



nutritionDay worldwide
benchmark & monitor your nutrition care

nutritionDay SmartReport

Nutrition Care Quality Indicators

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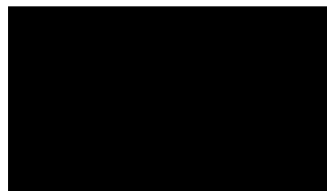
Specialty: Internal Medicine / Oncology (incl. radiotherapy)

Centre Code:

Unit Code:

Country:

Region:



nDay Smart Report 2019



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Report Toolbox: definitions, symbols and abbreviations

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

Reference:

Country: comprises data of the last three years: reference is indicated if ≥ 3 units per country and specialty are available with ≥ 6 patients per unit and 80% outcome reported.

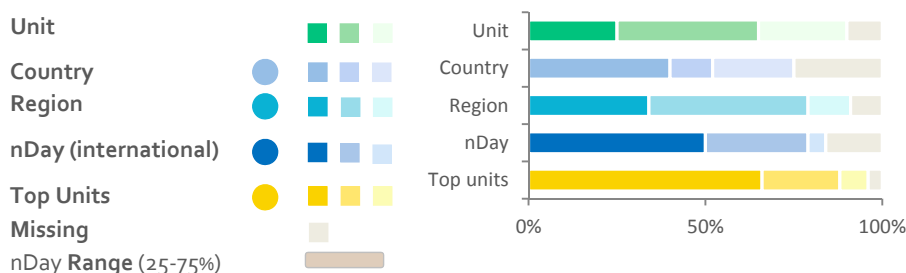
Region: comprises data of the last three years: reference is indicated if ≥ 2 countries have participated and ≥ 4 units per region and specialty are available with ≥ 6 patients per unit and 80% outcome reported.

nDay: represents international data of your specialty of the last three years.

Top Units: compares your unit to international units with top scores. It comprises units of the last three years with high participation: ≥ 10 patients included in the survey and $\geq 80\%$ outcome reported. The mean result of the top 25% of the question under consideration is provided as top unit reference (currently unavailable).

Unit level indicator presentation	Unit*	nDay (Reference)
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
*compare your practice with the frequency of use in the reference units from your speciality.		

Patient level indicator presentation



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

	Core Assessment Criteria		Supporting Etiologic Criteria		
	Weight Loss (%)	BMI (kg/m^2)*	Food Intake	Food intake on nDay	Inflammation
Malnutrition¹ (Requires 1 core & 1 supporting criterion)	5-10% in 3 months	<20 if <70 y <22 if >70 y	$\leq 75\%$ intake for 1 (last) week	1/4 on nDay	Acute disease/ injury **or chronic disease-related:***
Severe Malnutrition¹ (Requires 1 core & 1 supporting criterion)	>10% in 3 months	<18.5 if <70 y <20 if ≥ 70 y	$\leq 50\%$ 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 ICD-10 diagnosis: 0600-Nervous system OR 2000-External causes/accidents/assaults OR current infections 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 & Sub-regions: http://www.who.int/quantifying_ehimpacts/global/ebdcountgroup/en/:

More about definitions used: <https://www.nutritionday.org/en/about-nday/nday-results-reports/index.html>

Abbreviations

BMI= Body Mass Index

Def= Definition

EN= Enteral Nutrition

ESPEN= European Society for Clinical Nutrition and Metabolism

(h/u)= hospital or unit

m / maln= malnourished

nDay= nutritionDay

ONS= Oral Nutritional Supplements

PN= Parenteral Nutrition

QI= Quality indicator

r= at risk

nDay Smart Report

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Introduction to the nDay Smart Report

Facts about Malnutrition

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

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

Malnutrition increases the risk of hospital acquired infections, complications, falls, pressure ulcers and hospital readmission^b.

Malnutrition increases hospital length of stay by 2-6 days and hospitalization costs by 19-29%^{c,d,e}.

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

Malnutrition in the unit¹: 46%

Malnutrition risk²: 17%

See references^{a-f} at page 14

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

Participation in 2019	Unit	Country	Region	nDay
Number of units (Reference)³	1	9	51	77
Patients				
Present on nDay	37	20 [18-34]	22 [17-28]	26 [18-36]
Who gave consent ⁴	24	131	705	1239
Completing Sheet 3a/3b ⁵	24 (100%)	131 (100%)	696 (99%)	1200 (97%)
(Severely) malnourished by def. ¹	11 (46%)	58 (44%)	302 (43%)	503 (41%)
Malnourished acc. to staff ²	0 (0%)	26 (20%)	123 (17%)	186 (15%)
At risk acc. to staff ²	4 (17%)	7 (5%)	136 (19%)	272 (22%)
30-day outcome assessment ⁶	24 (100%)	131 (100%)	699 (99%)	1225 (99%)
Demographic information				
Age [median IQR]	66 [58-74]	62 [54-75]	66 [55-74]	62 [51-72]
Female	13 (54%)	57 (44%)	334 (47%)	574 (46%)
Weight [median IQR]	67 [61-81]	73 [63-88]	70 [61-82]	67 [58-79]
Height [median IQR]	168 [164-174]	173 [165-178]	169 [162-175]	166 [160-173]
BMI [median IQR]	25 [24-26]	25 [21-28]	25 [22-28]	24 [21-27]
Data quality				
Patient inclusion rate (%)	65%	66 [64-68]	72 [56-87]	67 [52-86]
Outcome data available (%)	100%	100%	100%	100%

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.

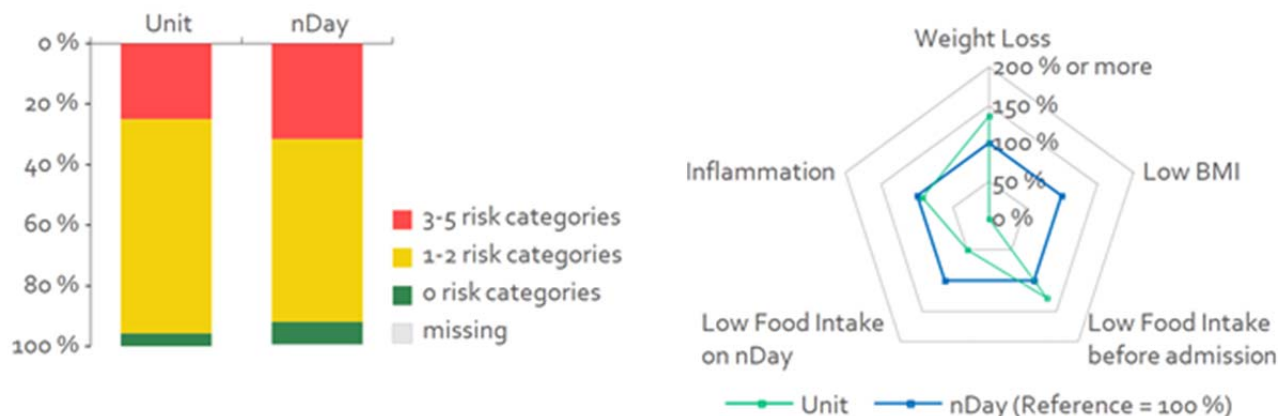
If possible include all unit patients in the data collection and the 30-day outcome assessment to receive the full picture and a certificate. In case of low participation interpret the results with caution.

We recommend discussing the results within your team and with the hospital management. The report can serve as a basis for further steps.

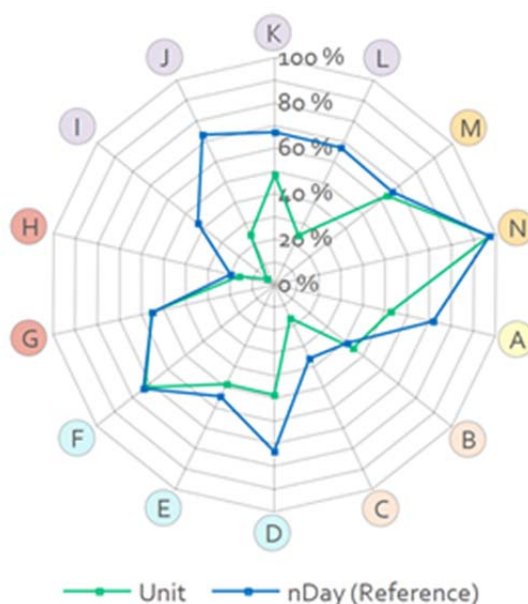
A full **numerical report** is available as a separate file to download from your personal nDay account.

At a Glance – Benchmark and Compare your Nutrition Care

Proportion of patients in GLIM nutrition risk categories¹



Nutrition care quality indicators



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 not met ⁵ (p.6)
Monitoring & Documentation	I	Malnutrition status recorded in the patient record ² (p.8)
	J	Malnourished/at risk 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)

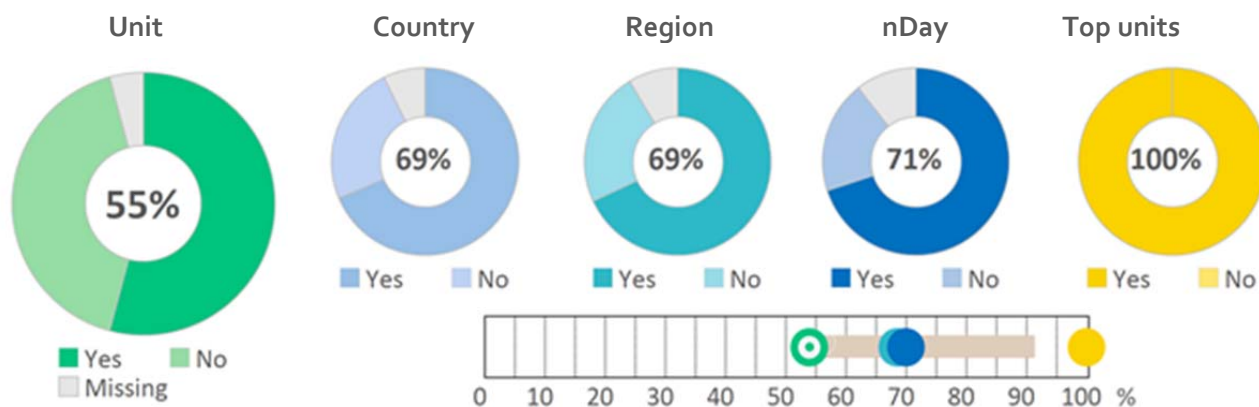
Nutrition care quality indicators in detail

1. Nutrition guidelines and screening structures in units³

	Unit	nDay (Reference)
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)	-	

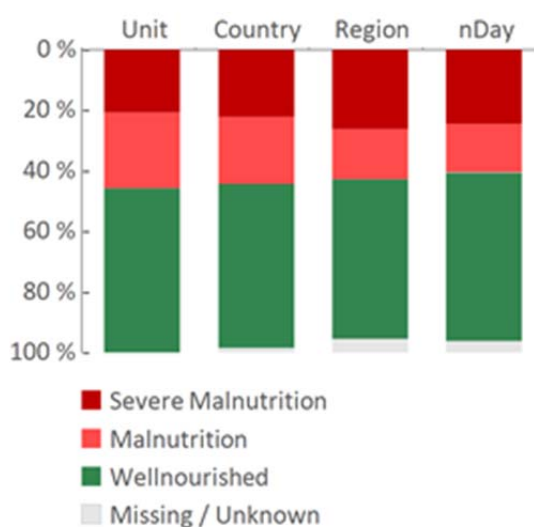
✓ = Yes ⊗ = No = missing

2. Proportion of patients weighed at admission⁵

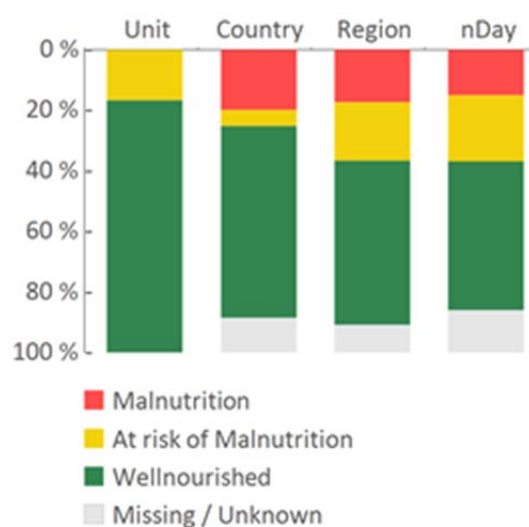


3. Prevalence of malnutrition according to...

... definition¹



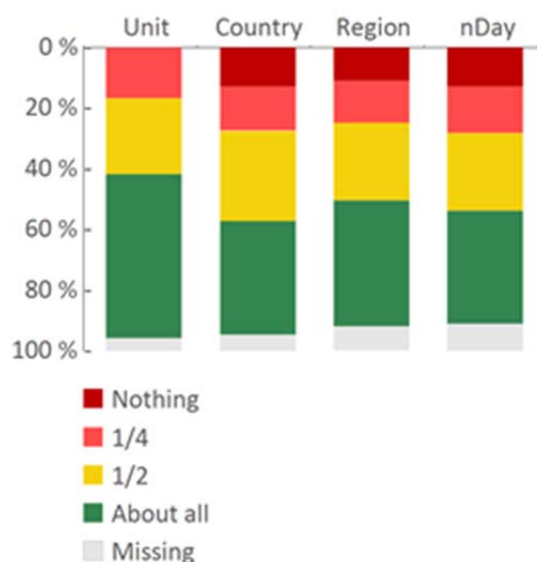
...identification by your staff²



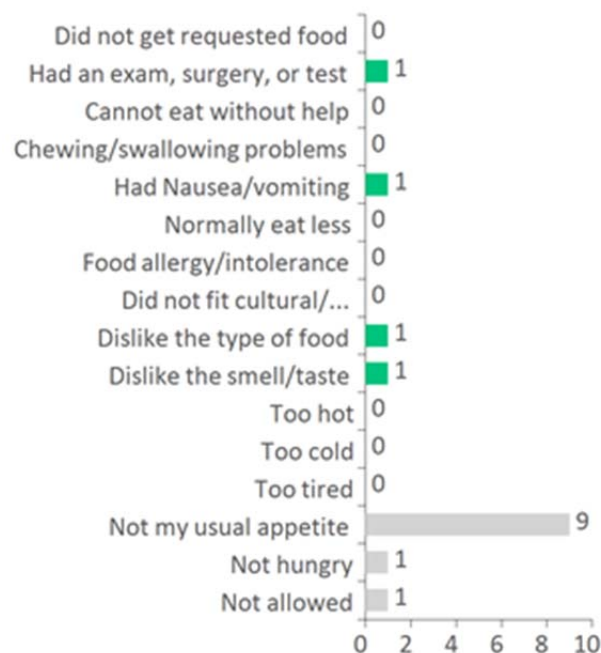
4. Structures in the wards about food, meals and mealtimes³

	Unit	nDay (Reference)
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 nDay⁵

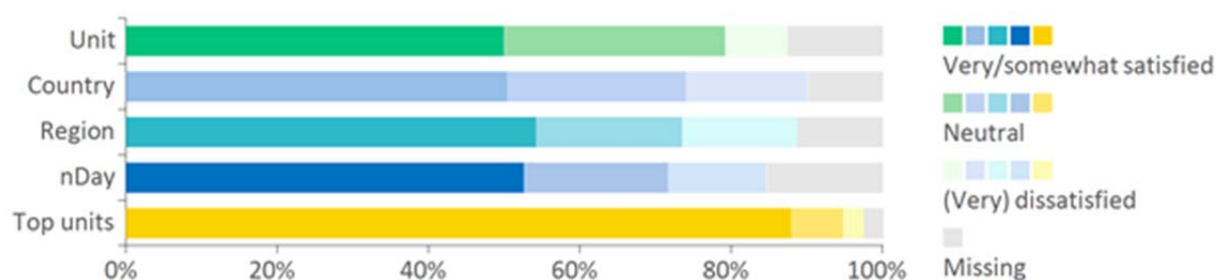


6. Reasons for eating less⁵

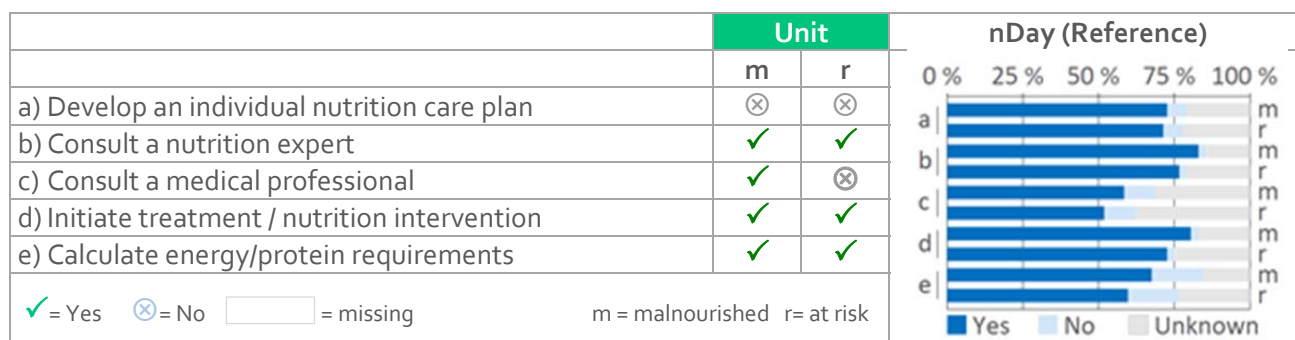


Considering the patients' eating difficulties, preferences and wishes (green bars) may support eating the full meal.

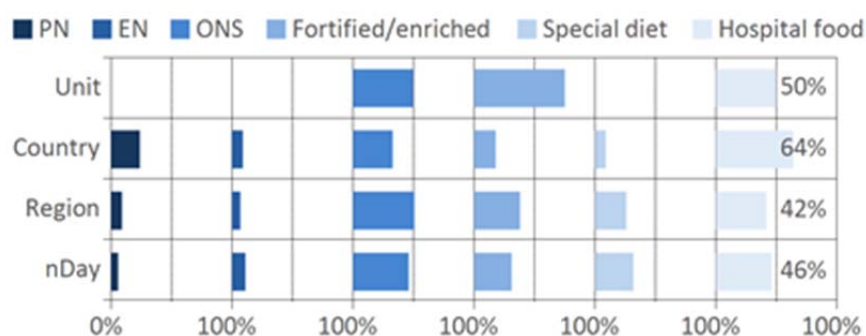
7. Food Satisfaction⁵



8. Structures in the wards managing malnourished/at risk patients³

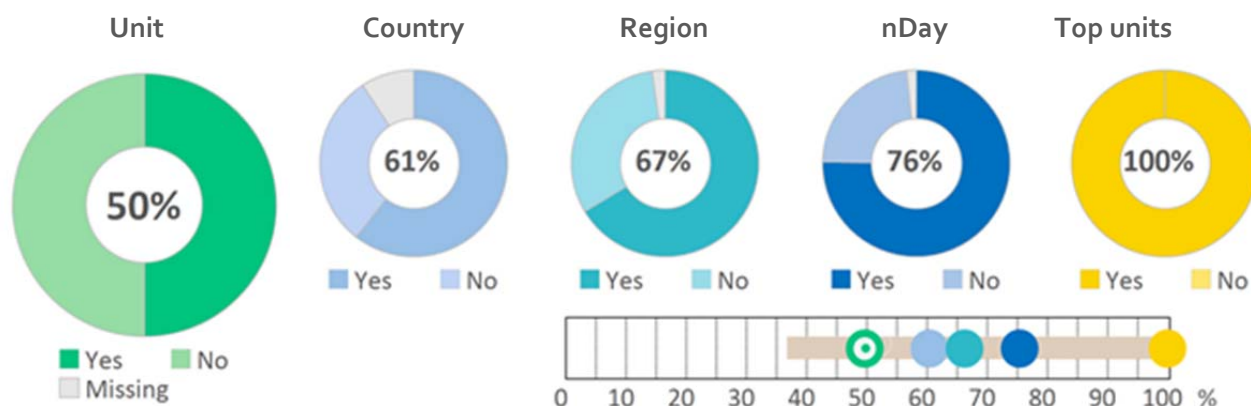


9. Nutrition treatment of malnourished / at risk patients²

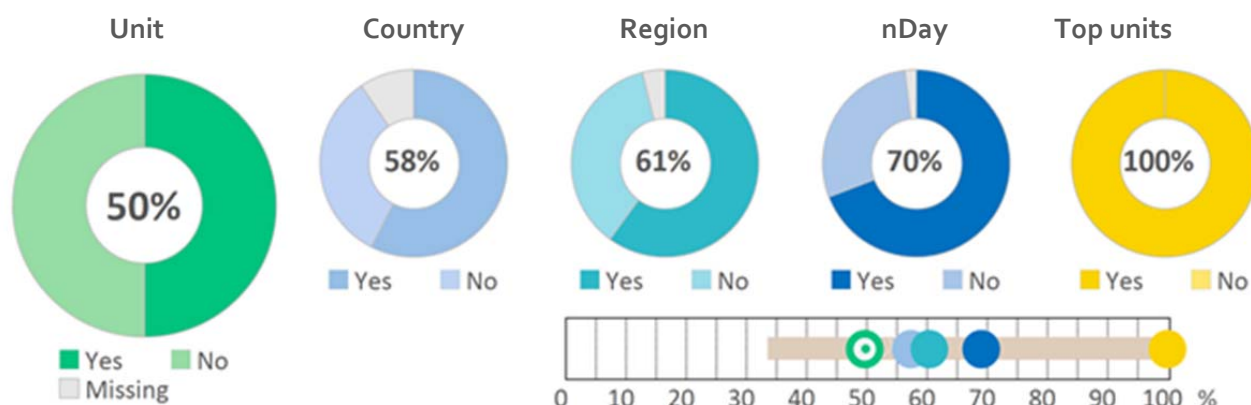


In your ward 2 (50%) malnourished / at risk patients receive regular hospital food only.

10. Malnourished / at risk patients consulted by a nutrition expert²



11. Malnourished / at risk patients with a nutrition treatment plan²



12. Screening, monitoring and documentation³

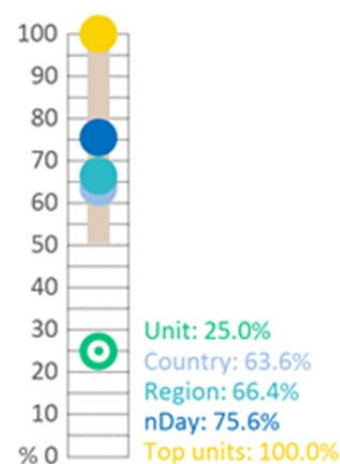
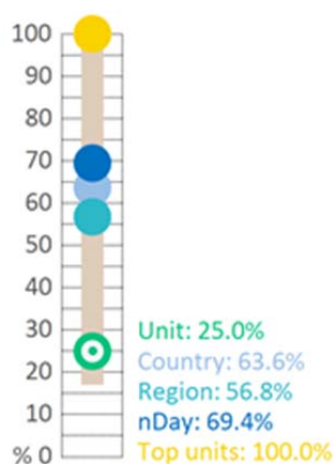
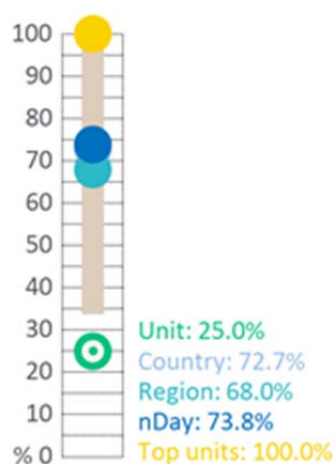
	Unit	nDay (Reference)
a) Weighing during hospital stay	✓	<p>0 % 25 % 50 % 75 % 100 %</p> <p>a b c d e f g h i</p> <p>■ Yes ■ No ■ Unknown</p>
b) Routine monitoring during hospital stay	✓	
Documentation at admission:		
c) weight change	✓	
d) Eating habits/difficulties	✓	
e) Nutrition before admission	✓	
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 patients²

Malnutrition status recorded

Protein /Energy requirements determined












Food / Nutrition intake recorded



14. Nutrition care structures about communication, coordination & training³

	Unit	nDay (Reference)
a) Discuss nutrition care of malnourished/at risk patients during ward rounds	✓	<p>0 % 25 % 50 % 75 % 100 %</p> <p>a b c d e f g</p> <p>■ Yes ■ No ■ Unknown</p>
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		

15. Health care professionals per 25 patients on nDay³

	Unit	Country	Region	nDay
Medical Doctor	 2	 2.6	 4	 3.8
Medical Students		 0.7		
Nurses	 2	 4.4	 5.5	 5.4
Nursing aides			 1.2	 1.5
Dieticians				
Nutritionists				

Reading example:

[2.5] Medical doctors are available per 25 patients in your unit...

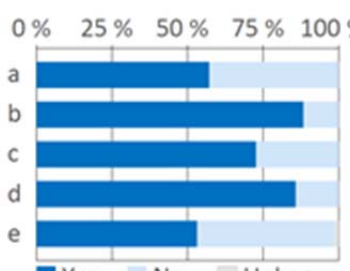
In case of 0:

[0] nutritionists are available for your unit...



= 1 staff member present during morning shift

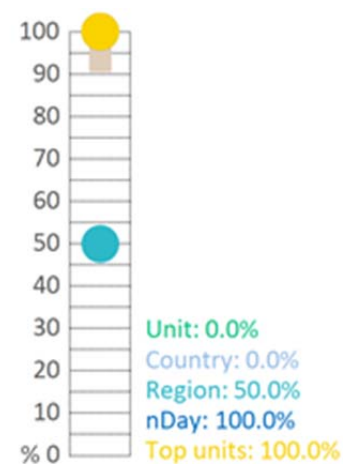
16. Nutrition staffing in the hospital/ward³

	Unit	nDay (Reference)
a) Nutrition steering team in the hospital	⊗	 <p>0 % 25 % 50 % 75 % 100 %</p> <p>a b c d e</p> <p>■ Yes ■ No ■ Unknown</p>
b) Nutrition support team in the hospital	⊗	
c) Person responsible for nutrition care in the unit	✓	
d) Dietician, Nutritionist, Dietetic assistant available	⊗	
e) Staff providing feeding assistance	⊗	
✓ = Yes ⊗ = No <input type="text"/> = missing		

17. Financing³

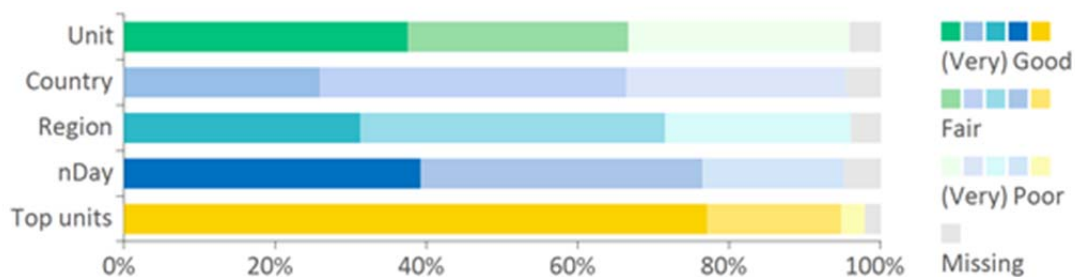
In your hospital different financing codes are available for the special reimbursement of nutrition-related care.

0% of these codes are currently in use.

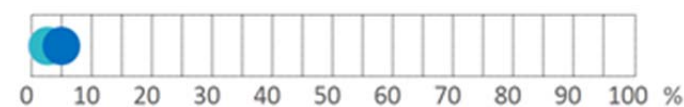


Outcomes

18. Self-rated health⁵

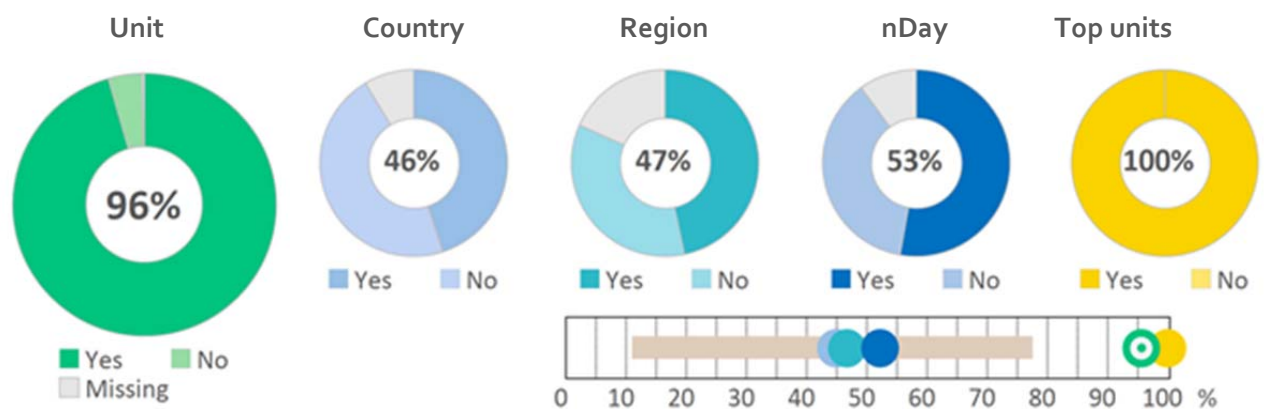


19. Complications with feeding tubes

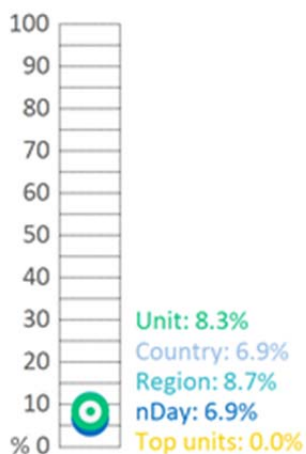


Unit (n=0)
Country (n=4)
Region (n=23)
nDay (n=68)
Top units (n=0)

20. Proportion of patients with adequate energy intake⁴



21. Unplanned readmission⁶



2 (8%) of all patients with an unplanned readmission. This accounts for 50% of all readmissions.

Implementation of a Quality Improvement Project

Before you start a quality improvement cycle...

✓

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

Define what, when, how and who...

✓

- ☐ Consider what is important for the hospital and if the implementation is feasible
- ☐ Choose one or two areas that shall be improved
- ☐ Define goals, roles and responsibilities, resources allocation, milestones and timeline (what, who, how and when)
- ☐ Remember to keep all relevant stakeholders informed about developments.

The **DMAIC**⁹ is a data-driven quality improvement strategy for improving processes and carrying out changes. The repetition of the five 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.



Describe

what is the problem?

- Identify the area of interest and define the problem
- Define who, what, when and how
- Develop an implementation plan
- Use nDay quality indicators and consider defining additional measures to allow following up

Measure

what is the magnitude of the problem?

- Develop a data collection plan (nDay)
- Collect data to understand the situation

Analyze

what is the major cause of the problem?

- Map the process (flow chart)
- Find the root of the problem
- Identify influencing factors and their relationship

Improve

Can a solution be developed?

- Consider and develop solutions
- Evaluate and select best solution
- Create a change plan and carry out a pilot
- Roll out the solution

Control

Is the sustainability of the improvement ensured?

- Develop and implement a process control plan
- Document improvements
- Monitor the process

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 the 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

References

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- e) Correia, I. and Waitzberg, D. (2003). The impact of malnutrition on morbidity, mortality, length of hospital stay and costs evaluated through a multivariate model analysis. *Clinical Nutrition*, 22(3), pp.235-239.
- f) Felder, S., Lechtenboehmer, C., Bally, M., Fehr, R., Deiss, M., Faessler, L., Kutz, A., Steiner, D., Rast, A., Laukemann, S., Kulkarni, P., Stanga, Z., Haubitz, S., Huber, A., Mueller, B. and Schuetz, P. (2015). Association of nutritional risk and adverse medical outcomes across different medical inpatient populations. *Nutrition*, 31(11-12), pp.1385-1393.
- g) Betts, A. (2015). DMAIC Cycle. *Wiley Encyclopedia of Management*, pp.1-1.

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