

Format evaluation plan

6.2 Evaluation plan

Define patient population (incl. ICC3-3 group and/or ICD-O code).

Define subgroups if applicable (incl. ICC3-3 group and/or ICD-O code if available).

To be able to evaluate the selected recommendations (described in Table 1), the recommendations needed to be converted. In Table 2 each recommendation is translated into one or more evaluation indicators, incl. the corresponding numerator and denominator to calculate the adherence, the norm that will be used and the source(s) in which the information can be found.

Table 1. Recommendations converted into evaluable recommendations*

Recommendation to be evaluated	Indicator**	Numerator / Denominator	Norm (%)	Source
Subject of recommendation [Insert recommendation]	Choose type of indicator: Structural Process Outcome [Include short description of indicator]	Numerator: [define the numerator for this indicator] Denominator: [define the denominator for this indicator]	[determine norm]	[list all sources / systems / databases]

*Are you struggling with filling in Table 1 for your guideline? Don't worry, read the definitions on the next two pages. On page 3 we have listed some examples from already authorized SKION guidelines.

**Note, one recommendation may include multiple indicators.

Determine evaluation period:

Determine revision period:

^a Martin Lawrence (Professor of General Practice) (Lecturer in General Practice) & Frede Olesen (1997) Indicators of Quality in Health Care, European Journal of General Practice, 3:3, 103-108.

^b Donabedian A. Evaluating the quality of medical care. 1966. Milbank Q. 2005;83(4):691-729.

^c Types of Health Care Quality Measures. Content last reviewed July 2015. Agency for Healthcare Research and Quality, Rockville, MD. <https://www.ahrq.gov/talkingquality/measures/types.html>

Definitions

Patient population: a collection of individuals grouped together based on certain health conditions, demographics, and geographic features such as ethnicity, socioeconomic status, and population density. For example: children and young adults (0-25 years) with the diagnosis LGG.

NB. For some guidelines, subgroups should be identified to evaluate the guideline properly.

For example: children and young adults (0-25 years) with the LGG involving the optic pathway (OPG) vs. children and young adults (0-25 years) with the LGG outside the optic pathway (non-OPG).

Recommendation to be evaluated: based on expert opinion, a selection of recommendations will be evaluated during the evaluation period. These recommendations will be converted into indicators to make them evaluable.

(Quality) indicator: “measurable elements of practice performance for which there is evidence or consensus that they can be used to assess quality, and hence change in quality, of care provided.” Quality indicators are statements that are used to precisely quantify structural (1), procedural (2), and outcome-related (3) aspects of care quality^{a,b}. The recommendations provided in guidelines form the essential starting point for defining quality indicators.

According to the Donabedian model, indicators (or measures) can be classified as^c:

1. **Structural indicator/measure:** give consumers a sense of a health care provider’s capacity, systems, and processes to provide high-quality care. For example:
 - Presence of an electronic health records system
 - Presence of a formal quality and safety management system.
 - The number or proportion of pediatric oncology nurses per ward.
 - The ratio of providers to patients.
2. **Process indicator/measure:** indicate what a provider does to maintain or improve health, either for healthy people or for those diagnosed with a health care condition. These measures typically reflect generally accepted recommendations for clinical practice. For example:
 - The percentage of children with severe aplastic anemia (0-18 yrs) in whom the treatment (HSCT or IST) is started within 3 months after diagnosis.
 - The percentage of boys at high risk of infertility, as a result of their oncological treatment, who have had a first counseling session with a nurse specialist onco-fertility.

Process measures can inform consumers about medical care they may expect to receive for a given condition or disease, and can contribute toward improving health outcomes. The majority of health care quality measures used for public reporting are process measures.

3. **Outcome indicators/measure:** reflect the impact of the health care service or intervention on the health status of patients. For example:
 - The percentage of patients who died as a result of surgery (surgical mortality rates).
 - The rate of surgical complications or hospital-acquired infections.

Note, outcome measures may seem to represent the “gold standard” in measuring quality, but an outcome is the result of numerous factors, many beyond providers’ control^c.

Numerator (NL: teller): the number of parts out of the whole (i.e. the number above the line in a fraction). For example: the amount of pediatric patients (0-18 yrs) with LgG in the Netherlands who had an MRI at baseline.

Denominator (NL: noemer): indicates how many parts the whole contains (i.e. the number below the line in a fraction). For example: all pediatric patients (0-18 yrs) with LGG in the Netherlands.

Norm: the target value that’s used to compare with or benchmark. Ideally the norm is 100%. However, in some circumstances the norm can be set below 100%. For instance, when you just started implementing the a recommendation of the guideline, 80% may be more appropriate. The norm is determined based on expert opinion.

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Source: system or database that supplies the needed information (e.g. EHR). If applicable, also include the exact location of the information, such as ‘tab radiology in HiX’ or ‘the Fanconi anemia database in Castor’.

Evaluation period: period after which the guideline is evaluated. The evaluation period may vary between different guidelines. It often ranges between two and five years, depending mainly on the expected number of patients per year, as the population should be large enough to run the analyses. SKION and the Evaluation Desk can help to find an appropriate time frame.

NB. The evaluation period can differ from the period after which the guideline is being updated. The evaluation period can for instance be set at 2 years after publication, while the revision date is after 5 years.

Revision period: period after which the guideline will be considered for revision. Searches for new evidence should be performed and updating of the recommendations might be considered to keep guidelines up-to-date.

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Appendix 1: Examples of evaluation indicators

Table A. Examples for tumor specific guidelines

Recommendation to be evaluated	Indicator*	Numerator / denominator	Norm (%)	Source
Guideline osteosarcoma				
Diagnosis A biopsy is performed in collaboration with an oncology-experienced orthopedic surgeon and/or interventional radiologist in the referral center	Process indicator Diagnosis in bone sarcoma referral center	Numerator: Patients with pretherapeutic core needle or open biopsy of primary disease at a national bone sarcoma referral center Denominator: all pediatric patients with a high grade osteosarcoma	≥ 95%	HiX, TSD
Staging All imaging should be completed within 28 days before the start of treatment.	Process indicator Staging according to protocol	Numerator: Number of patients with primary staging (i.e. chest CT, MRI primary tumor and FDG PET-CT < 28 days of initiation of therapy) Denominator: all pediatric patients with a high grade osteosarcoma	≥ 95%	HiX, TSD
Guideline LGG				
Follow-up For pLGG overweight, subfertility, hypothalamic pituitary dysfunction, motor function, visual function and quality of life (e.g. neuro-cognitive functioning) should be monitored yearly after one year follow-up.	Process indicator Monitoring overweight	Numerator: pediatric patients (0-18 yrs) with LGG in whom BMI is monitored yearly after one year of follow-up Denominator: all pediatric patients (0-18 yrs) with LGG who completed one year of follow-up	80%	HiX,
	Process indicator Monitoring subfertility post puberty	Numerator: pediatric patients post puberty (and > 15 yrs in case of precocious puberty) with LGG in whom subfertility is monitored yearly after one year of follow-up Denominator: all pediatric patients post puberty (and > 15 yrs in case of precocious puberty) with LGG who completed one year of follow-up	80%	HiX,

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Tabel B. Examples for guidelines focused on quality of life and supportive care

Recommendation to be evaluated	Indicator*	Numerator / denominator	Norm (%)	Source
Guideline febrile neutropenia				
Golden hour Antibiotics should be started within 60 minutes after the onset of fever at home or in the hospital.	Process indicator Start AB within 60 minutes after onset fever	Numerator: pediatric patients in whom ceftazidime or meropenem is started within 60 after onset fever at home or in hospital Denominator: all pediatric patients with fever	100%	HiX,
Stop antibiotics Antibiotics should be stopped after 48 hours in patients whose blood culture is negative and have no fever anymore.	Process indicator Stop AB	Numerator: pediatric patients with a negative blood culture, without fever in whom ceftazidime or meropenem is stopped after 48 hrs Denominator: all pediatric patients with fever who started with ceftazidime or meropenem	100%	HiX, GLIMS, results microbiology
ICU admission Amount of patients with febrile neutropenia who are admitted to the ICU within 7 days after start antibiotics	Outcome indicator ICU admission within 7 days	Numerator: pediatric patients with febrile neutropenia who started with ceftazidime or meropenem and were admitted to the ICU within 7 days after start AB Denominator: all pediatric patients with febrile neutropenia who started with ceftazidime or meropenem	n.a.	HiX, GLIMS, results microbiology
Guideline oral care in children with chemotherapy and/or radiotherapy or with reduced resistance				
Dental screening A dentist and dental hygienist should be involved for dental screening at diagnosis in children who are being treated with chemotherapy and/or radiotherapy.	Process indicator Dental screening at diagnosis	Numerator: pediatric patients treated with chemotherapy and/or radiotherapy in whom a dentist and dental hygienist are involved for dental screening at diagnosis Denominator: all pediatric patients treated with chemotherapy and/or radiotherapy	100%	HiX, calendar/schedule dentist and dental hygienist

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