too high intake of food leads to overweight, especially in combination with a sedentary life-style. Over weight may also lead to an increase in illness (5).

The consequences for the individual with an unbalanced nutritional status can be more suffering and higher costs of care. To identify eating problems and malnutrition (malnourishment as well as over weight) is therefore important for all staff (6).

In Swedish hospitals the mean prevalence of undernourishment is found to be 31% and in sheltered housing the mean prevalence of undernourishment is found to be 32% (7). The older the patient is the greater risk of under nutrition (1). Eating problems such as difficulties to swallow can be found in over 80% of certain populations in hospitals (2).

To establish nutritional assessments in practice the Swedish National Specialist Board of physicians, registered nurses and registered dieticians recommended in 2004 that assessment of all patients is needed to identify patients at risk (8). If two or more of the following criteria is present there is a risk for undernourishment and actions need to be taken:

Unwilling weight loss (unregarded of time limits and amount of weight loss).
Eating difficulties (appetite, swallowing, loss of energy, moving disturbances).
Low Body Mass Index (BMI) (weight (kg)/squared height (m²), with a risk if BMI <20 (69 years or younger) or BMI <22 (70 years or older).



In this study “High BMI” has been defined according to the literature (9, 10).

Definition of high BMI:

Over weight: 25-29.9 (69 years or younger), 27-31.9 (70 years or older)

Obesity: 30-39.9 (69 years or younger), 32-41.9 (70 years or older)

Severe obesity: >40 (69 years or younger), >42 (70 years or older)

The frequencies of risk for malnutrition can be measured either as prevalence (the number of patients with risk at a given time) or as incidences (the number of patients developing a risk of malnutrition during at defined period).

The point prevalence method gives a picture of the total number of patients with risk for malnutrition at a given point in time, without answering the question of when the risk was developed. The method is suitable to obtain a baseline before interventions and as a method to follow up the effects of such interventions. The method is helpful for planning and monitoring optimal utilization of available resources. Point prevalence studies can be performed with relatively modest costs and include total populations.

Rational for the study

Risk for malnutrition and implementation of preventive factors are indicators of quality of care. Data regarding prevalence of malnutrition and the frequency of eating difficulties as well as preventive actions had not been studied at Fjordungssjukrahusid. The decision was therefore taken by the Management to perform a point prevalence study. The intention was also to give feedback of the results to the wards, to discuss suggested preventive actions, to train the staff in assessing risk of malnutrition and to implement a 5-point program. The intention was also to repeat the study at a later time.

Aim

To study the prevalence of eating difficulties and risk for malnutrition as well as preventive actions taken for patients at risk for malnutrition.

Questions

What is the prevalence of risk of undernourishment?

Is BMI measured?

Into what grades of risk of undernourishment may the patients be classified?

What proportions of patients have a high risk of undernourishment?

What proportions of patients have over weight?

How frequent are the preventive actions taken in relation to patients with risk of malnutrition (undernourishment or over weight)?



Method

Prior to the study, information was given to the Management and to all departments at Fjordungssjúkrahúsíð by the Director of Nursing (Ólína Torfadóttir).

A group of researchers at Kristianstad University, Sweden, have developed and tested in a larger study a simple form for registration of the prevalence, patient-related risk factors for malnutrition, such as eating difficulties, and preventive actions. The scale for eating difficulties developed by Westergren (2) is included in this instrument.

The instrument for data collection was translated into Icelandic and back-translated into Swedish. Two items were added – not allowed to eat and nauseated.

One registered nurse/ward was allocated to perform the data collection during one set day. The nurses were carefully instructed, and forms were test-filled in and questions were answered by representatives from Kristianstad University and by the Director of Nursing at Fjordungssjúkrahúsíð.

Written patient information was developed and given patients the day before the study. If the patient or significant other gave oral informed consent, the patient was included in the study.

All of the patients admitted to the wards between 07.00 and 21.00 a day in March 2006 at the Fjordungssjúkrahúsíð, were assessed for eating difficulties and risk for malnutrition, after having given consent. Their weight and height was measured. The patients were observed while eating and asked about all types of eating difficulties and unintended weight loss.

Preventive actions were recorded on the form.



Internal loss of data was low (Table 1).

Table 1 Review over percent unanswered questions (N=95) – internal loss

Item	Percent loss
Gender	0
Age	0
Weight in kg	0
Height in cm	1
BMI	1
Weight loss	18
Eating difficulties (13 questions)	1
Difficulties to chew	4
Eating assistance	2
Type of food	2
Consistency of food	3
Consistency of drink	1
Size of portion	1

Results

In total 107 patients were asked to participate and 95 patients did take part (89%). Ten patients could not participate and two patients did not want to participate. The mean age of the participating patients was 71 years (sd ±18) and 64% were women.

Unintended weight loss was present in 20% of the patients (n=19) and in total 16% of the patients had a low BMI. BMI was found registered for one patient in the chart.

High BMI was found in 52% of the patients in the hospital. No patient was classified with severe obesity, 36% of the patients had over weight and 16% of the patients were classified as obese.

In total 58% (n=55) of the patients had different types of eating difficulties. The percentage varied between 18-87% of the patients within the different wards.

Table 2 Eating difficulties of all patients (%)	FSA total
Difficulties to open/close the mouth, %	3
Difficulties to swallow, %	14
Difficulties to handle food in the mouth, %	10
Difficulties to transport food to the mouth, %	22
Difficulties to handle food on the plate, %	26
Difficulties to chew, %	5



Table 3 Eating difficulties of all patients (%)	FSA total
Not enough strength to eat, %	11
Fast/Slow eating time, %	11
Difficulties to sit and eat, %	10
Eat less than $\frac{3}{4}$ of food served, %	7
Does not want to eat, %	1
Not allowed to eat, %	3
Nauseated, %	16
Decrease in appetite, %	28

Table 4 Risk of undernourishment in all patients (%)	FSA total
No risk	26
Little risk	49
Some risk	20
High risk	5
Some + High risk of undernourishment	25

Some risk or high risk of undernourishment was most frequent in combination with loss of appetite (46%, n=11, of the patients with loss of appetite).

Table 5 Actions taken concerning eating and food	FSA total
Actions taken	%
Needs assistance to eat	27
Protein- and/or energy enriched food	1
Change in consistency of food	22
Artificial nutrition	13
Served a small portion (approx 200 kcal)	39
Served an enlarged portion (approx 600 kcal)	5
Food supplementation	11

One of seven units did not serve food supplementation to any patient at the time of the point prevalence study.

In total seven patients got food with reduction of certain items such as salt, wheat, fat or milk.



Table 6 Actions (%) taken for patients related to risk for undernourishment at the hospital

	Risk for malnourishment	
	No risk (n=63) %	Some + high risk (n=21) %
Needs assistance to eat	19	43
Protein- and/or energy enriched food	1	0
Change in consistency of food	11	38
Artificial nutrition	12	4
Served a small portion (approx 200 kcal)	29	57
Served an enlarged portion (approx 600 kcal)	8	0
Food supplementation	5	14

Discussions

Methodological considerations

The data collection went on smoothly since the preparation and information was well prepared. This resulted in carefully filled in forms with few missing data. The question concerning unintended weight loss was difficult to answer for six patients.

All seven data collectors agreed that the information before the study was excellent and to collect the data they had enough support from the research team. Two nurses commented on how much they identified concerning the patients that they had not been aware of before. They found the study particularly meaningful.

The inclusion of patients was 5% higher than in the similar study in Northern Skåne, which may have to do with the good performance of the data collectors.

Result discussion

The results of this study showed risk for undernourishment as well as over weight for patients at the Fjordungssjukrahusid. By using the figures as a base for change the possibility exist to act and assist the patients more accurately to reduce their risk for malnutrition.

Within the hospital 32% of the patients had a normal BMI, which is lower than the point-prevalence study performed in Northern Skåne in the year of 2005 (number of patients at hospitals was 874 and normal BMI was present in 41% of them). When comparing the patients who had no or little risk for undernourishment the figure 75% is in concordance with the 73% found in Northern Skåne.



The patient group with high BMI was 13% larger than in Skåne. This may have to do with the differences in the patient mix and possibly by differences in precision by the scales used. But it may also be a factor to take into account in a public health perspective. Depending on what type of care is given educational programs on weight loss and increased physical activity might be appropriate, especially after the patient leaves the hospital.

Over half of the patients at Fjordungssjukrahusid had some difficulties eating and the most common trait was loss of appetite, which is natural in combination with illness and old age. To serve small portions of food seemed to be the most common way of handling the patients eating difficulties apart from changes in consistency of food served. The use of protein- and energy enriched food was not used for any patient with risk of undernourishment. Only one patient in total got this type of food. This is an area which needs change. By serving energy-enriched food the servings can still be small but the patient gets the needed protein and energy (12).

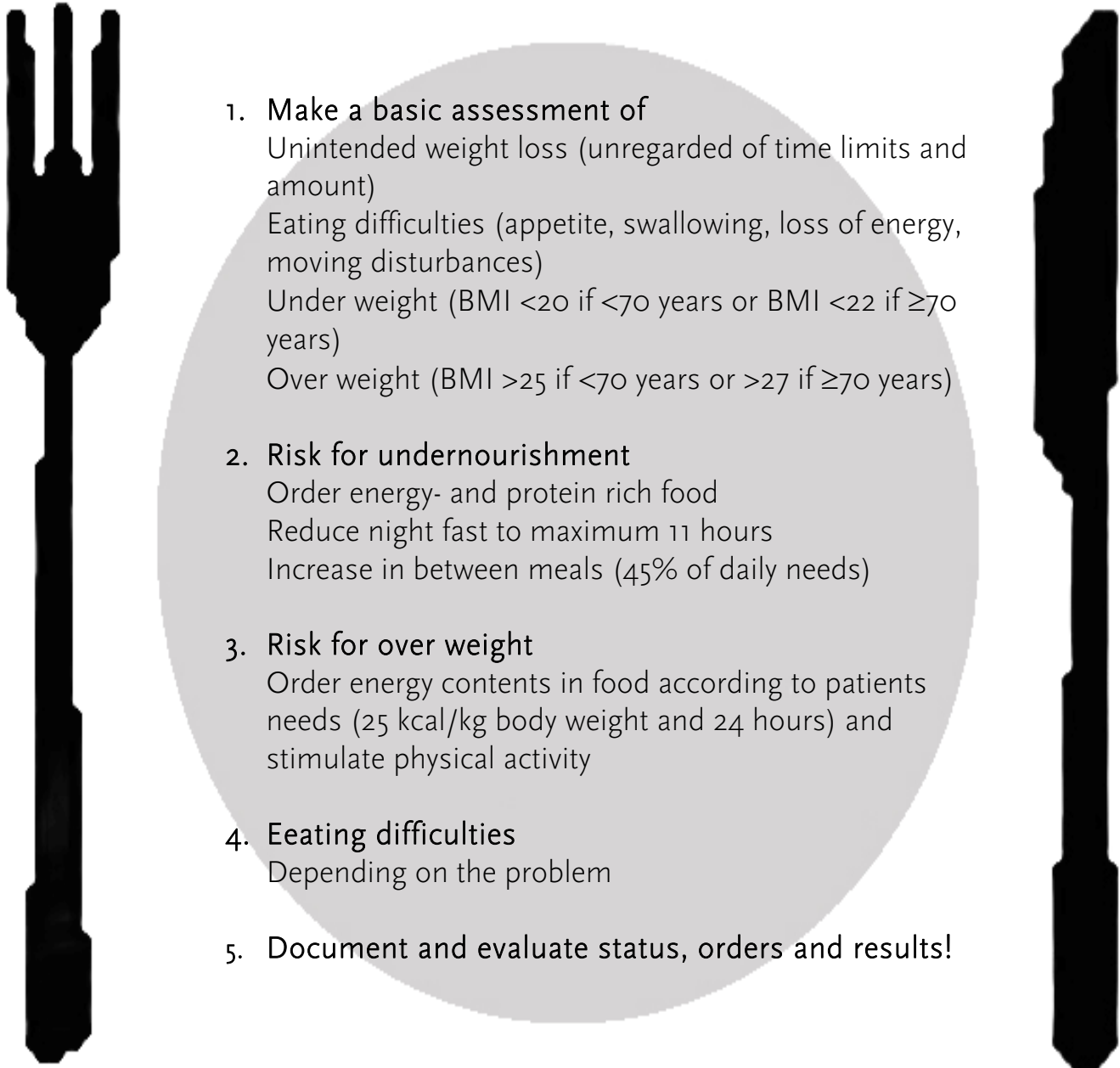
Food supplementation was also used scarcely. The pre made supplementation solutions may of course be exchanged by food items. A higher nutritional energy intake can be accomplished by using full milk, fat cheese on sandwiches, cream in the coffee etc. The important factor is to use this method.

The result of each ward is returned to that ward and to the hospital Management. The results are compared with the results of the total hospital and to the Swedish hospitals from the point prevalence study of November 2005. By these figures the ward can compare results within the hospital and between the countries. Most important is to consider what actions may be implemented for the patients.



We suggest the following program for nutrition and eating:

Program for nutrition and eating

- 
- 1. Make a basic assessment of**
 - Unintended weight loss (unregarded of time limits and amount)
 - Eating difficulties (appetite, swallowing, loss of energy, moving disturbances)
 - Under weight (BMI <20 if <70 years or BMI <22 if ≥70 years)
 - Over weight (BMI >25 if <70 years or >27 if ≥70 years)
 - 2. Risk for undernourishment**
 - Order energy- and protein rich food
 - Reduce night fast to maximum 11 hours
 - Increase in between meals (45% of daily needs)
 - 3. Risk for over weight**
 - Order energy contents in food according to patients needs (25 kcal/kg body weight and 24 hours) and stimulate physical activity
 - 4. Eating difficulties**
 - Depending on the problem
 - 5. Document and evaluate status, orders and results!**

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Results for the wards

Table 1. O-deild Geriatrics - Rehabilitation

Results from the point prevalence study of Eating and Nutrition, March 2006.

	O-deild Ger-Rehab	FSA Total	Swedish hospitals
Participation			
Percent who chose to participate, %	100	89	84
Number of participating patients	19	95	874
Gender/Age			
Percent women, %	63	64	53
Mean age, year	82	71	69
Body mass			
Low BMI,%	16	16	20
High BMI,%	42	52	39
Unwilling weight loss, %	16	20	28
Eating difficulties			
Have difficulties eating (see below), %	63	58	50
Not enough strength to eat,%	11	11	8
Difficulties to open/close the mouth, %	11	3	1
Difficulties to swallow, %	16	14	6
Difficulties to handle food in the mouth, %	26	10	3
Fast/Slow eating time, %	5	11	5
Difficulties to sit and eat, %	5	10	4
Difficulties to transport food to the mouth, %	37	22	6
Difficulties to handle food on the plate, %	47	26	6
Eat less than $\frac{3}{4}$ of food served, %	5	7	11
Does not want to eat, %	0	1	2
Not allowed to eat, %	0	3	-
Nauseated, %	11	16	-
Decrease in appetite, %	32	28	35
Difficulties to chew, %	22	5	14
Risk of undernourishment,%			
No risk	21	26	40
Little risk	53	49	33
Some risk	21	20	18
High risk	5	5	9
Some + High risk of undernourishment	26	25	27
Actions taken			
Needs assistance to eat, %	37	27	12
Protein- and/or energy enriched food, %	0	1	4
Change in consistency of food, %	21	22	8
Artificial nutrition,%	0	13	2
Served a small portion (approx 200 kcal) ,%	32	39	15
Served an enlarged portion (approx 600 kcal), %	5	5	12
Food supplementation,%	5	11	25



Table 2. O-deild (Orthopedics)

Results from the point prevalence study of Eating and Nutrition, March 2006.

	O-deild Ortoped	FSA Total	Swedish hospitals
Participation			
Percent who chose to participate, %	85	89	84
Number of participating patients	11	95	874
Gender/Age			
Percent women, %	82	64	53
Mean age, year	73	71	69
Body mass			
Low BMI,%	20	16	20
High BMI,%	70	52	39
Unwilling weight loss, %	46	20	28
Eating difficulties			
Have difficulties eating (see below), %	18	58	50
Not enough strength to eat,%	9	11	8
Difficulties to open/close the mouth, %	0	3	1
Difficulties to swallow, %	0	14	6
Difficulties to handle food in the mouth, %	0	10	3
Fast/Slow eating time, %	0	11	5
Difficulties to sit and eat, %	9	10	4
Difficulties to transport food to the mouth, %	0	22	6
Difficulties to handle food on the plate, %	0	26	6
Eat less than $\frac{3}{4}$ of food served, %	9	7	11
Does not want to eat, %	0	1	2
Not allowed to eat, %	0	3	-
Nauseated, %	18	16	-
Decrease in appetite, %	9	28	35
Difficulties to chew, %	0	5	14
Risk of undernourishment,%			
No risk	40	26	40
Little risk	40	49	33
Some risk	20	20	18
High risk	0	5	9
Some + High risk of undernourishment	20	25	27
Actions taken			
Needs assistance to eat, %	0	27	12
Protein- and/or energy enriched food, %	0	1	4
Change in consistency of food, %	0	22	8
Artificial nutrition,%	9	13	2
Served a small portion (approx 200 kcal) ,%	18	39	15
Served an enlarged portion (approx 600 kcal), %	0	5	12
Food supplementation,%	9	11	25



Table 3. H-deild Surgery

Results from the point prevalence study of Eating and Nutrition, March 2006.

	H-deild Surgery	FSA Total	Swedish hospitals
Participation			
Percent who chose to participate, %	57	89	84
Number of participating patients	8	95	874
Gender/Age			
Percent women, %	63	64	53
Mean age, year	64	71	69
Body mass			
Low BMI,%	25	16	20
High BMI,%	63	52	39
Unwilling weight loss, %	63	20	28
Eating difficulties			
Have difficulties eating (see below), %	38	58	50
Not enough strength to eat,%	0	11	8
Difficulties to open/close the mouth, %	0	3	1
Difficulties to swallow, %	0	14	6
Difficulties to handle food in the mouth, %	0	10	3
Fast/Slow eating time, %	0	11	5
Difficulties to sit and eat, %	13	10	4
Difficulties to transport food to the mouth, %	0	22	6
Difficulties to handle food on the plate, %	0	26	6
Eat less than $\frac{3}{4}$ of food served, %	38	7	11
Does not want to eat, %	0	1	2
Not allowed to eat, %	0	3	-
Nauseated, %	25	16	-
Decrease in appetite, %	75	28	35
Difficulties to chew, %	0	5	14
Risk of undernourishment,%			
No risk	25	26	40
Little risk	13	49	33
Some risk	37	20	18
High risk	25	5	9
Some + High risk of undernourishment	60	25	27
Actions taken			
Needs assistance to eat, %	0	27	12
Protein- and/or energy enriched food, %	0	1	4
Change in consistency of food, %	25	22	8
Artificial nutrition,%	63	13	2
Served a small portion (approx 200 kcal) ,%	88	39	15
Served an enlarged portion (approx 600 kcal), %	0	5	12
Food supplementation,%	13	11	25



Table 4. L1 Medicine

Results from the point prevalence study of Eating and Nutrition, March 2006.

	L1 Medicine	FSA Total	Swedish hospitals
Participation			
Percent who chose to participate, %	83	89	84
Number of participating patients	15	95	874
Gender/Age			
Percent women, %	60	64	53
Mean age, year	59	71	69
Body mass			
Low BMI,%	0	16	20
High BMI,%	60	52	39
Unwilling weight loss, %	27	20	28
Eating difficulties			
Have difficulties eating (see below), %	60	58	50
Not enough strength to eat,%	13	11	8
Difficulties to open/close the mouth, %	0	3	1
Difficulties to swallow, %	13	14	6
Difficulties to handle food in the mouth, %	0	10	3
Fast/Slow eating time, %	27	11	5
Difficulties to sit and eat, %	0	10	4
Difficulties to transport food to the mouth, %	0	22	6
Difficulties to handle food on the plate, %	0	26	6
Eat less than ¾ of food served, %	0	7	11
Does not want to eat, %	0	1	2
Not allowed to eat, %	13	3	-
Nauseated, %	20	16	-
Decrease in appetite, %	27	28	35
Difficulties to chew, %	0	5	14
Risk of undernourishment,%			
No risk	14	26	40
Little risk	73	49	33
Some risk	13	20	18
High risk	0	5	9
Some + High risk of undernourishment	13	25	27
Actions taken			
Needs assistance to eat, %	7	27	12
Protein- and/or energy enriched food, %	0	1	4
Change in consistency of food, %	13	22	8
Artificial nutrition,%	27	13	2
Served a small portion (approx 200 kcal) ,%	43	39	15
Served an enlarged portion (approx 600 kcal), %	7	5	12
Food supplementation,%	13	11	25



Table 5. L II Medicine

Results from the point prevalence study of Eating and Nutrition, March 2006.

	L II Medicine	FSA Total	Swedish hospitals
Participation			
Percent who chose to participate, %	100	89	84
Number of participating patients	7	95	874
Gender/Age			
Percent women, %	71	64	53
Mean age, year	59	71	69
Body mass			
Low BMI,%	0	16	20
High BMI,%	57	52	39
Unwilling weight loss, %	29	20	28
Eating difficulties			
Have difficulties eating (see below), %	72	58	50
Not enough strength to eat,%	27	11	8
Difficulties to open/close the mouth, %	0	3	1
Difficulties to swallow, %	27	14	6
Difficulties to handle food in the mouth, %	0	10	3
Fast/Slow eating time, %	29	11	5
Difficulties to sit and eat, %	0	10	4
Difficulties to transport food to the mouth, %	0	22	6
Difficulties to handle food on the plate, %	0	26	6
Eat less than ¾ of food served, %	0	7	11
Does not want to eat, %	0	1	2
Not allowed to eat, %	0	3	-
Nauseated, %	57	16	-
Decrease in appetite, %	57	28	35
Difficulties to chew, %	0	5	14
Risk of undernourishment,%			
No risk	14	26	40
Little risk	57	49	33
Some risk	29	20	18
High risk	0	5	9
Some + High risk of undernourishment	29	25	27
Actions taken			
Needs assistance to eat, %	0	27	12
Protein- and/or energy enriched food, %	14	1	4
Change in consistency of food, %	0	22	8
Artificial nutrition,%	14	13	2
Served a small portion (approx 200 kcal) ,%	43	39	15
Served an enlarged portion (approx 600 kcal), %	0	5	12
Food supplementation,%	0	11	25



Table 6. R-deild Young - Rehabilitation

Results from the point prevalence study of Eating and Nutrition, March 2006.

	R-deild Young- rehab	FSA Total	Swedish hospitals
Participation			
Percent who chose to participate, %	92	89	84
Number of participating patients	12	95	874
Gender/Age			
Percent women, %	58	64	53
Mean age, year	57	71	69
Body mass			
Low BMI,%	17	16	20
High BMI,%	58	52	39
Unwilling weight loss, %	0	20	28
Eating difficulties			
Have difficulties eating (see below), %	33	58	50
Not enough strength to eat,%	17	11	8
Difficulties to open/close the mouth, %	0	3	1
Difficulties to swallow, %	8	14	6
Difficulties to handle food in the mouth, %	0	10	3
Fast/Slow eating time, %	8	11	5
Difficulties to sit and eat, %	0	10	4
Difficulties to transport food to the mouth, %	0	22	6
Difficulties to handle food on the plate, %	0	26	6
Eat less than ¾ of food served, %	0	7	11
Does not want to eat, %	0	1	2
Not allowed to eat, %	0	3	-
Nauseated, %	8	16	-
Decrease in appetite, %	17	28	35
Difficulties to chew, %	0	5	14
Risk of undernourishment,%			
No risk	67	26	40
Little risk	22	49	33
Some risk	11	20	18
High risk	0	5	9
Some + High risk of undernourishment	11	25	27
Actions taken			
Needs assistance to eat, %	0	27	12
Protein- and/or energy enriched food, %	0	1	4
Change in consistency of food, %	0	22	8
Artificial nutrition,%	9	13	2
Served a small portion (approx 200 kcal) ,%	42	39	15
Served an enlarged portion (approx 600 kcal), %	17	5	12
Food supplementation,%	8	11	25



Table 7. Sel Nursing home
Results from the point prevalence study of Eating and Nutrition, March 2006.

	Sel Nursing home	FSA Total	Swedish hospitals
Participation			
Percent who chose to participate, %	100	89	84
Number of participating patients	23	95	874
Gender/Age			
Percent women, %	61	64	53
Mean age, year	84	71	69
Body mass			
Low BMI,%	26	16	20
High BMI,%	39	52	39
Unwilling weight loss, %	0	20	28
Eating difficulties			
Have difficulties eating (see below), %	87	58	50
Not enough strength to eat,%	4	11	8
Difficulties to open/close the mouth, %	4	3	1
Difficulties to swallow, %	22	14	6
Difficulties to handle food in the mouth, %	17	10	3
Fast/Slow eating time, %	9	11	5
Difficulties to sit and eat, %	26	10	4
Difficulties to transport food to the mouth, %	61	22	6
Difficulties to handle food on the plate, %	70	26	6
Eat less than ¾ of food served, %	9	7	11
Does not want to eat, %	4	1	2
Not allowed to eat, %	4	3	-
Nauseated, %	4	16	-
Decrease in appetite, %	17	28	35
Difficulties to chew, %	4	5	14
Risk of undernourishment,%			
No risk	18	26	40
Little risk	59	49	33
Some risk	17	20	18
High risk	6	5	9
Some + High risk of undernourishment	23	25	27
Actions taken			
Needs assistance to eat, %	78	27	12
Protein- and/or energy enriched food, %	0	1	4
Change in consistency of food, %	52	22	8
Artificial nutrition,%	0	13	2
Served a small portion (approx 200 kcal) ,%	35	39	15
Served an enlarged portion (approx 600 kcal), %	4	5	12
Food supplementation,%	13	11	25

