nutritionDay worldwide
benchmark & monitor your nutrition care

nutritionDay
Smart Report
Nutrition Care Quality Indicators

Hospital:
Unit:
Specialty:

Centre Code:
Unit Code:

ESPEN

MEDICAL UNIVERSITY OF VIENNA

AKE
ARBEITSGEMEINSCHAFT KLINISCHE ERNÄHRUNG

Understanding the Report

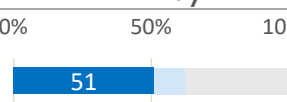**Your unit data:** is based on your online data input.

Reference:

Country: comprises data of [**2016**]: reference is indicated if ≥ 6 units per country and specialty are available with ≥ 6 patients per unit and 80% outcome reported.
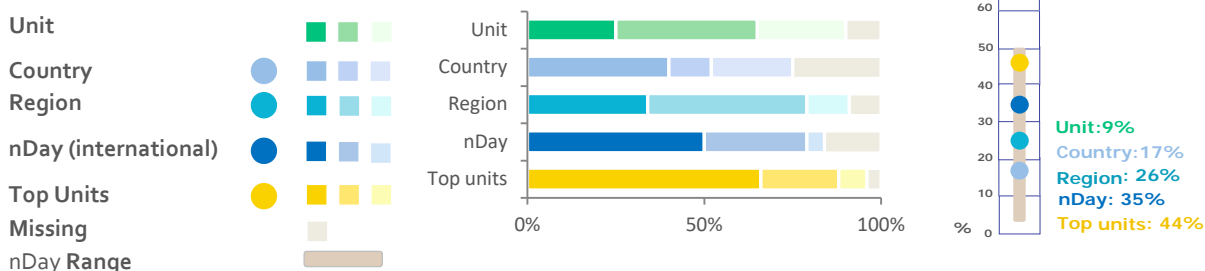
Region: comprises data of [**2016**]: reference is indicated if ≥3 countries have participated and ≥ 6 units per region and specialty are available with ≥ 6 patients per unit and 80% outcome reported.

nDay: represents international data of your specialty of [**2016**].

Top Units: compares your unit to units with top scores. Comprises units of [**2016**] with high participation: ≥6 units per country & specialty, ≥60% of present patients are included in the survey, ≥6 patients in the unit and ≥80% outcome reported. The mean result of the top 25% of the question under consideration is provided as top unit reference.

Unit level indicator presentation	Unit	nDay
Screening using a validated screening tool	✓	0%　　50%　　100%　　[51]
	✓ = done/available in your unit　⊗ = not done/available in your unit　☐ = unknown/missing	■ Yes　■ No　☐ Unknown

Patient level indicator presentation

Unit
Country
Region
nDay (international)
Top Units
Missing
nDay Range

Unit: 9%
Country: 17%
Region: 26%
nDay: 35%
Top units: 44%

Definition of Malnutrition: (Adaptation of GLIM criteria to fit to nDay survey)

	Core Assessment Criteria		Supporting Etiologic Criteria		
	Weight Loss (%)	BMI (kg/m^2)*	Food Intake	Food intake on nDay	Inflammation
Malnutrition[1] (Requires 1 core & 1 supporting criterion)	5-10% in 3 months	<20 if <70 y <22 if >70 y	≤75% intake for 1 (last) week	1/4 on nDay	Acute disease/ injury ** or chronic disease-related:***
Severe Malnutrition[1] (Requires 1 core & 1 supporting criterion)	>10% in 3 months	<18.5 if <70 y <20 if ≥70 y	≤50% intake for 1 (last) week	Nothing but allowed	Acute disease/ injury ** or chronic disease-related:***

*Recommended use of lower BMI standards for Asians will be applied when cut-off values have been published.

** Acute diseases: Emergency admissions AND ICD-10: 0100-Infectious parasitic diseases OR current infections OR ICD-10 diagnosis: 0600-Nervous system OR 2000-External causes/accidents/assaults OR Patients admitted to Trauma wards

*** Comorbidities: cancer OR cardiac insufficiency OR chronic lung disease OR chronic liver disease OR chronic kidney disease OR Other chronic disease

Regions: based on WHO Regions & Subregions http://www.who.int/quantifying_ehimpacts/global/ebdcountgroup/en/:
More about definitions used: www.nutritionday.org/xxx

Abbreviations

BMI=Body Mass Index	(h/u)= hospital or unit	QI=Quality indicator
Def=Definition	m / maln = malnourished	r=risk
EN=Enteral Nutrition	nDay=nutritionDay	
ESPEN= European Society for Clinical Nutrition and Metabolism	ONS=Oral Nutritional Supplements PN=Parenteral Nutrition	

Introduction and Interpretation

Facts about Malnutrition

Malnutrition, as cause and consequence of disease affects 20-50% of hospitalized patients.

It is associated with increased morbidity and mortality and has serious implications for recovery.

Malnutrition increases the risk of hospital acquired infections, complications, falls, pressure ulcers and leads to increased readmission.

Malnutrition increases hospital length of stay by 2-6 days and hospitalization costs by 19-29%.

An association exists between malnutrition and impaired quality of life of hospitalized patients.

Malnutrition in the unit[1]: 16%

Malnutrition risk[2]: 37%

This report shows malnutrition risk factors, care structures and nutrition care provided in your unit and to your patients. Your data is compared to your country, your region and international data of the same specialty of [2016]. This feedback should not be mistaken as definitive evidence of effectiveness and performance but rather provides a basis for discussion and future steps.

Participation 2016	Unit	Country	Region	nDay
Number of units (Reference)[3]	1	9	29	34
Patients				
Present on nDay	22 (100%)	236 (100%)	657 (100%)	744 (100%)
Patients recruited (consent + non-consent)				
Who gave consent [4]	19 (86%)	118 (50%)	391 (60%)	459 (62%)
Completing Sheet 3a/3b [5]	19 (100%)	118 (100%)	391 (100%)	459 (100%)
(Severely) malnourished by def.[1]	3 (16%)	15 (13%)	38 (10%)	47 (10%)
Malnourished acc. to staff[2]	2 (11%)	11 (9%)	17 (4%)	22 (5%)
At risk acc. to staff[2]	7 (37%)	20 (17%)	44 (11%)	52 (11%)
30-day outcome assessment[6]	19 (100%)	118 (100%)	372 (95%)	439 (96%)
Demographic information				
Age [median | IQR]	68 [64-76]	70 [59-78]	67 [52-76]	66 [52-76]
Female (%)	8 (42%)	53 (45%)	205 (52%)	235 (51%)
Weight [median | IQR]	72 [65-81]	72 [62-87]	74 [63-85]	74 [64-85]
Height [median | IQR]	171 [163-174]	170 [163-175]	168 [160-176]	168 [160-176]
BMI [median | IQR]	25 [22-30]	25 [23-29]	26 [23-30]	26 [23-30]
Data quality				
Patient inclusion rate				
Missing values				
Implausible data				

1-6 Exponents: are provided in the report next to each graph. Exponents refer to the total number of included patients/units (n) in the unit reference (country/region/nDay/top units). Total numbers are provided in the table above.
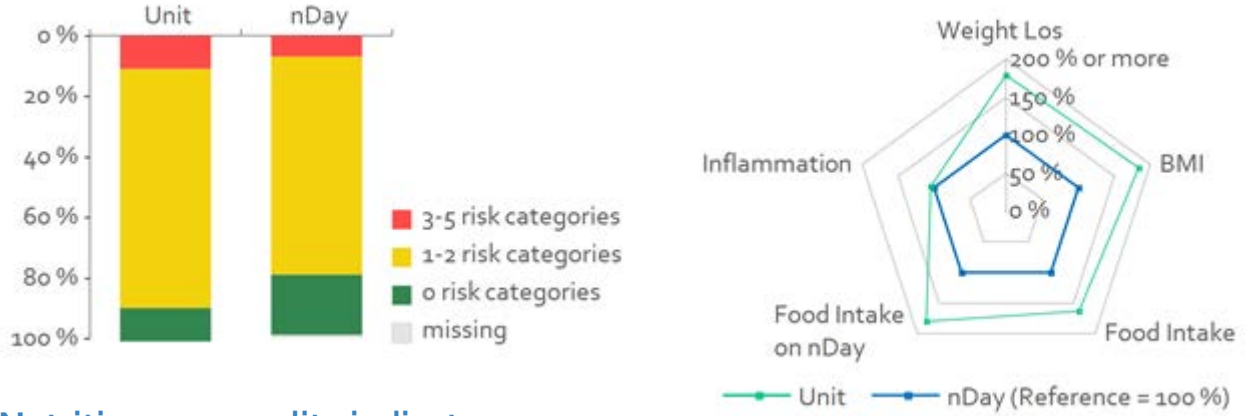
If possible include all unit patients in the data collection and the 30-day outcome assessment to receive the full picture and a certificate. In case of low participation interpret the results with caution.

We recommend discussing the results within your team and with the hospital management. The report can serve as a basis for further steps.
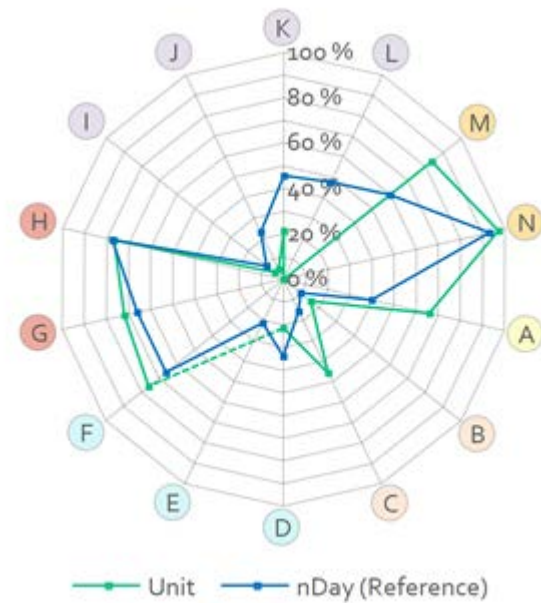
A full **numerical report** is available as a separate download from your personal account.

Summary – Benchmark and Compare your Nutrition of Care

Proportion of patients in GLIM nutrition risk categories[1]

Legend:
- 3-5 risk categories
- 1-2 risk categories
- 0 risk categories
- missing

Radar chart axes: Weight Los 200 % or more, BMI, Food Intake, Food Intake on nDay, Inflammation
Legend: Unit — nDay (Reference = 100 %)

Nutrition care quality indicators

Legend: Unit — nDay (Reference)

Quality of care indicators

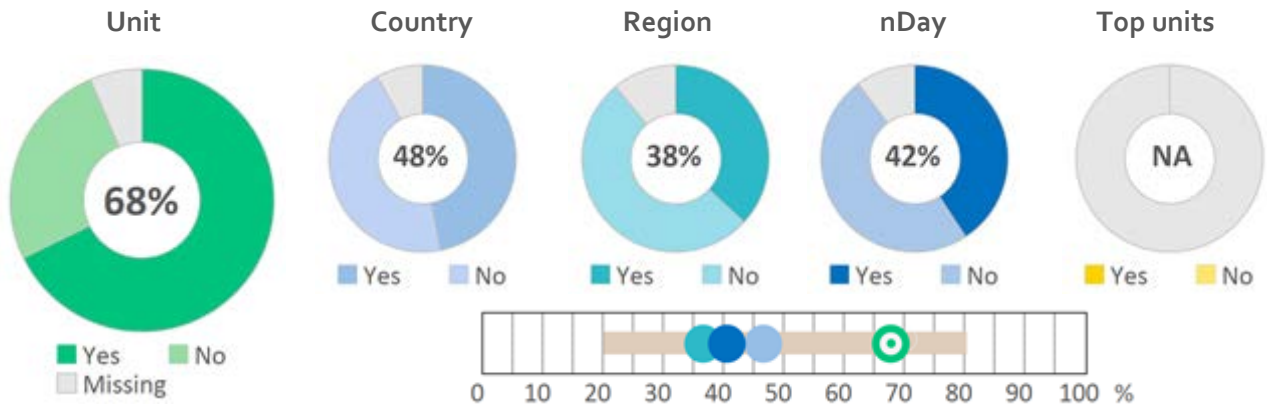|		
Screening	**A**	Patients **weighed at admission**[5] (p.5)
Prevalence	**B**	**(Severely) malnourished patients** according to **definition**[1] (p.5)
	C	**Malnourished / at risk** patients **identified by staff**[2] (p.5)
Treatment	**D**	**Nutritional expert consulted** in case of malnutrition/ at risk of malnutrition[2] (p.7)
	E	Malnourished/at risk patients receiving **artificial treatment**[2] (p.7)
	F	**Identified** and **treated** malnourished/at risk patients[2] (p.7)
Food & Meals	**G**	**Food satisfaction**[5] (p.6)
	H	Patients whose food **preferences** and **wishes** were met[5] (p.6)
Monitoring & Documentation	**I**	**Malnutrition status recorded** in the patient record[2] (p.8)
	J	Patients whose food **intake** was **recorded**[4] (p.8)
	K	Malnourished/ at risk patients with **nutrition treatment plan developed**[2] (p.7)
	L	Malnourished/ at risk patients with **energy/protein requirements determined**[2] (p.8)
Patient inclusion	**M**	Proportion of patients **included** in the nDay survey[4] (p.3)
	N	Proportion of included patients **with** 30-day outcome assessment[6] (p.3)

4

Compare your Quality of Care Indicators

Nutrition care quality indicators in detail

1. Nutrition guidelines and screening structures in units[3]

	Unit	nDay
a) Screening using a validated screening tool	⊗	
b) Routine screening at admission	✓	
c) Routine weighing at admission	✓	
d) Guidelines or standards are routinely used for nutrition care	⊗	
e) Nutrition care strategy exists (hospital /unit)	✓	

✓ = Yes   ⊗ = No   ☐ = missing
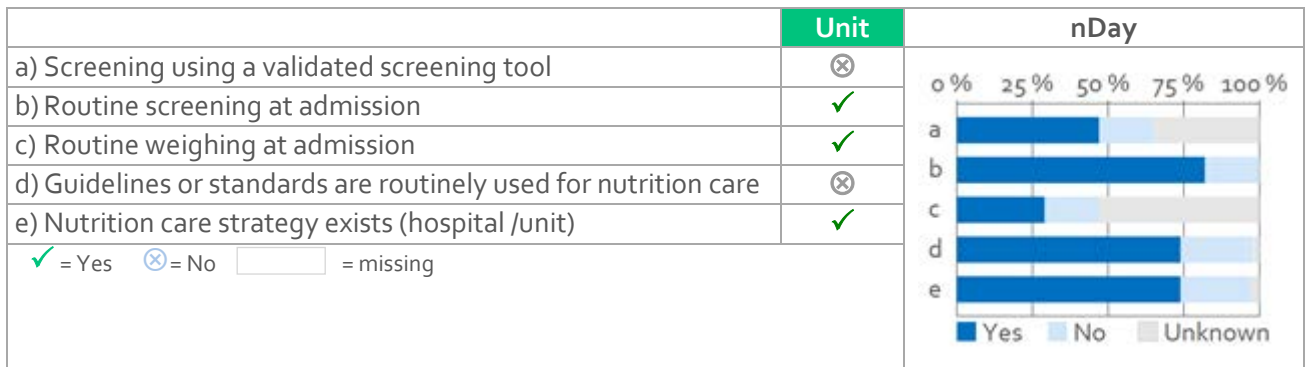
2. Proportion of patients weighed at admission[5]

Unit: 68% (Yes / No / Missing)
Country: 48% (Yes / No)
Region: 38% (Yes / No)
nDay: 42% (Yes / No)
Top units: NA (Yes / No)

3. Prevalence of malnutrition according to...

... definition[1]

- Severe Malnutrition
- Malnutrition
- Wellnourished
- Missing / Unknown

... identification by your staff[2]

- Malnutrition
- At risk of Malnutrition
- Wellnourished
- Missing / Unknown

5
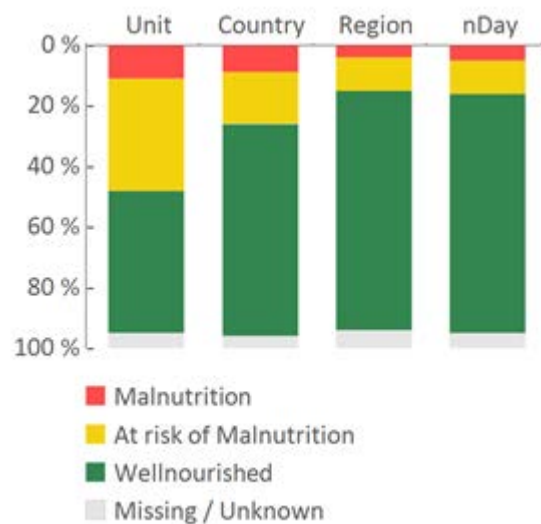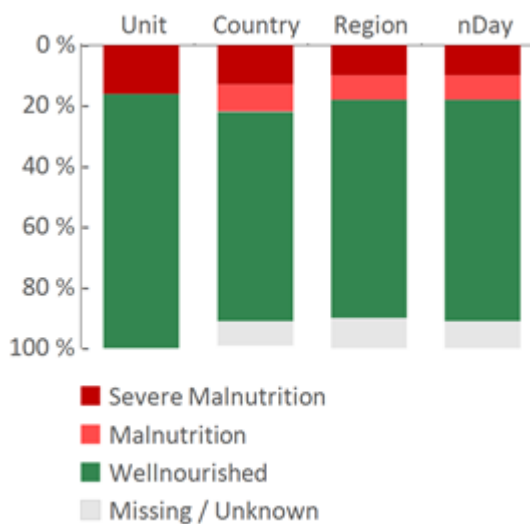
4. Structures in the wards about food, meals and mealtimes[3]

	Unit	nDay
a) Promote positive eating environment	⊗	
b) Protected mealtime policy	⊗	
c) Consider food presentation	⊗	
d) Consider patient allergies / intolerances	✓	
e) Consider cultural/religious preferences	✓	
f) Change food texture/consistency as needed	✓	
g) Consider patient problems with eating and drinking	✓	
h) Offer additional meals or in between snacks	✓	
i) Offer meal choices	✓	
j) Offer different portion sizes	✓	

✓ = Yes   ⊗ = No   ☐ = missing

■ Yes   ■ No   ■ Unknown

5. Food intake on nDay[5]

■ Nothing
■ 1/4
■ 1/2
■ About all
■ Missing
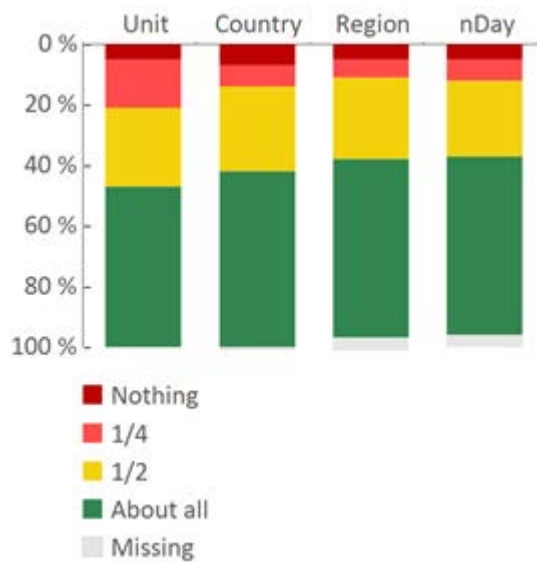
6. Reasons for eating less[5]

|	
Did not get requested food	0
Had an exam, surgery, or test	5
Cannot eat without help	0
Chewing/swallowing problems	0
Had Nausea/vomiting	5
Normally eat less	16
Food allergy/intolerance	0
Did not fit cultural/...	0
Dislike the type of food	5
Dislike the smell/taste	0
Too hot	0
Too cold	0
Too tired	0
Not my usual appetite	21
Not hungry	0
Not allowed	0
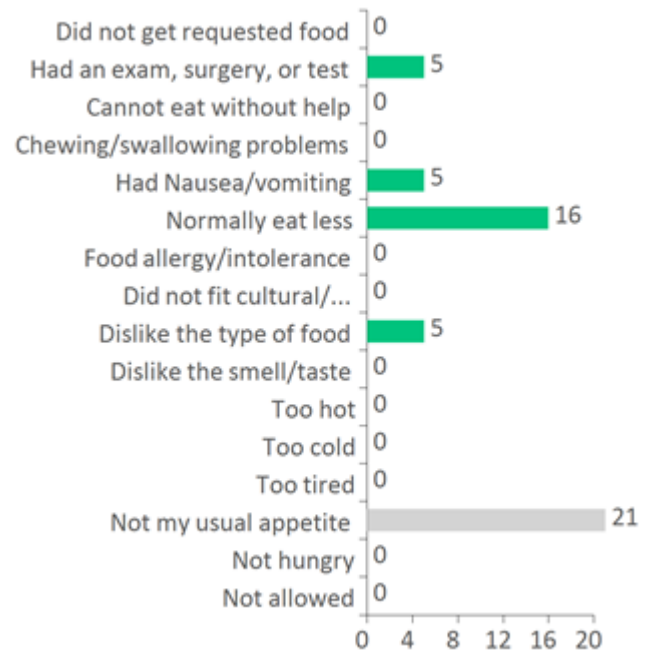
Considering the patients' eating difficulties, preferences and wishes (green bars) may support eating the full meal.

7. Food Satisfaction[5]

■ Very/somewhat satisfied
■ Neutral
■ (Very) dissatisfied
■ Missing
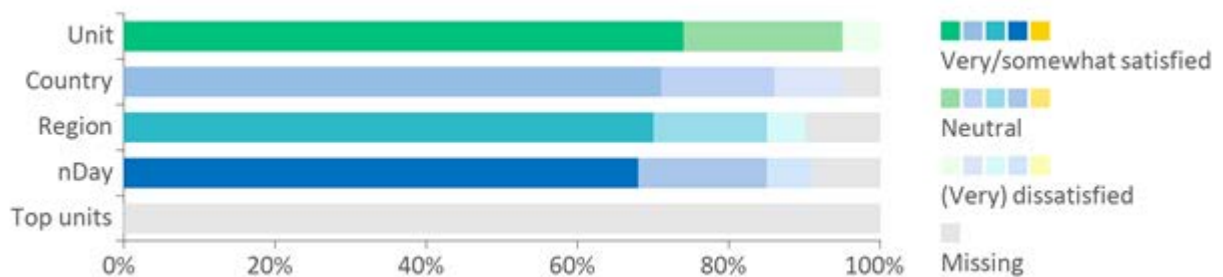
8. Structures in the wards about management of malnourished/at risk patients[3]

	Unit		nDay
	m	r	
a) Develop an individual nutrition care plan	✓	✓	
b) Consult a nutrition expert	✓	✓	
c) Consult a medical professional	✓	⊗	
d) Initiate treatment / nutrition intervention	✓	✓	
e) Calculate energy/protein requirements	✓	⊗	

✓ = Yes ⊗ = No ☐ = missing
M=malnourished r=at risk

9. Nutrition treatment of malnourished / at risk patients[2]

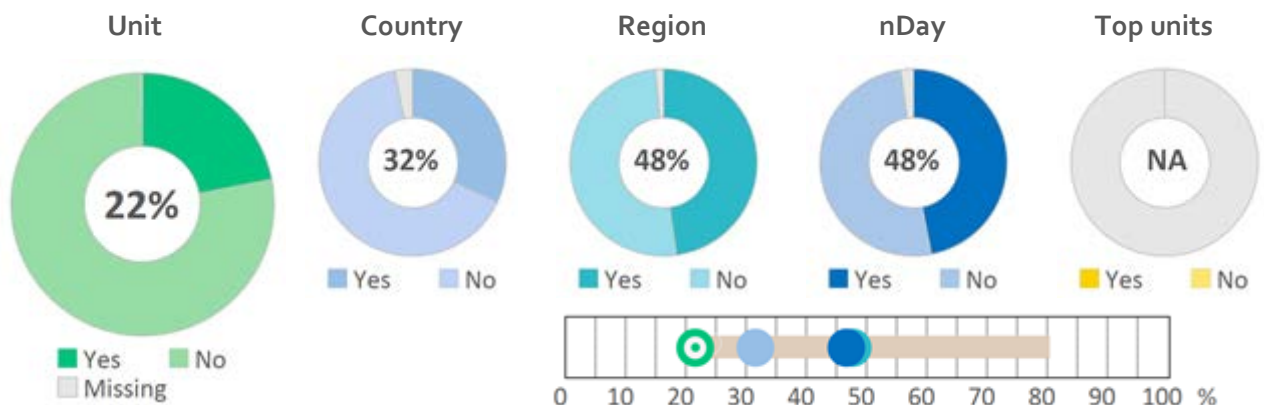|	
Unit	22%
Country	32%
Region	52%
nDay	53%
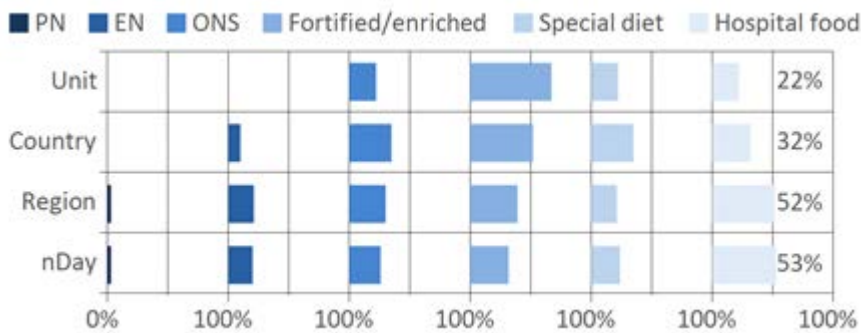
In your ward **22%** of malnourished /at risk patients receive regular hospital food only.

10. Malnourished / at risk patients consulted by a nutrition expert[2]

Unit	Country	Region	nDay	Top units
22%	40%	38%	36%	NA
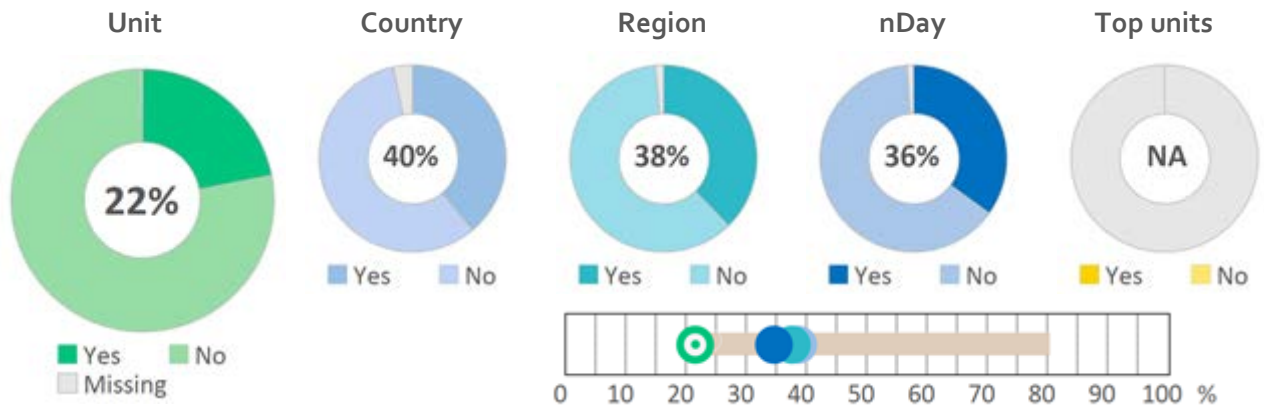
11. Malnourished / at risk patients with a nutrition treatment plan[2]

Unit	Country	Region	nDay	Top units
22%	32%	48%	48%	NA

7

12. Structures in the wards about monitoring and documentation[3]

	Unit	nDay
a) Weighing during hospital stay	✓	
b) Routine monitoring during hospital stay	⊗	
Documentation at admission:		
c) weight change	✓	
d) Eating habits/difficulties	✓	
e) Nutrition before admission	✓	
Patient record has a section for:		
f) documentation of nutrition treatment	✓	
g) documentation of nutrition status	✓	
Discharge letter has a section for:		
h) nutrition treatment during hospital stay	⊗	
i) future nutrition recommendations	✓	

✓ = Yes   ⊗ = No   = missing

13. Monitoring & documentation of malnourished/at risk patients[2]

Malnutrition status recorded

Protein /Energy requirements determined

Food / Nutrition intake recorded

Unit: 5.0%
Country: 14.0%
Region: 8.0%
nDay: 10.0%
Top units: -1.0%

Unit: 0.0%
Country: 8.0%
Region: 13.0%
nDay: 15.0%
Top units: -1.0%

Unit: 5.0%
Country: 12.0%
Region: 25.0%
nDay: 24.0%
Top units: -1.0%
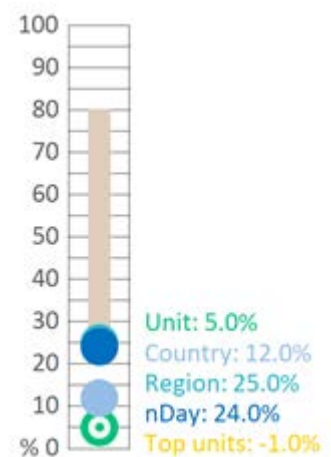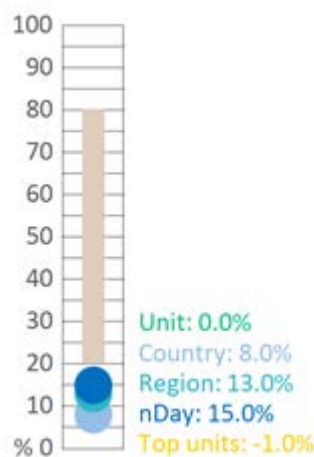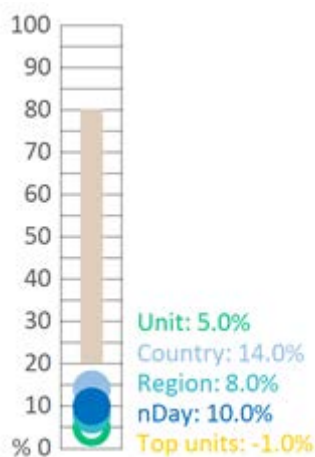
14. Nutrition care structures about communication, coordination & training[3]

	Unit	nDay
a) Discuss nutrition care of malnourished/at risk patients during ward rounds	✓	
b) Provide Brochures about malnutrition to malnourished/at risk patients	✓	
c) Nutrition training is available (h/u)	✓	
d) Ask for patient feedback about food and food services (h/u)	✓	
e) Report nutrition related information to hospital managers	✓	
f) Report QIs to national/regional level (h/u)	✓	
g) Use QIs for internal benchmarking (h/u)	⊗	

✓ = Yes   ⊗ = No   = missing   h/u= hospital or unit

8

15. Health care professionals per 25 patients on nDay[3]

	Unit	Country	Region	nDay
Medical Doctor	3	3	3	3
Medical Students		2	0	1
Nurses	4	5	4	4
Nursing aides	1	1	1	1
Dieticians	2	1	0	0
Nutritionists	0	0	0	0

👤 = 1 staff member

Reading example:
[2.5] Medical doctors are available per 100 patients in your unit…

*In case of 0:*
[0] nutritionists are available for your unit…

16. Nutrition staffing in the wards[3]

|	Unit	nDay
a) Nutrition steering team in the hospital	✓	
b) Nutrition support team in the unit	✓	
c) Person responsible for nutrition care in the unit	✓	
d) Dietician, Nutritionist, Dietetic assistant available	✓	
e) Staff providing feeding assistance	✓	

✓ = Yes   ⊗ = No   ☐ = missing

17. Financing[3]

In your hospital 7 different financing codes are available for the special reimbursement of nutrition-related care. 71% of these codes are currently used.
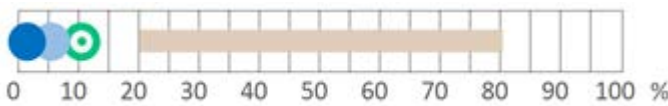

Unit: 71.0%
Country: 83.0%
Region: 100.0%
nDay: 100.0%
Top units: -1.0%
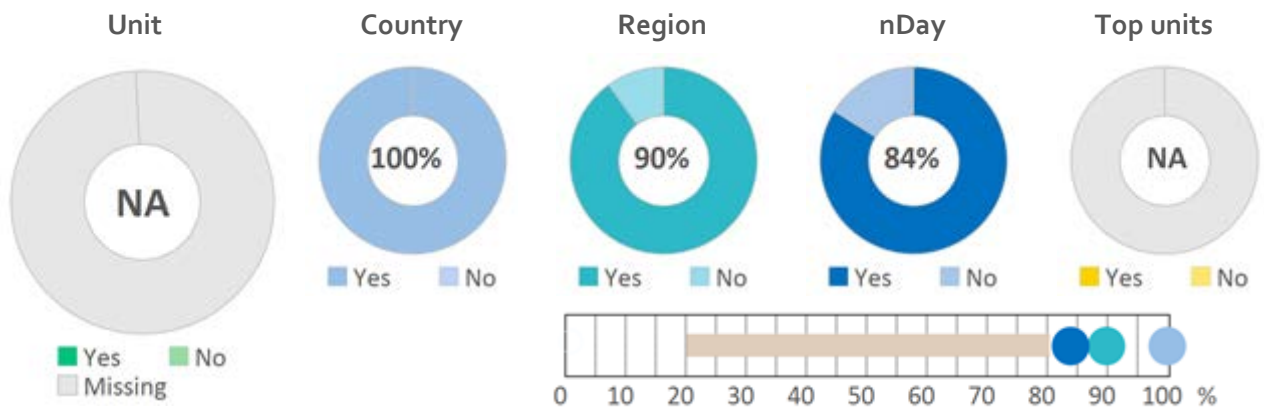
9
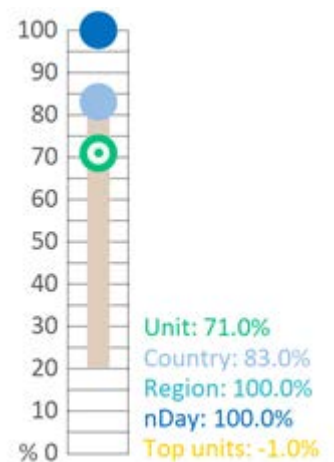
Outcomes

18. Self-rated health[5]
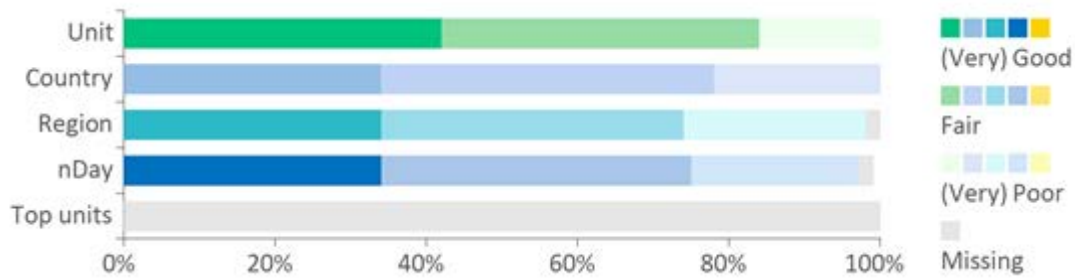
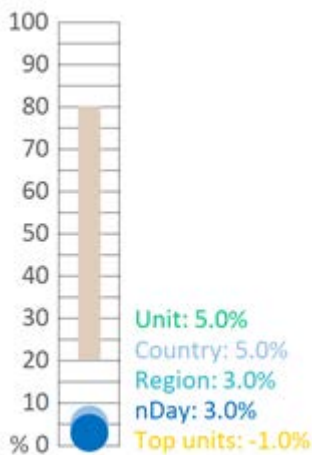## 19. Complications with feeding tubes

Unit 16.5% (n=xx)
Country 3,1% (n=xx)
Region 4,2% (n=xx)
nDay 5.4% (n=xx)
Top units 0.2% (n=xx)

20. Proportion of patients with adequate energy intake[4]

21. Unplanned readmission[6]

Unit: 5.0%
Country: 5.0%
Region: 3.0%
nDay: 3.0%
Top units: -1.0%

5% of all patients **were readmitted unplanned**. This accounts for xx% of all readmissions.

Implementation of a Quality Improvement Project

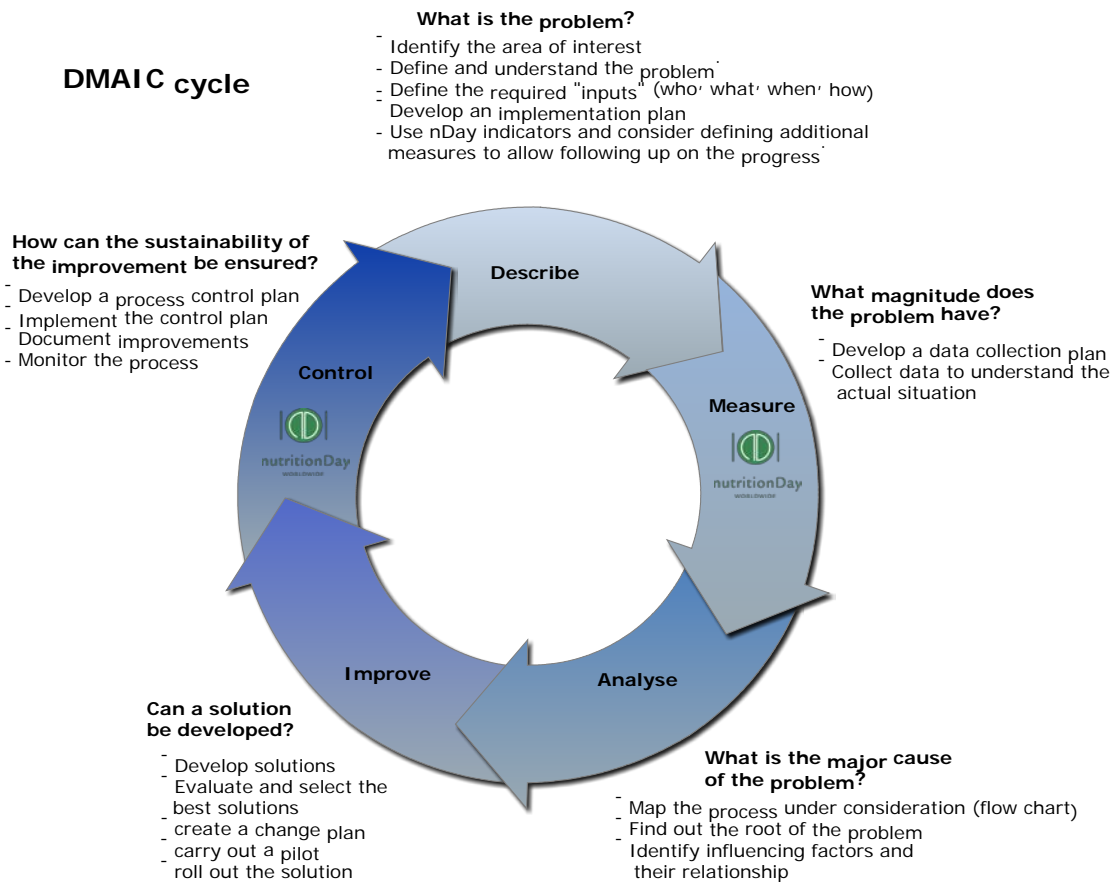**From Knowledge to Action**

Before you start a quality improvement cycle...
✓
- ☐ Are unit staff aware of the importance of malnutrition and nutrition treatment?
- ☐ Are there clear signs from management about the importance of nutritional care?
- ☐ Do you have the needed financial and human resources for a quality improvement initiative?
- ☐ Do all important stakeholders and decision makers support the project?
- ☐ Are all teams/committees/professionals on board (nutrition team, nutrition steering committee, decision makers, quality improvement team, representatives of all professions,...) ?
- ☐ Is a multidisciplinary project team in place and a project leader defined?

Define what, when, how and who...
✓
- ☐ Results of the report help to define blind spots or areas with potential for improvement
- ☐ Consider what is important for the hospital and if implementation is feasible
- ☐ Choose one or two areas that shall be improved
- ☐ Define specific goals, roles and responsibilities, resources allocation, milestones and timeline (what, who, how, when)
- ☐ Do not forget to keep all relevant stakeholders informed about developments

The DMAIC is a data-driven quality improvement strategy for improving processes and carrying out change. Repeating the 5 steps (describe – measure – analyse – improve – control) in small circles shall direct into a continuous change of an organisation in the desired field of interest and shall institutionalize the improvements by monitoring and modification of structures.

DMAIC cycle

What is the problem?
- Identify the area of interest
- Define and understand the problem
- Define the required "inputs" (who, what, when, how)
- Develop an implementation plan
- Use nDay indicators and consider defining additional measures to allow following up on the progress

How can the sustainability of the improvement be ensured?
- Develop a process control plan
- Implement the control plan
- Document improvements
- Monitor the process

What magnitude does the problem have?
- Develop a data collection plan
- Collect data to understand the actual situation

Can a solution be developed?
- Develop solutions
- Evaluate and select the best solutions
- create a change plan
- carry out a pilot
- roll out the solution

What is the major cause of the problem?
- Map the process under consideration (flow chart)
- Find out the root of the problem
- Identify influencing factors and their relationship

(Describe – Measure – Analyse – Improve – Control)

11

Your personal development plan

Priority	Area to improve	Current state	Target performance	Actions to take	How and when I will measure success
I	e.g. Proportion of malnourished / at risk patients seen by a dietician	Screening is done systematically ; dietician is not requested systematically for malnourished patients. xx% of malnourished/at risk patients have been seen by a dietician	Increase proportion of malnourished patients seen by a dietician from xx% to xx%.	Nutrition team to define standard process (how, when and who to call a dietician). Communicate and train new procedure. Include specific section in patient record.	1 month after implementation: check patient records of all admitted patients of 1 week. 1 year: repeat nDay and see if target performance has been reached

Page for my thoughts and suggestions

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