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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 ≥26 patients per unit and 80% outcome reported.

Region: comprises data of the last three years: reference is indicated if ≥22 countries have participated and ≥24 units per region and specialty are available with ≥26 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 ≥80% outcome reported. The mean result of the top 25% of the question under consideration is provided as top unit reference (currently unavailable).

<table>
<thead>
<tr>
<th>Unit level indicator presentation</th>
<th>Unit*</th>
<th>nDay (Reference)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening using a validated screening tool</td>
<td>✔</td>
<td>0% 50% 100%</td>
</tr>
</tbody>
</table>

* = compare your practice with the frequency of use in the reference units from your specialty.

Patient level indicator presentation

Core Assessment Criteria

Weight Loss (%)
BMI (kg/m²)*
Food Intake
Food intake on nDay
Inflammation

Malnutrition
(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

Severe Malnutrition
(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

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

*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: 0300-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_ghimpacts/global/ebdcountgroup/en/


Abbreviations

BMI= Body Mass Index
Def= Definition
EN= Enteral Nutrition
ESPEN= European Society for Clinical Nutrition and Metabolism
PN= Parenteral Nutrition

nDay= nutritionDay
ONS= Oral Nutritional Supplements
QI= Quality indicator
r= at risk

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nDay Smart Report
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.\(^c\)

See references ^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.

<table>
<thead>
<tr>
<th>Participation in 2019</th>
<th>Unit</th>
<th>Country</th>
<th>Region</th>
<th>nDay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of units (Reference)(^3)</td>
<td>1</td>
<td>9</td>
<td>51</td>
<td>77</td>
</tr>
<tr>
<td>Patients</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Who gave consent(^4)</td>
<td>24</td>
<td>131 (100%)</td>
<td>696 (99%)</td>
<td>1200 (97%)</td>
</tr>
<tr>
<td>Completing Sheet 3a/3b(^5)</td>
<td>24 (100%)</td>
<td>131 (100%)</td>
<td>696 (99%)</td>
<td>1200 (97%)</td>
</tr>
<tr>
<td>(Severely) malnourished by def.(^6)</td>
<td>11 (46%)</td>
<td>58 (44%)</td>
<td>302 (43%)</td>
<td>503 (41%)</td>
</tr>
<tr>
<td>Malnourished acc. to staff(^7)</td>
<td>0 (0%)</td>
<td>26 (20%)</td>
<td>123 (17%)</td>
<td>186 (15%)</td>
</tr>
<tr>
<td>At risk acc. to staff(^8)</td>
<td>4 (17%)</td>
<td>7 (5%)</td>
<td>16 (19%)</td>
<td>27 (22%)</td>
</tr>
<tr>
<td>30-day outcome assessment(^9)</td>
<td>24 (100%)</td>
<td>131 (100%)</td>
<td>699 (99%)</td>
<td>1225 (99%)</td>
</tr>
<tr>
<td>Demographic information</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>13 (54%)</td>
<td>57 (44%)</td>
<td>334 (47%)</td>
<td>574 (46%)</td>
</tr>
<tr>
<td>Data quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient inclusion rate (%)</td>
<td>65%</td>
<td>66 [64-68]</td>
<td>72 [56-87]</td>
<td>67 [52-86]</td>
</tr>
<tr>
<td>Outcome data available (%)</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

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.

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**nDay SmartReport**

**Exponent 1** see the definition used for malnutrition in the section “Report Toolbox” at page 2

**Exponents 1 to 6:** see table “Participation in 2019” at page 3 for details about total number of patients/units (n) included.

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At a Glance – Benchmark and Compare your Nutrition Care

Proportion of patients in GLIM nutrition risk categories³

Nutrition care quality indicators

Quality of care indicators

Screening
A. Patients weighed at admission³ (p.5)

Prevalence
B. (Severely) malnourished patients according to definition¹ (p.5)
C. Malnourished / at risk patients identified by staff⁴ (p.5)

Treatment
D. Nutritional expert consulted in case of malnutrition/ at risk of malnutrition⁵ (p.7)
E. Malnourished/at risk patients receiving artificial treatment² (p.7)
F. Identified and treated malnourished/at risk patients³ (p.7)

Food & Meals
G. Food satisfaction⁶ (p.6)

Monitoring & Documentation
H. Patients whose food preferences and wishes were not met⁵ (p.6)
I. Malnutrition status recorded in the patient record² (p.8)
J. Malnourished/at risk patients whose food intake was recorded⁴ (p.8)
K. Malnourished/ at risk patients with nutrition treatment plan developed⁵ (p.7)
L. Malnourished/ at risk patients with energy/protein requirements determined² (p.8)

Patient inclusion
M. Proportion of patients included in the nDay survey¹ (p.3)
N. Proportion of included patients with 30 day outcome assessment⁶ (p.3)
Nutrition care quality indicators in detail

1. Nutrition guidelines and screening structures in units

| a) Screening using a validated screening tool | nDay (Reference) |
| 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

3. Prevalence of malnutrition according to...

... definition

... identification by your staff
4. Structures in the wards about food, meals and mealtimes

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

✓ = Yes ☒ = No ☐ = missing

5. Food intake on nDay

6. Reasons for eating less

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

7. Food Satisfaction

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

| 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 patients²

In your ward (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 documentation

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

✓ = Yes  ❌ = No  ❑ = missing

13. Monitoring & documentation of malnourished/at risk patients

| Malnutrition status recorded | Protein /Energy requirements determined | Food / Nutrition intake recorded |

14. Nutrition care structures about communication, coordination & training

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

✓ = Yes  ❌ = No  ❑ = missing  h/u = hospital or unit
15. Health care professionals per 25 patients on nDay³

<table>
<thead>
<tr>
<th>Unit</th>
<th>Country</th>
<th>Region</th>
<th>nDay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Doctor</td>
<td>2</td>
<td>2.6</td>
<td>4</td>
</tr>
<tr>
<td>Medical Students</td>
<td></td>
<td>0.7</td>
<td></td>
</tr>
<tr>
<td>Nurses</td>
<td>2</td>
<td>4.4</td>
<td>5.5</td>
</tr>
<tr>
<td>Nursing aides</td>
<td></td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td>Dieticians</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutritionists</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

阅读示例：[2.5] 医生每25名患者在你的科室有2.5名专业医生。

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

16. Nutrition staffing in the hospital/ward³

<table>
<thead>
<tr>
<th>Unit</th>
<th>nDay (Reference)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Nutrition steering team in the hospital</td>
<td><img src="chart1.png" alt="Chart" /></td>
</tr>
<tr>
<td>b) Nutrition support team in the hospital</td>
<td><img src="chart2.png" alt="Chart" /></td>
</tr>
<tr>
<td>c) Person responsible for nutrition care in the unit</td>
<td><img src="chart3.png" alt="Chart" /></td>
</tr>
<tr>
<td>d) Dietician, Nutritionist, Dietetic assistant available</td>
<td><img src="chart4.png" alt="Chart" /></td>
</tr>
<tr>
<td>e) Staff providing feeding assistance</td>
<td><img src="chart5.png" alt="Chart" /></td>
</tr>
</tbody>
</table>

= Yes  = No  = missing

17. Financing³

In your hospital 0 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 health**

19. **Complications with feeding tubes**

20. **Proportion of patients with adequate energy intake**

21. **Unplanned readmission**

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® 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
<table>
<thead>
<tr>
<th>Priority</th>
<th>Area to improve</th>
<th>Current state</th>
<th>Target performance</th>
<th>Actions to take</th>
<th>How and when I will measure success</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>e.g. Proportion of malnourished / at risk patients seen by a dietician</td>
<td>Screening is done systematically; dietician is not requested systematically for malnourished patients. xx% of malnourished/at risk patients have been seen by a dietician</td>
<td>Increase the proportion of malnourished patients seen by a dietician from xx% to xx%.</td>
<td>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.</td>
<td>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</td>
</tr>
</tbody>
</table>
Page for my thoughts and suggestions
References


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