

Standards for improving the quality of care for children and young adolescents in health facilities



World Health
Organization

Standards for improving the quality of care for children and young adolescents in health facilities



World Health
Organization

Standards for improving the quality of care for children and young adolescents in health facilities

ISBN 978-92-4-156555-4

© World Health Organization 2018

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

Under the terms of this licence, you may copy, redistribute and adapt the work for non-commercial purposes, provided the work is appropriately cited, as indicated below. In any use of this work, there should be no suggestion that WHO endorses any specific organization, products or services. The use of the WHO logo is not permitted. If you adapt the work, then you must license your work under the same or equivalent Creative Commons licence. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: "This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition".

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization.

Suggested citation. Standards for improving the quality of care for children and young adolescents in health facilities. Geneva: World Health Organization; 2018. Licence: **CC BY-NC-SA 3.0 IGO**.

Cataloguing-in-Publication (CIP) data. CIP data are available at <http://apps.who.int/iris>.

Sales, rights and licensing. To purchase WHO publications, see <http://apps.who.int/bookorders>. To submit requests for commercial use and queries on rights and licensing, see <http://www.who.int/about/licensing>.

Third-party materials. If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

General disclaimers. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by WHO to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall WHO be liable for damages arising from its use.

Design by Inís Communication – www.iniscommunication.com

Printed by the WHO Document Production Services, Geneva, Switzerland.

Contents

Acknowledgements	iv
Abbreviations and acronyms	v
Definitions and terms	vi
1. Summary of standards	2
2. Introduction	6
3. Framework for improving the quality of paediatric care	7
4. Definitions and structure of the standards	9
5. Purpose and application of the standards	10
6. Development of the standards	11
7. References	12
Standard 1 Evidence-based practices and management of illness	17
Standard 2 Actionable health information systems	47
Standard 3 Functioning referral systems	55
Standard 4 Effective communication and meaningful participation	61
Standard 5 Respect, protection and fulfilment of children's rights	69
Standard 6 Educational, emotional and psychological support	81
Standard 7 Competent, motivated, empathetic human resources	87
Standard 8 Child-friendly physical resources	95
Annex 1. Participants and agenda of the technical consultation on the framework and standards for improving the quality of paediatric care in health facilities	106
Annex 2. Participants in the online Delphi consultation on quality measures and possible indicators	110
Annex 3. Online process for developing quality measures	116

Acknowledgements

The WHO department of Maternal, Newborn, Child and Adolescent Health (MCA) gratefully acknowledges the contributions of many individuals to preparation of this document.

Special thanks go to the experts who participated in and contributed to a meeting on a framework and standards for improving the quality of paediatric care in facilities, in December 2016, who are listed in Annex 1.

We acknowledge the contributions of the 220 experts in 88 countries who participated in the Delphi study to build consensus on the quality measures and those of the external consultants and others who supported the work at various stages, including Tamara Kaemba, Senait Kebede and Bennett Nemser.

The staff members from the Quality of Care Working Group, Interdepartmental Taskforce on Quality of Health Services, and technical staff who participated in drafting, reviewing and refining the quality statements and measures were: Samira Aboubaker, Per Ashorn, Bernadette Daelmans, Ornella Lincetto, Annie Portela, Jonathon Simon, Shamim Qazi and Wilson Were, MCA; Neelam Dhingra and Shamsuzzoha Syed, Service Delivery and Safety; Margaret Montgomery and Michaela Pfeiffer, Public Health and Environment; Mwansa Nkowane, Health Workforce; Zita Weise Prinzo, Gerardo Zamora and Laurence Grummer-Strawn, Nutrition for Health and Development; and Annabel Baddeley, Annemieke Brands and Malgorzata Grzemska, Global Tuberculosis Programme. We also acknowledge and thank all WHO staff in the regions and countries who reviewed the standards and provided comments.

The process was coordinated by Wilson Were in collaboration with staff members in the Quality of Care Working Group.

We acknowledge and thank USAID and the Maternal and Child Survival Program grantee of the US Agency for International Development, which provided financial support and the consultant who participated in this work respectively.

Abbreviations and acronyms

ICD	International Classification of Diseases for Mortality and Morbidity Statistics
IMCI	integrated management of childhood illness
IMNCI	integrated management of neonatal and childhood illness
IV	intravenous
ORS	oral rehydration salts
PSBI	possible serious bacterial infections
TB	tuberculosis

Definitions and terms

Adolescent	Young person aged 10–19 years; young adolescents are children aged 10–15 years.
Carer, caregiver	Parent, family member or any other person who is responsible for taking care of a child
Child	Anyone under the age of 18 years. In this document, “child” refers to anyone from birth to 15 years of age.
Emergency care area	A designated area (room or unit) in a facility where immediate care and resuscitation are provided for severe or sudden illness, trauma or injuries
Family	In this document, “family” is broadly construed to include relatives by blood, adoption or marriage and members of the same household.
Health professional or provider	A trained individual with knowledge and skills to provide preventive, curative, promotional or rehabilitative health care in a systematic way to people, families or communities. They include doctors, nurses, midwives, pharmacists and paramedical staff.
Infant	A child under 1 year of age
Primary-level hospital	A hospital or facility that provides outpatient and inpatient care, which is staffed mainly by general practitioners, with a few specialities, mainly internal medicine, obstetrics–gynaecology, paediatrics and general surgery; limited laboratory services; 30–200 beds; often referred to as a “district hospital” or “first-level referral”
Standard	A general statement about what is expected to be provided to ensure high-quality care for children and adolescents
Quality measure	Criterion for assessing, measuring and monitoring the quality of care as specified in a quality statement
Quality statement	A concise statement of a prioritized aspect of a standard that describes what is required to ensure measurable quality of care for children and adolescents



1. Summary of standards

These standards for the quality of paediatric care in health facilities form part of normative guidance for improving the quality of maternal, newborn, child and adolescent health care. In view of the importance of the continuum of both the life-course and service delivery (1), these standards build on the *Standards for improving the quality of maternal and newborn care in health facilities (2)*, during labour, childbirth and the early postnatal period. They are derived from WHO Guidelines Review Committee approved recommendations, guidelines and international best practices in care of children and young adolescents.

The goal of this publication is to ensure that the care given to all children, including young adolescents, in health facilities is evidence-based, safe, effective, timely, efficient, equitable and appropriate for their age and stage of development. The standards were developed in the best interests of children, in recognition of the fact that their requirements are different from those of adults and to ensure their right to high-quality health care. The standards are applicable to all facilities that provide health care to children and adolescents.



STANDARD 1.

Every child receives evidence-based care and management of illness according to WHO guidelines

- Quality statement 1.1** All children are triaged and promptly assessed for emergency and priority signs to determine whether they require resuscitation and receive appropriate care according to WHO guidelines.
- Quality statement 1.2** All sick infants, especially small newborns, are thoroughly assessed for serious bacterial infection and receive appropriate care according to WHO guidelines.
- Quality statement 1.3** All children with cough or difficult breathing are correctly assessed, classified and investigated and receive appropriate care and/or antibiotics for pneumonia, according to WHO guidelines.
- Quality statement 1.4** All children with diarrhoea are correctly assessed and classified and receive appropriate rehydration and care, including continued feeding, according to WHO guidelines.
- Quality statement 1.5** All children with fever are correctly assessed, classified and investigated and receive appropriate care according to WHO guidelines.
- Quality statement 1.6** All infants and young children are assessed for growth, breastfeeding and nutrition, and their carers receive appropriate support and counselling, according to WHO guidelines.
- Quality statement 1.7** All children at risk for acute malnutrition and anaemia are correctly assessed and classified and receive appropriate care according to WHO guidelines.
- Quality statement 1.8** All children at risk for tuberculosis (TB) and/or HIV infection are correctly assessed and investigated and receive appropriate management according to WHO guidelines.

- Quality statement 1.9** All children are assessed and checked for immunization status and receive appropriate vaccinations according to the guidelines of the WHO expanded programme on immunization.
- Quality statement 1.10** All children with chronic conditions receive appropriate care, and they and their families are sufficiently informed about their condition(s) and are supported to optimize their health, development and quality of life.
- Quality statement 1.11** All children are screened for evidence of maltreatment, including neglect and violence, and receive appropriate care.
- Quality statement 1.12** All children with surgical conditions are screened for surgical emergencies and injury and receive appropriate surgical care.
- Quality statement 1.13** All sick children, especially those who are most seriously ill, are adequately monitored, reassessed periodically and receive supportive care according to WHO guidelines.
- Quality statement 1.14** All children receive care with standard precautions to prevent health care-associated infections.
- Quality statement 1.15** All children are protected from unnecessary or harmful practices during their care.



STANDARD 2.

The health information system ensures the collection, analysis and use of data to ensure early, appropriate action to improve the care of every child.

- Quality statement 2.1** Every child has a complete, accurate, standardized, up-to-date medical record, which is accessible throughout their care, on discharge and on follow-up.
- Quality statement 2.2** Every health facility has a functional mechanism for data collection, analysis and use as part of its activities for monitoring performance and quality improvement .
- Quality statement 2.3** Every health facility has a mechanism for collecting, analysing and providing feedback on the services provided and the perception of children and their families on the care received.



STANDARD 3.

Every child with condition(s) that cannot be managed effectively with the available resources receives appropriate, timely referral, with seamless continuity of care.

- Quality statement 3.1** Every child who requires referral receives appropriate prereferral care, and the decision to refer is made without delay.
- Quality statement 3.2** Every child who requires referral receives seamless, coordinated care and referral according to a plan that ensures timeliness.
- Quality statement 3.3** For every child referred or counter-referred within or among health facilities, there is appropriate information exchange and feedback to relevant health care staff.



STANDARD 4.

Communication with children and their families is effective, with meaningful participation, and responds to their needs and preferences.

- Quality statement 4.1** All children and their carers are given information about the child's illness and care effectively, so that they understand and cope with the condition and the necessary treatment.
- Quality statement 4.2** All children and their carers experience coordinated care, with clear, accurate information exchange among relevant health and social care professionals and other staff.
- Quality statement 4.3** All children and their carers are enabled to participate actively in the child's care, in decision-making, in exercising the right to informed consent and in making choices, in accordance with their evolving capacity.
- Quality statement 4.4** All children and their carers receive appropriate counselling and health education, according to their capacity, about the current illness and promotion of the child's health and well-being.



STANDARD 5.

Every child's rights are respected, protected and fulfilled at all times during care, without discrimination.

- Quality statement 5.1** All children have the right to access health care services, with no discrimination of any kind.
- Quality statement 5.2** All children and their carers are made aware of and given information about children's rights to health and health care.
- Quality statement 5.3** All children and their carers are treated with respect and dignity, and their right to privacy and confidentiality is respected.
- Quality statement 5.4** All children are protected from any violation of their human rights, physical or mental violence, injury, abuse, neglect or any other form of maltreatment.
- Quality statement 5.5** All children have access to safe, adequate nutrition that is appropriate for both their age and their health condition during their care in a facility.



STANDARD 6.

All children and their families are provided with educational, emotional and psychosocial support that is sensitive to their needs and strengthens their capability.

- Quality statement 6.1** All children are allowed to be with their carers, and the role of carers is recognized and supported at all times during care, including rooming-in during the child's hospitalization.
- Quality statement 6.2** All children and their families are given emotional support that is sensitive to their needs, with opportunities for play and learning that stimulate and strengthen their capability.
- Quality statement 6.3** Every child is assessed routinely for pain or symptoms of distress and receives appropriate management according to WHO guidelines.



STANDARD 7.

For every child, competent, motivated, empathic staff are consistently available to provide routine care and management of common childhood illnesses.

- Quality statement 7.1** All children and their families have access at all times to sufficient health professionals and support staff for routine care and management of childhood illnesses.
- Quality statement 7.2** Health professionals and support staff have the appropriate skills to fulfil the health, psychological, developmental, communication and cultural needs of children.
- Quality statement 7.3** Every health facility has managerial leadership that collectively develops, implements and monitors appropriate policies and legal entitlements that foster an environment for continuous quality improvement.



STANDARD 8.

The health facility has an appropriate, child-friendly physical environment, with adequate water, sanitation, waste management, energy supply, medicines, medical supplies and equipment for routine care and management of common childhood illnesses.

- Quality statement 8.1** Children are cared for in a well-maintained, safe, secure physical environment with an adequate energy supply and which is appropriately designed, furnished and decorated to meet their needs, preferences and developmental age.
- Quality statement 8.2** Child-friendly water, sanitation, hand hygiene and waste disposal facilities are easily accessible, functional, reliable, safe and sufficient to meet the needs of children, their carers and staff.
- Quality statement 8.3** Child-friendly, age-appropriate equipment designed to meet children's needs in medical care, learning, recreation and play are available at all times.
- Quality statement 8.4** Adequate stocks of child-friendly medicines and medical supplies are available for the routine care and management of acute and chronic childhood illnesses and conditions.

2. Introduction

During the past two decades, many countries have made considerable progress towards achieving Millennium Development Goals 4 and 5, mainly by increasing interventions for maternal and child health (3,4). Despite this progress, an estimated 6.6 million children and young adolescents died in 2016 (5.6 million children under 5 years and 1 million children aged 5–14), mostly from preventable causes (5). As most women now deliver in health facilities and children have increasing access to health services, attention can be focused on improving the quality of services for women and children (6). Poor-quality services and care reduce the effectiveness of interventions and increase the risks for nosocomial infections, life-long disability and death from avoidable complications and preventable causes (7). Therefore, achieving the ambitious Sustainable Development Goal 3 will require universal health coverage with high-quality, affordable services for women and children, as stated in the Global strategy for women's, children's and adolescents' health (2016–2030) (8–10).

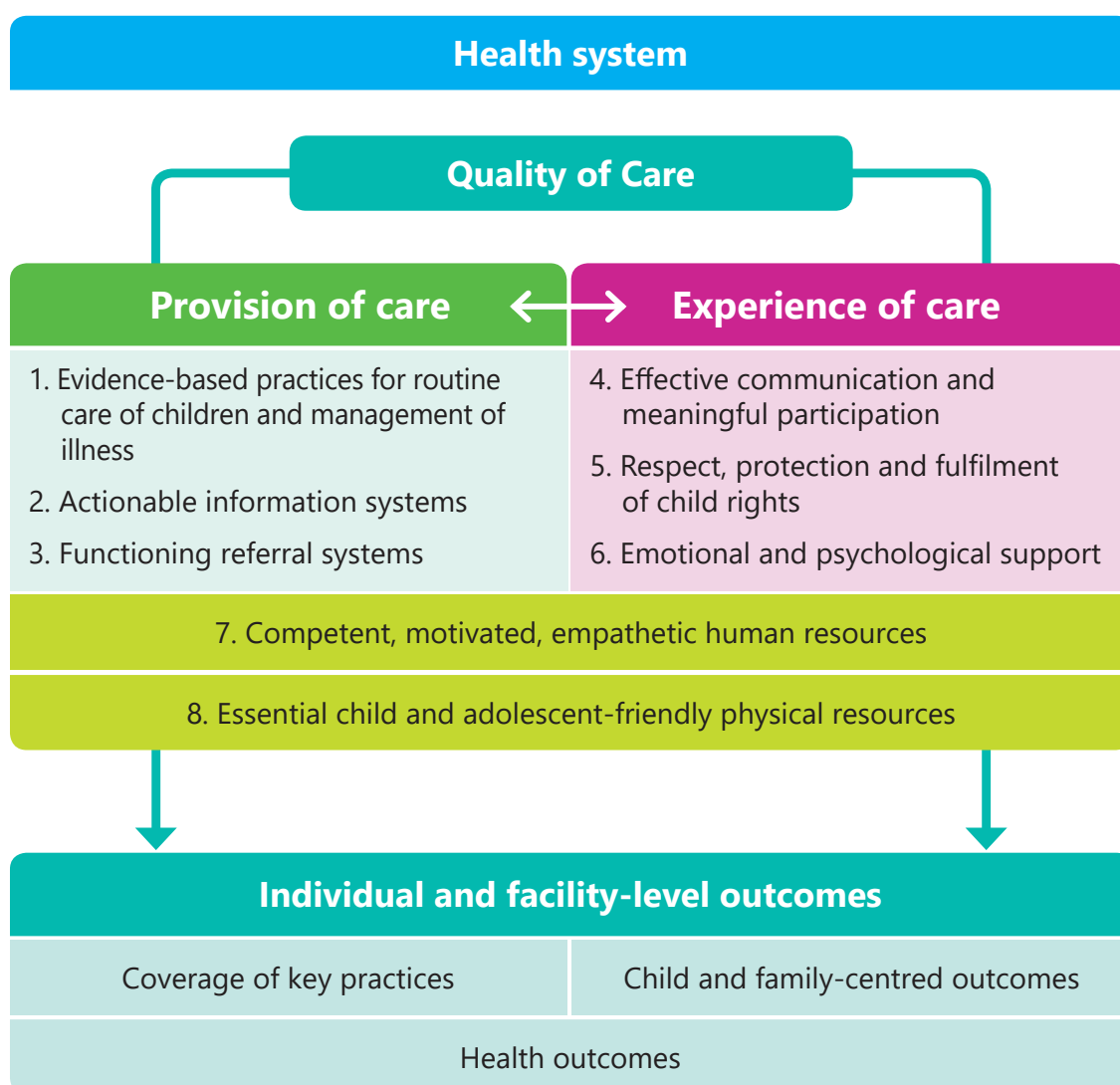
In 2015, WHO made improving the quality of care for women and children a priority for reducing preventable maternal and child deaths. It consequently elaborated a vision in which "Every mother and newborn receives quality care throughout pregnancy, childbirth and postnatal period" (11). To operationalize this vision, a framework for quality of care and standards of care (*Standards for improving the quality of maternal and newborn care in health facilities*) were published in 2016 (2). The first series of standards of care covered routine management of complications during labour, childbirth and the early postnatal period, particularly for small infants, during the first week of life. Several sets of standards will be published to address the broader vision, in which "Every woman, child and adolescent receives quality care throughout the continuum of care", as defined in the Global strategy.

This is therefore the second series of standards for improving the quality of care for children (aged 0–15 years) in health facilities, recognizing that their health, physical, psychosocial, developmental, communication and cultural needs differ from those of adults. These standards have been set in the best interests of children and young adolescents, to ensure that their particular needs are met and their risks for harm are minimized during health service delivery. The standards delineate what is expected in order to respect children's rights: ensuring child-, adolescent- and family-friendly health facilities and services; evidence-based clinical care; availability of child- and adolescent-specific appropriate equipment; appropriately trained, competent staff. The standards include health facility measures to facilitate implementation, to track improvement and to monitor performance.

3. Framework for improving the quality of paediatric care

The aim of the framework is to ensure the specific care required by children up to 15 years of age (infants, children and young adolescents) (Fig. 1). The framework takes into account children’s right to health and recognizes that their health and physical, psychosocial, developmental and communication needs are different from those of adults. All eight domains of the framework for the quality of maternal and newborn care were modified to reflect the best interests of children and their right to health (9). The domains of provision of care ensure that the care provided is child-, adolescent- and family-centred, and the domains of experience of care domains were modified to ensure that children are respected, protected and supported emotionally and psychologically and can meaningfully participate according to their evolving capacity.

Fig. 1. Framework for improving the quality of paediatric care



The eight domains reflect the priorities for assessing, improving and monitoring the quality of care in the health system to influence and guide the conception, planning and delivery of high-quality child and adolescent care services. The domains are organized into the three main categories that influence care and the desired outcomes – provision of care (domains 1–3), experience of care (4–6) and availability of child- and adolescent-friendly resources (7 and 8). The domains of the framework are:

1. evidence-based practices for routine care of children and management of illness;
2. actionable information systems;
3. functioning referral systems;
4. effective communication and meaningful participation;
5. respect, protection and fulfilment of children's rights;
6. emotional and psychological support;
7. competent, motivated, empathetic human resources; and
8. essential child- and adolescent-friendly physical resources.

The framework provides a strategic approach to improving the quality of care at all levels of the health system in order to foster a continuing culture of quality, to ensure safe, effective child-, adolescent- and family-centred care. Although the initial focus is on the care provided in health facilities, families and communities have a critical role in demanding quality and in managing their own health. Community engagement is therefore an important aspect, which will be fully addressed in a subsequent publication on the quality of standards of care in the community.

4. Definitions and structure of the standards

Quality of care is “the extent to which health care services provided to individuals and patient populations improve desired health outcomes. In order to achieve this, health care must be safe, effective, timely, efficient, equitable and people-centred” (12).

Standard of care is a general description of what is expected to be provided to achieve high-quality care for children and adolescents in each domain of the framework. It has two main components: the quality statements and quality measures (adapted from the National Institute for Health and Care Excellence quality standards) (13) (Fig. 2).

“Quality statements” are concise statements of the priorities for improving the quality of care for children and adolescents.

“Quality measures” are criteria for assessing, measuring and monitoring the quality of care as specified in the quality statement, in terms of input, process and outcome. Thus:

- *input*: what must be in place for the desired care to be provided (e.g. physical resources, human resources, policies, guidelines);
- *process or output*: whether the desired process of care was provided as expected; and
- *outcome*: the effect of the provision and experience of care on health and people-centred outcomes.

Fig. 2. Structure of the standards



5. Purpose and application of the standards

The standards of care are intended to serve as a resource for policy-makers, health care professionals, health service planners, programme managers, regulators and professional bodies or technical partners involved in care, to help plan, deliver and ensure the quality of health service delivery. They do not replace clinical guidelines but provide guidance on the requirements for ensuring high-quality care in health facilities. The standards empower local teams to work effectively towards continuous quality improvement in child and adolescent health.

The standards are in the best interests of children, as they recognize their specific needs and apply to all health facilities that provide care for children. They build on the standards of care for mothers and newborns up to 1 week of life and the standards of care for adolescents aged 10–19 years (2,14). They include evidence-based practices for the prevention and management of common childhood diseases within Integrated Management of Childhood Illnesses (IMCI) and common problems in older children and young adolescents (15,16). Most infectious diseases are still among the leading causes of death in children up to 15 years of age, in addition to conditions such as injuries, noncommunicable diseases and chronic diseases (5,17,18). The standards are not, however, comprehensive, as they do not cover congenital anomalies, early childhood development, childhood obesity or some issues specific to adolescents, which will be addressed in subsequent publications.

The eight standards are presented after a description of the framework for improving the quality and experience of paediatric care. The resource requirements for health systems are discussed in later sections. The standards provide guidance for preparing national standards of care and protocols and organizing and planning the required services and resources (e.g. essential medicines and supplies, equipment and human resources). The measures also identify what can be tracked and monitored to assess performance.

The aim of the standards is to support users in:

- determining what is expected and required to deliver effective, high-quality health services for children and adolescents in health facilities;
- defining the priorities for improving the quality of care for children and adolescents in health facilities;
- defining the best practices that will support improvement of the quality of care;
- providing the basis for assessing, auditing and monitoring improvements in the quality of care for facility accreditation and performance rewards; and
- achieving optimal outcomes for individuals and facilities.

In order to achieve the desired outcomes, the standards should be adapted to local contexts to ensure that they are applicable to the levels of care in the country's network of health facilities.

6. Development of the standards

The paediatric standards of care were modelled on those for mothers and newborns (2). The standards and their quality statements were conceived by a multidisciplinary WHO working group consisting of clinicians and other health care providers and experts in the quality of care and child rights, with the involvement of patient care advocacy groups.

6.1 Quality statements

First, existing standards, guidelines and recommendations for best practice in the health care of children and adolescents were identified through a literature search and review. When gaps were identified, new standards were drafted on the basis of current guidelines and agreed upon by the working group. The draft standards were circulated to experts for review and comments and were then refined and incorporated by the working group before an expert consultation in December 2016 to build consensus and final endorsement.

6.2 Development of quality measures

Quality measures were based on the model used for maternal and newborn standards of care (9). A semi-systematic review was conducted to identify possible candidate measures. When no measures were identified for a particular quality statement, new measures were formulated and agreed upon by the working group. The list was reviewed for consistency and completeness by experts in each area and was widely circulated for review and comments in two rounds of an online Delphi process (see Annex 2).

In the first round, 222 of the 296 invitees (75%) in 92 countries provided feedback and comments on clarity and appropriateness and proposed additional measures (see Annex 3). The measures were then refined, and additional measures were formulated by the working group on the basis of the feedback. To build consensus on the measures and identify possible candidate indicators, the refined list of measures was circulated for a second Delphi process, in which the 222 respondents in the first round were asked to rank the measures on the basis of predefined criteria (see Annex 3). Of the 191 people invited to participate in the second round, 136 (71%) responded (85 on measures only for provision of care, 34 for both provision and experience of care and 17 only for experience of care).

Grading was used to calculate the mean score for each quality measure of each criterion, which is referred to as the "intermediate" score. This was calculated as the sum of all the scores for a criterion divided by the number of respondents (excluding blanks). (See Annex 2.) The calculated mean scores were weighted to rank the input, output and outcome measures for each statement. The mean of the five intermediate scores was calculated to obtain the final score for the priority of each quality measure by adding the intermediate scores for that measure on the five criteria, divided by 5 and presented as a percentage. The top-ranked measures are possible candidates indicators of quality of care. These will be defined and validated in a feasibility study, and the final list of indicators will be published in another document on indicators for monitoring the quality of maternal, newborn and child care.

7. References

1. Kerber KJ, de Graft-Johnson JE, Bhutte ZA, Okong P, Starrs A, Lawn JE. Continuum of care for maternal, newborn, and child health: from slogan to service delivery. *Lancet*. 2007;370:1358–69.
2. Standards for improving the quality of maternal and newborn care in health facilities. Geneva: World Health Organization; 2016 (http://www.who.int/maternal_child_adolescent/documents/improving-maternal-newborn-care-quality/en/, accessed 11 December 2017).
3. The Millennium Development Goals Report 2015. New York City (NY): United Nations; 2015 (http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20%28July%201%29.pdf, accessed 11 December 2017).
4. WHO, UNICEF, UNFPA, The World Bank, United Nations Population Division. Trends in maternal mortality: 1990 to 2013. Geneva: World Health Organization; 2014 (<http://www.who.int/reproductivehealth/publications/monitoring/maternal-mortality-2013/en/>, accessed 11 December 2017).
5. UNICEF, WHO, World Bank, UN-DESA Population Division. Levels & trends in child mortality report 2017. Estimates developed by the U Inter-Agency Group for Child Mortality Estimation. Geneva: United Nations Children’s Fund; 2017 (http://childmortality.org/files_v21/download/IGME%20report%202017%20child%20mortality%20final.pdf, accessed 11 December 2017).
6. WHO (World Health Organization). State of inequality: Reproductive, maternal, newborn and child health. Geneva: WHO; 2015. (<http://www.who.int/gender-equity-rights/knowledge/state-of-inequality/en/>, accessed 12 February 2018).
7. Austin A, Langer A, Salam RA, Lassi ZS, Das JK, Bhutta ZA. Approaches to improve the quality of maternal and newborn health care: an overview of the evidence. *Reprod Health*. 2014;11(Suppl 2):S1.
8. United Nations General Assembly 69th session. Document A/69/L.85 Annex. Transforming our world: the 2030 Agenda for Sustainable Development. New York City (NY): United Nations; 2015:2–34.
9. Every woman every child. Global strategy for women’s, children’s and adolescents health 2016–2030. Geneva: World Health Organization; 2016 (<http://www.who.int/life-course/partners/global-strategy/global-strategy-2016–2030/en/>, accessed 11 December 2017).
10. World Health Assembly 58th session. Document WHA 58.33. Sustainable health financing, universal coverage and social health insurance. Geneva: World Health Organization; 2005.
11. Tunçalp Ö, Were WM, MacLennan C, Oladapo OT, Gülmezoglu AM, Bahl R et al. Quality of care for pregnant women and newborns – the WHO vision. *Br J Obstet Gynaecol*. 2015;122:1045–9.
12. Quality of care: a process for making strategic choices in health systems. Geneva: World Health Organization; 2006 (http://www.who.int/management/quality/assurance/QualityCare_B.Def.pdf?ua=1, accessed 11 December 2017).
13. National Institute for Health and Care Excellence. London (<https://www.nice.org.uk/standards-and-indicators> accessed 24 June 2016).
14. Global standards for quality health care services for adolescents. Geneva: World Health Organization; 2015 (http://www.who.int/maternal_child_adolescent/documents/global-standards-adolescent-care/en/, accessed 11 December 2017).
15. Integrated management of childhood illness. Chart booklet. Geneva: World Health Organization; 2014 (http://www.who.int/maternal_child_adolescent/documents/IMCI_chartbooklet/en/, accessed 11 December 2017).
16. Pocket book of hospital care for children: guidelines for the management of common childhood illnesses. Second ed. Geneva: World Health Organization; 2014 (http://www.who.int/maternal_child_adolescent/documents/child_hospital_care/en/, accessed 11 December 2017).
17. Were WM, Daelmans B, Bhutta Z, Duke T, Bahl R, Boschi-Pinto C et al. Children’s health priorities and interventions. *BMJ* 2015;351:h4300.
18. Liu L, Oza S, Hogan D, Perin J, Rudan I, Lawn JE et al. Global, regional, and national causes of child mortality in 2000–13, with projections to inform post-2015 priorities: an updated systematic analysis. *Lancet*. 2015;385:430–40.





STAND PAEDIA

Theme: Provision of care



Standard

1 Every child receives evidence-based care and management of illness according to WHO guidelines.



Standard

2 The health information system ensures the collection, analysis and use of data to ensure early, appropriate action to improve the care of every child.



Standard

3 Every child with condition(s) that cannot be managed effectively with the available resources receives appropriate, timely referral, with seamless continuity of care.

The standards place children and adolescents at the centre of care by improving both the provision and patients' experience of health care. They are a critical component for strengthening health systems. They uphold children's right to health; the principle of the best interests of the child is the primary consideration throughout the health care services provided. Children and adolescents must receive the highest possible standard of care during health service delivery.

The standards are based on the eight domains of the framework for improving the quality of paediatric care and address the most common conditions that affect the quality of care of children and adolescents in health facilities.

STANDARDS FOR PAEDIATRIC CARE

Theme: Health system resources



Standard

8 The health facility has an appropriate, child-friendly physical environment, with adequate water, sanitation, waste management, energy supply, medicines, medical supplies and equipment for routine care and management of common childhood illnesses.



Standard

7 For every child, competent, motivated, empathic staff are consistently available to provide routine care and management of common childhood illnesses.

Theme: Experience of care



Standard

4 Communication with children and their families is effective, with meaningful participation, and responds to their needs and preferences.



Standard

5 Every child's rights are respected, protected and fulfilled at all times during care, without discrimination.



Standard

6 All children and their families are provided with educational, emotional and psychosocial support that is sensitive to their needs and strengthens their capability.



STANDARD 1

EVIDENCE-BASED PRACTICES AND MANAGEMENT OF ILLNESS

Standard 1: Every child receives evidence-based care and management of illness according to WHO guidelines.

Overview

The aim of this standard is to ensure that all children and adolescents receive evidence-based care and that the care is provided in their best interests. The standard guides health care professionals in providing high-quality care to children and young adolescents who present to health facilities. It includes routine care, appropriate assessment with early identification of emergency signs (general danger signs) and appropriate management of common conditions. Although many conditions require attention, these standards apply only to those prioritized conditions associated with high morbidity and mortality in children aged 0–15 years seen in health facilities. The priority areas do not cover congenital anomalies, early childhood development, childhood obesity and several adolescent specific issues that will be addressed separately in the subsequent series of standards.

The scope and identified priority thematic areas for the evidence-based practices include:

- emergency care
- management of common childhood conditions
 - serious bacterial infection in young infants
 - pneumonia and wheeze
 - diarrhoea
 - common causes of febrile illness in children
 - acute malnutrition
 - common chronic conditions in children (e.g. chronic respiratory diseases, tuberculosis, hiv infection, heart diseases and diabetes)
 - maltreatment, including neglect and violence
 - surgical emergencies and injuries
- infant and young child feeding;
- routine immunization.

Managing the priority conditions appropriately will drastically reduce the number of preventable deaths and contribute to the overall well-being of children managed in health facilities. The care should be provided in the best interests of the child. Thus, the child's right to health supersedes parental and economic considerations, so that the child receives appropriate care. Health providers should go beyond disease management by considering the implications for the child's overall health, development and well-being, as well as the short- and long-term effects on their lives and those of the child's parents or carers and other considerations that are pertinent and specific to each child and family.

Quality statements

- 1.1 All children are triaged and promptly assessed for emergency and priority signs to determine whether they require resuscitation and receive appropriate care according to WHO guidelines.
- 1.2 All sick young infants, especially small newborns, are thoroughly assessed for possible serious bacterial infection and receive appropriate care according to WHO guidelines.
- 1.3 All children with cough or difficult breathing are correctly assessed, classified and investigated and receive appropriate care and/or antibiotics for pneumonia, according to WHO guidelines.
- 1.4 All children with diarrhoea are correctly assessed and classified and receive appropriate rehydration and care, including continued feeding, according to WHO guidelines.
- 1.5 All children with fever are correctly assessed, classified and investigated and receive appropriate care according to WHO guidelines.
- 1.6 All infants and young children are assessed for growth, breastfeeding and nutrition, and their carers receive appropriate support and counselling, according to WHO guidelines.
- 1.7 All children at risk for acute malnutrition and anaemia are correctly assessed and classified and receive appropriate care according to WHO guidelines.
- 1.8 All children at risk for TB and/or HIV infection are correctly assessed and investigated and receive appropriate management according to WHO guidelines.
- 1.9 All children are assessed and checked for immunization status and receive appropriate vaccinations according to the guidelines of the WHO expanded programme on immunization.
- 1.10 All children with chronic conditions receive appropriate care, and they and their families are sufficiently informed about their condition(s) and are supported to optimize their health, development and quality of life.
- 1.11 All children are screened for evidence of maltreatment, including neglect and violence, and receive appropriate care.
- 1.12 All children with surgical conditions are screened for surgical emergencies and injury and receive appropriate surgical care.
- 1.13 All sick children, especially those who are most seriously ill, are adequately monitored, reassessed periodically and receive supportive care according to WHO guidelines.
- 1.14 All children receive care with standard precautions to prevent health care-associated infections.
- 1.15 All children are protected from unnecessary or harmful practices during their care.

Quality statement 1.1: All children are triaged and promptly assessed for emergency and priority signs to determine whether they require resuscitation and receive appropriate care according to WHO guidelines.

Rationale: In health facilities in which the outpatient department is often crowded, it is important to have a triage system that allows rapid identification of seriously ill children. The flow of patients must not be a barrier to accessing urgent care, and administrative or payment procedures must be delayed until the child has been started on medical care. All children must be quickly inspected to identify obvious signs of life-threatening or serious illness, which may be missed in long waiting queues. Children with emergency or any general danger sign or possible serious bacterial infection should be assessed and treated immediately. In referral receiving facilities, a brief initial assessment must be made to triage and categorize sick children into those with emergency signs and to put them at the head of the queue; non-urgent cases can wait their turn. Children with emergency signs should be assessed immediately, resuscitated if necessary and given initial treatment.

Every facility that cares for children should have protocols and guidelines for emergency triage assessment and treatment, designated trained, competent paediatric emergency staff and an appropriately equipped area for resuscitation and initial treatment. Children with emergency signs or injuries should be moved immediately to the designated resuscitation area, and those with priority signs should be assessed within 15 min of arrival. Essential emergency resuscitation supplies, such as oxygen, essential equipment, emergency medicines and laboratory tests, should be available on a designated paediatric resuscitation trolley or in a bag and readily accessible to all staff.

Patients should be appropriately resuscitated, stabilized and treated, their demographic information, weight and initial assessment findings recorded, and vital signs (respiratory rate, heart rate, temperature, pulse oximetry and blood pressure) measured and recorded. A full assessment to classify or formulate a differential diagnosis and management plan for referral, inpatient care or outpatient home care should be made according to WHO guidelines.



QUALITY MEASURES

Input

1. The health facility has written, up-to-date clinical protocols and procedures for emergency triage, assessment and management of common paediatric emergencies and trauma consistent with evidence-based and/or WHO guidelines. (92.71)
2. The health facility has the essential equipment and supplies for assessing and monitoring paediatric emergencies (e.g. weighing scales, thermometer, blood pressure measuring device, blood glucose and oxygen saturation tests). (95.59)

3. The health facility has a 24-h triage system for every sick child to ensure a rapid visual inspection within a few minutes of arrival that is not delayed by administrative or payment procedures. (88.72)
4. The health facility receiving a referred paediatric patient with danger or emergency signs or injuries has a system for immediate emergency care, and a full initial assessment is made by suitably trained staff within 15 min of arrival. (88.30)
5. The health facility has a designated emergency care area, room or trolley in the outpatient area and wards equipped with appropriate paediatric equipment, supplies and essential medicines for emergency resuscitation and initial treatment. (94.19)
6. The designated emergency care area, room or trolley in the outpatient area and wards has visible emergency care aids (e.g. standardized algorithms or protocols, medicines, fluids and treatment dosage wall charts). (90.49)
7. The health facility professional staff organize emergency care drills at least once every 12 months for all staff working in paediatric emergency areas and on wards to which severely ill children are admitted. (85.39)
8. The health facility maintains an update-to-date 24-h staff duty roster, with a functioning contact mechanism for finding additional support, which ensures that staff responsible for paediatric triage are available at all times. (88.95)

Process/output

9. Proportion of all children with general danger or emergency signs or injuries who were assessed within 15 min of arrival at the facility (86.78)
10. Proportion of all children with general danger or emergency signs who required referral who received correct emergency and/or prereferral treatment. (88.42)
11. Proportion of all children under 5 years of age who did not require urgent referral or admission who were properly assessed according to WHO Integrated management of childhood and neonatal illnesses (IMNCI) guidelines. (84.66)
12. Proportion of all professional health staff who care for children in a health facility who received training or refresher courses in emergency triage, assessment and treatment or paediatric emergency care during the past 12 months. (89.59)
13. Proportion of all professional health staff who care for children in a health facility who received training and/or refresher sessions in the management of common paediatric conditions during the past 12 months. (86.73)
14. Proportion of all sick children who attended the health facility who were immediately triaged on arrival, before receiving definitive care or a full assessment by a health professional. (82.97)
15. Proportion of all children in shock who were adequately assessed for signs of shock and were appropriately resuscitated according to WHO guidelines. (87.51)

Outcome

16. Proportion of all cases of children who died within 24 h of admission whose cases were audited and reviewed as part of performance improvement. (91.49)
17. Proportion of sick children who attended the health facility who were triaged before seeing a doctor for treatment in either the outpatient department or the emergency unit. (77.57)
18. The age-disaggregated child mortality rate in the health facility: number of child deaths in the total number of children who presented to the health facility). (93.10)
19. Proportion of all children with emergency signs who were resuscitated and received emergency care consistent with WHO emergency care protocols and guidelines. (84.96)

Quality statement 1.2: All sick infants, especially small newborns, are thoroughly assessed for possible serious bacterial infection and receive appropriate care according to WHO guidelines.

Rationale: Newborns and young infants can become sick and die very quickly if their condition is not identified and managed rapidly and appropriately. Sick newborns, particularly those who are small, preterm or with a low birth weight (< 2000 g), are at much greater risk for illness and death if they do not receive careful attention and appropriate care. Unlike older children, young infants often do not show specific signs or symptoms. Prompt identification of serious bacterial infection in this age group is therefore essential to ensure appropriate treatment as soon as possible in order to prevent complications and achieve the best clinical outcome. The aim of this quality statement is to address possible serious bacterial infections (PSBI) in young infants older than 1 week. It complements quality statements 1.1b, 1.5, 1.16b, 1.7b and 1.9 for maternal and newborn health care.¹

Sick young infants should be routinely weighed and assessed carefully for signs of severe disease, local infection or jaundice. Those with PSBI should immediately be appropriately resuscitated and initiated on appropriate antibiotics according to IMCI guidelines, before admission or referral for further care. Referral receiving facilities should have a special area or room for sick young infants, in which staff can provide oxygen, keep the infants warm, practise Kangaroo mother care and perform basic laboratory and diagnostic tests: blood glucose, full blood count, blood grouping and cross-matching, blood culture, urine analysis, cerebrospinal fluid microscopy, ultrasound and chest X-ray. Unstable young infants weighing < 2000 g should be cared for in a clean incubator or under a radiant warmer and their temperature closely monitored. The risks for common complications (hypothermia, feeding problems, apnoea, respiratory distress syndrome and infections) should be assessed and monitored routinely.

¹ Standards for improving quality of maternal and newborn care in health facilities. Geneva: World Health Organization; 2016 (http://www.who.int/maternal_child_adolescent/documents/improving-maternal-newborn-care-quality/en/, accessed 11 December 2017).



QUALITY MEASURES

Input

1. The health facility has written, up-to-date clinical protocols for assessing, identifying and appropriately managing newborns and young infants with PSBI, local infections or jaundice, consistent with WHO guidelines. (93.16)
2. The health facility has supplies of antibiotics (first- and second-line) for prereferral treatment and/or full treatment of neonatal sepsis and meningitis that are adequate for the expected case load without stock outs. (95.48)
3. The health facility clinical staff who care for newborn and young infants receive training or regular refresher sessions in recognizing and managing sick young infants at least once every 12 months. (89.30)
4. The referral receiving facility for high-risk and severely ill newborn and young infants has appropriate diagnostic tests and medical devices for appropriate investigation and management. (93.40)
5. The referral receiving facility has adequate material to provide optimal thermal care to preterm and small infants, including facilities for Kangaroo mother care. (93.37)
6. The referral receiving facility for newborns with severe jaundice has procedures in place to assess severity, check bilirubin and provide effective phototherapy. (94.83)
7. The referral facility has a separate area or room in which sick newborns and young infants are admitted and managed. (91.70)
8. The referral receiving health facility has facilities for Kangaroo mother care and practises rooming-in of parents with their sick infants. (88.83)

Process/output

9. Proportion of all sick young infants admitted to the health facility with any signs of PSBI who were appropriately classified and managed for PSBI or sepsis. (87.94)
10. Proportion of all sick young infants classified as having PSBI or sepsis who were prescribed appropriate antibiotics (correct choice, dose, frequency, route of administration and duration) according to WHO guidelines. (90.86)
11. Proportion of all sick young infants admitted to the facility with PSBI or fast breathing who were appropriately assessed for oxygen requirements with a pulse oximeter and received the documented appropriate amount of oxygen. (85.75)
12. Proportion of all sick young infants admitted to the facility with convulsions whose blood glucose was checked and who were appropriately investigated and treated. (89.66)

13. Proportion of all sick young infants with severe jaundice whose bilirubin level was checked and who were appropriately managed according to WHO guidelines. (90.70)
14. Proportion of pre-term and/or small infants weighing < 2000 g who received Kangaroo mother care as part of clinical management in the health facility. (87.11)
15. Proportion of all sick young infants admitted to the facility who were maintained on exclusive breastfeeding and/or received only expressed breast milk during hospitalization, up to discharge. (84.05)

Outcome

16. Proportion of all sick young infants treated for PSBI or sepsis who died in the health facility (case fatality rate). (94.20)
17. Proportion of all sick young infants who were readmitted within 48 h of discharge. (85.16)
18. Proportion of all newborns (0–28 days) managed in the health facility who died in the health facility. (96.96)
19. The death rate of low-birth-weight infants in the health facility disaggregated by birth weight: 2000–2499 g, 1500–1999 g, < 1500 g. (90.80)

Quality statement 1.3: All children with cough or difficult breathing are correctly assessed, classified and investigated and receive appropriate care and/or antibiotics for pneumonia, according to WHO guidelines.

Rationale: Respiratory infections are one of the main causes of childhood morbidity and mortality. While most cases of cough are self-limiting viral infections, it is difficult to distinguish between self-limiting acute viral and life-threatening bacterial infections in young children. Identification of serious conditions like pneumonia, bronchiolitis, viral-induced wheeze, asthma, TB and *Pneumocystis* pneumonia in children with HIV infection is critical for choosing interventions. Children with cough should be assessed for their degree of agitation, general danger signs, fast breathing, signs of severe distress, cyanosis and oxygen saturation. Children with pneumonia or severe pneumonia should be treated with oral antibiotics or referred for parenteral antibiotics, while those with no signs of pneumonia should receive home care and safe remedies.

Children under 5 years should be assessed for pneumonia according to IMCI guidelines, and older children should be assessed for predictors of pneumonia such as the presence of fever, cyanosis and more than one sign of respiratory distress (tachypnoea, cough, nasal flaring, chest indrawing, rales and decreased breath sounds). Children with chronic cough should be assessed for common causes (e.g. TB, asthma, cardiac problems) and be investigated appropriately (e.g. X-ray, full blood count, erythrocyte sedimentation rate and C-reactive protein). Children who present with wheeze should be correctly assessed, and appropriate inhalation bronchodilators provided. Those with life-threatening upper airway obstruction due to viral croup, epiglottitis, pharyngeal abscess or inhaled foreign bodies should be identified, given emergency care and

appropriately managed. Oxygen therapy should be administered to all children with cyanosis or oxygen saturation < 95%, and they should be adequately monitored.



QUALITY MEASURES

Input

1. The health facility has a written, up-to-date, evidence-based clinical protocol for identifying and managing children with cough or difficult breathing, consistent with IMCI and paediatric care guidelines. (93.52)
2. The referral receiving health facility has basic laboratory and diagnostic tests (e.g. pulse oximetry, full blood count, culture, ultrasound and chest X-ray) available for appropriate investigation of children with severe pneumonia. (93.03)
3. The health facility has adequate supplies of antibiotics (first- and second-line) for treatment of severe pneumonia and pneumonia for the expected case load with no stock outs. (94.94)
4. The health facility has adequate supplies of inhalation bronchodilators and delivery devices for treatment of wheeze for the expected case load with no stock outs. (96.19)
5. The health facility has an adequate supply of pulse oximeters and a reliable, functioning oxygen supply at all times for the expected case load with no stock outs. (92.27)
6. The health facility clinical staff who care for children receive training and regular refresher sessions in assessing and managing children with cough or wheeze at least once every 12 months. (89.49)

Process/output

7. Proportion of all children with cough or difficult breathing who are correctly assessed, investigated, classified and diagnosed according to the severity of pneumonia. 88.87)
8. Proportion of children < 5 years with cough or difficult breathing treated as outpatients who were correctly classified according to IMCI guidelines. (87.08)
9. Proportion of all children with pneumonia or severe pneumonia who received correct antibiotic treatment (formulation, dose, frequency and duration) according to WHO guidelines. (92.74)
10. Proportion of all children with asthma who were appropriately administered inhalation bronchodilator treatment. (89.87)
11. Proportion of all children with pneumonia to whom oxygen was appropriately administered for the clinical indication (signs of hypoxaemia or oxygen saturation < 90%). (86.98)

12. Proportion of all children admitted with severe pneumonia whose respiratory rate and oxygen saturation were appropriately monitored. (87.00)
13. Proportion of all children with cough for ≥ 14 days who were referred or further assessed and investigated for TB or other causes of chronic infection. (87.28)
14. Proportion of all children with only cough and cold (with no signs of pneumonia or severe pneumonia) who received antibiotics. (79.37)

Outcome

15. Proportion of all children managed for pneumonia in the health facility who died of pneumonia (case fatality rate). (94.14)
16. Proportion all children who died of pneumonia among all children admitted to the health facility. (85.30)
17. Proportion of all children managed for pneumonia in the health facility who died of pneumonia within the initial 24 h of admission. (86.59)
18. Proportion of all children managed for wheeze or asthma in the health facility who died of wheeze. (82.68)

Quality statement 1.4: All children with diarrhoea are correctly assessed and classified and receive appropriate rehydration and care, including continued feeding, according to WHO guidelines.

Rationale: Diarrhoea that results in excessive loss of fluids and electrolytes in the stools is one of the leading causes of death in children due to dehydration. Diarrhoea makes children vulnerable and contributes to long-term nutritional deficiency; therefore, monitoring of nutritional status and counselling of caregivers on feeding are important components of diarrhoea management.

All children with diarrhoea must be rehydrated with oral or intravenous (IV) fluids, depending on the degree of dehydration, and children under 5 years should receive zinc supplementation. Children and adolescents classified or diagnosed with dysentery or cholera require antibiotics in addition to fluids. Children with persistent or chronic diarrhoea require further assessment and, when indicated by stool microscopy and in settings of high HIV prevalence, a test for HIV. The IMNCI and other paediatric guidelines describe systematic approaches for the assessment, evaluation and management of diarrhoea in children.



QUALITY MEASURES

Input

1. The health facility has a written, up-to-date clinical protocol for identifying and managing children with diarrhoea, consistent with WHO guidelines. (95.23)

2. The health facility staff use standard guidelines to assess, document and appropriately manage children with diarrhoea and dehydration or dysentery, based on WHO guidelines. (91.08)
3. The health facility paediatric outpatient areas and inpatient wards have rehydration algorithms and plan A, B and C charts available and visibly displayed on the walls for use by health care workers and carers. (92.47)
4. The health facility has adequate supplies for diarrhoea management (IV fluids, oral rehydration salts [ORS], zinc, antibiotics) for the expected case load without stock outs in the past 3 months. (94.72)
5. The health facility has an appropriate designated space with safe, clean water and adequate supplies for preparing ORS for children with diarrhoea and dehydration. (92.43)
6. The health facility clinical staff who care for children receive IMCI training and regular refresher sessions in assessing and managing children with diarrhoea who are dehydrated or have dysentery at least once every 12 months. (90.85)

Process/output

7. Proportion of all children with appropriately classified diarrhoea who were documented as having received an appropriate rehydration treatment plan (A, B or C) according to WHO guidelines. (89.46)
8. Proportion of all children with dysentery who were correctly prescribed an appropriate course of antibiotics. (91.03)
9. Proportion of all children with diarrhoea and severe dehydration who were correctly administered IV fluids according to rehydration plan C. (90.60)
10. Proportion of all children managed for diarrhoea and some or no dehydration who were correctly prescribed ORS and zinc supplementation. (88.16)
11. Proportion all children treated for diarrhoea and dehydration who were not prescribed medicines to reduce stool frequency (anti-motility agents) (80.54)
12. Proportion of all children admitted with diarrhoea who were correctly monitored for their intake of fluids and foods (85.78)
13. Proportion of all children admitted with diarrhoea and dehydration whose fluid intake and feeding were appropriately monitored and documented. (86.05)
14. Proportion of all children with diarrhoea and severe dehydration who could not be managed in the facility who were correctly referred after receiving appropriate prereferral treatment. (83.79)
15. Proportion of all children with persistent diarrhoea who were correctly assessed for dehydration and nutritional status and correctly treated. (86.09)
16. Number of days on which the health facilities did not have medicines or supplies to treat diarrhoea (ORS, zinc, IV fluids and supplies, antibiotics) in the past 3 months. (86.38)

Outcome

17. Proportion of all children with some dehydration who were successfully rehydrated in the outpatient department and discharged for home treatment. (83.33)
18. Proportion of all children managed for diarrhoea with severe dehydration in the health facility who died of diarrhoea. (93.48)
19. Proportion of children who were treated for diarrhoea and who returned to the same health facility with diarrhoea within 7 days of the initial discharge (78.51)

Quality statement 1.5: All children with fever are correctly assessed, classified and investigated and receive appropriate care according to WHO guidelines.

Rationale: Fever is a common reason for seeking care and may be a presenting symptom of either a self-limiting viral infection or a life-threatening infection such as malaria, pneumonia, meningitis, septicaemia, urinary tract infection or typhoid fever. It is often difficult to identify the cause of fever, unless the symptoms and signs suggest a particular infection. The younger the child the more difficult it is to establish a diagnosis and the severity of illness. The cause may be difficult to identify, despite careful assessment and investigation. The health facility must therefore have access to basic laboratory and diagnostic tests to exclude causes of serious febrile illness suggested by the disease epidemiology (e.g. blood smear or malaria rapid diagnostic test, full blood count, blood culture, urinalysis with microscopy, cerebrospinal fluid microscopy, ultrasound, chest X-ray, blood glucose test, pulse oximetry).

Children under 5 years with fever should be assessed according to the IMNCI guidelines and older children by other evidence-based paediatric guidelines. Assessment should include the history and general danger or emergency signs, signs of severe illness and vital signs (e.g. temperature, heart rate, respiratory rate, blood pressure and capillary refill time). A differential diagnosis of fever should be considered and appropriate investigations undertaken. Correct treatment (choice of drug, dose, frequency, route of administration and duration of treatment) and appropriate supportive care should be provided. Parents and caregivers should be counselled and advised about home care (if the child is not admitted) and told when to return.



QUALITY MEASURES

Input

1. The health facility has a written, up-to-date, evidence-based clinical protocol for identifying and managing children with fever that is consistent with WHO guidelines. (93.32)

2. The health facility has basic laboratory and diagnostic tests and supplies (e.g. otoscopes, blood glucose tests, malaria smear and/or rapid diagnostic tests, urine tests) available for appropriate assessment of children with fever. (92.68)
3. The referral receiving health facility for children with severe febrile illness has appropriate laboratory and diagnostic tests available for further investigation and management. (92.35)
4. The health facility has adequate supplies of first- and second-line antibiotics for treatment of bacterial infections and antimalarial agents for treatment of malaria in sufficient quantities for the expected case load with no stock outs. (93.18)
5. The health facility clinical staff that care for children receive training and regular refresher sessions in the assessment and management of children with fever at least once every 12 months. (89.71)

Process/output

6. Proportion of all children seen in the health facility for whom a raised temperature was documented in their medical record. (88.57)
7. Proportion of all children admitted to the health facility with fever for whom a documented differential diagnosis was appropriately investigated. (81.63)
8. Proportion of all children treated for malaria for whom there is documented evidence of a positive malaria rapid diagnostic test or positive microscopy. (91.86)
9. Proportion of all children treated for severe malaria who had documented confirmed malaria and evidence of severe disease. (88.52)
10. Proportion of all children with severe malaria who received the correct treatment (drug, dose, frequency, route of administration and duration) and supportive care according to WHO guidelines. (90.77)
11. Proportion of all children with severe febrile illness and suspected meningitis for whom there was documented evidence of lumbar puncture in the medical records. (90.34)
12. Proportion of all children with meningitis who received correct antibiotic treatment (choice of drug, dose frequency, route of administration and duration) and supportive care according to WHO guidelines. (91.37)
13. Proportion of all children with severe febrile illness (e.g. malaria, meningitis, septicaemia, dengue) who were monitored regularly for vital signs and level of consciousness until resolution of severe signs of illness. (88.36)
14. Proportion of all children with severe febrile illness with suspected septicaemia who were appropriately investigated (e.g. full blood count, urine analysis, blood and urine bacteriology culture). (87.27)
15. Proportion of all children treated for septic shock who received the correct antibiotic treatment (choice of drug, dose, frequency, route of administration and duration) and supportive care according to WHO guidelines. (89.74)

Outcome

16. Proportion of all children treated for severe malaria and/or meningitis who had physical or neurological sequelae. (78.84)
17. Severe malaria case fatality rate disaggregated by age (91.22)
18. Meningitis case fatality rate disaggregated by age. (89.56)
19. Proportion of all children treated for septicaemia who died (septicaemia case fatality rate). (90.08)

Quality statement 1.6: All infants and young children are assessed for growth, breastfeeding and nutrition, and their carers receive appropriate support and counselling, according to WHO guidelines.

Rationale: Adequate feeding is essential for growth and development. Poor feeding during infancy and particularly during illness can have lifelong consequences. Young infants, particularly those with a low birth weight (< 2500 g), are at much greater risk for illness and death if careful attention is not paid to feeding and appropriate care. Exclusive breastfeeding gives young infants the best immune support and nutrition and enhanced growth and development. Breastfeeding also protects mothers against breast and ovarian cancer, improves birth spacing and protects them against type 2 diabetes. Infants and young children should be breastfed exclusively up to 6 months of age and progressively given complementary nutritious foods with continued breastfeeding up to 2 years.

Children's growth should be assessed according to weight for age of young infants and to weight for length (height) in children aged ≥ 2 months. All children < 2 years should be assessed for feeding problems and practices, and caregivers should be appropriately counselled on feeding. Preterm and low-birth-weight infants (< 2500 g) should be monitored closely and their mothers given support for exclusive breastfeeding or alternative feeding (expressed breast milk, donor breast milk or formula). The health facility should be baby-friendly and have a written breastfeeding policy that is routinely communicated to all staff, who should be trained in implementing the policy.



QUALITY MEASURES

Input

1. The health facility has a written, up-to-date policy for exclusive breastfeeding and appropriate feeding, according to WHO guidelines. (93.37)
2. The health facility maintains a baby-friendly status that supports breastfeeding according to WHO guidelines. (89.03)
3. The health facility fully complies with the International Code of marketing of breast-milk substitutes and has systems in place to monitor compliance with the Code. (85.43)

4. The health facility has the necessary supplies and materials to support breastfeeding and, when appropriate, alternative feeding (feeding cups and spoons, infant formula, nasogastric tubes, syringe drivers, IV fluids and tubing). (89.92)
5. The professional staff of the health facility who care for children receive training and regular refresher sessions in counselling on breastfeeding and optimal feeding and nutrition of infants and young children at least once every 12 months. (88.49)
6. The health facility can regularly assess the competence of staff for supporting carers in sustaining optimal infant and young child feeding and nutrition at least once every 12 months. (79.69)

Process/output

7. Proportion of all children aged < 6 months in the health facility who are exclusively breastfed or given only expressed breast milk. (87.18)
8. Proportion of all children < 5 years in the health facility who have been assessed for routine growth and delayed development, as documented on their child health card or booklet. (90.55)
9. Proportion of children aged 6–23 months in the health facility who receive appropriate complementary foods according to WHO guidelines. (81.16)
10. Proportion of preterm or small sick infants who receive assisted feeding for whom a correctly prescribed feed volume appropriate for their weight and gestation age is documented. (86.84)
11. Proportion of all newborn infants in the health facility who receive fully established breastfeeding at the time of discharge. (85.22)

Outcome

12. Proportion of carers in the health facility who have received counselling on breastfeeding and nutrition to ensure continued, appropriate feeding of the children in their care. (82.94)

Quality statement 1.7: All children at risk for acute malnutrition and anaemia are correctly assessed and classified and receive appropriate care according to WHO guidelines.

Rationale: Acute malnutrition is common in children, particularly infants and young children < 2 years, and anaemia occurs in children with underlying conditions such as malnutrition, hookworm infestation, malaria and sickle-cell disease. Factors that contribute to malnutrition include poor feeding practices, lack of or inadequate breastfeeding, persistent or chronic diarrhoea, measles and malaria. Children with severe acute malnutrition are at high risk of death from complications.

All children < 5 years should be assessed for acute malnutrition routinely, and any complications should be identified, investigated and managed according to WHO IMNCI guidelines. Parents and caregivers should receive appropriate counselling on breastfeeding, feeding practices and child nutrition. Infants aged < 6 months should be exclusively breastfed, and mothers should be encouraged to continue breastfeeding up to 24 months of age. Children with severe acute malnutrition should be managed appropriately according to IMNCI guidelines and, if they have medical complications, admitted for further care. A health facility that manages children with severe acute malnutrition should have an area or room in which these children are cared for, with special monitoring charts.



QUALITY MEASURES

Input

1. The health facility has written, up-to-date clinical protocols for assessment, identification and management of children with acute malnutrition and anaemia consistent with WHO guidelines. (94.07)
2. The health facility has adequate, functioning equipment (e.g. weighing scales, length and height boards, mid-upper arm circumference tapes) and other supplies for assessing and managing acute malnutrition for the expected case load without stock outs. (94.31)
3. The health facility has or is linked to an outpatient or community therapeutic feeding centre that provides nutritional support and counselling. (84.82)
4. The health facility that is managing children with complicated severe acute malnutrition has adequate medical and nutrition supplies (e.g. antibiotics, F75, F100, Resomal and ready-to-use therapeutic food) available for the expected case load without stocks-outs. (91.96)
5. The health facility has a separate room for all children with complicated severe acute malnutrition, with facilities for keeping them warm (e.g. overhead heaters) and provisions for developmental stimulation. (86.64)
6. The professional staff at the health facility who care for children receive training and regular refresher sessions in assessment, identification, appropriate management and follow-up of children with acute malnutrition at least once every 12 months. (89.42)
7. The health facility has basic laboratory and diagnostic tests (e.g. blood glucose, full blood count, blood culture, urinalysis, serum electrolytes, chest X-ray) for appropriate investigation and management of children with complicated severe acute malnutrition. (90.48)

Process/output

8. Proportion of all sick children aged < 5 years seen in the health facility whose nutritional and anaemia status was assessed and classified according to the IMCI guidelines. (89.50)

9. Proportion of all sick children seen in the health facility whose weight and height were assessed and checked against the recommended WHO growth standards. (90.86)
10. Proportion of all children seen in the health facility with uncomplicated severe acute malnutrition who received correct, appropriate outpatient care according to WHO guidelines. (87.21)
11. Proportion of all children admitted to the health facility with complicated severe acute malnutrition whose temperature was measured and recorded on admission. (86.70)
12. Proportion of all children admitted to the health facility with complicated severe acute malnutrition whose vital signs, feed intake and weight were regularly and adequately monitored during hospitalization. (88.83)
13. Proportion of all children admitted with complicated severe acute malnutrition who received appropriate feeding at a correct frequency both day and night according to WHO guidelines. (86.80)
14. Proportion of all children with acute malnutrition whose carers have been counselled and informed about age-appropriate feeding. (83.46)
15. Proportion of all children classified or diagnosed with anaemia who are appropriately investigated and prescribed treatment correctly according to WHO guidelines. (89.09)

Outcome

16. Case fatality rate from complicated severe acute malnutrition (monthly or every 3 months depending on the number of cases managed). (92.54)

Quality statement 1.8: All children at risk for TB and/or HIV infection are correctly assessed and investigated and receive appropriate management according to WHO guidelines.

Rationale: TB is a neglected disease in children and adolescents because of lack of awareness, lack of access to care and lack of consistently effective diagnostic tools for young children. TB in young children commonly presents as a failure to thrive, weight loss, prolonged fever or cough. The risk for TB infection is higher among children and adolescents who are in contact with people with active pulmonary TB in their household and among those who are immunocompromised (e.g. children with severe acute malnutrition, who have had measles or who have HIV/AIDS or cancer. As HIV in young children is usually transmitted from their mothers, in settings with a high HIV prevalence, HIV status should be established at birth or at their first medical contact. Because of the interrelation between HIV and TB infection, these services should be integrated in settings with a high prevalence so that holistic, comprehensive prevention and care can be provided for both conditions.

Children who present with cough for ≥ 14 days or who are at risk for TB should be appropriately assessed, investigated and managed according to guidelines for paediatric TB. Children with multidrug-resistant TB should be treated or referred. All HIV-infected mothers should

receive treatment to prevent mother-to-child transmission, and their children should be given antiretroviral prophylaxis and/or treatment if they are infected with HIV. The health facility should have a functioning system for chronic care and follow-up of the children in their care who are infected with TB and HIV. The facility should have relevant protocols for tracing contacts of TB cases, case-finding, treatment of TB and HIV infection and monitoring. Parents or caregivers should be counselled and supported in caring for their children.



QUALITY MEASURES

Input

1. The health facility has written, up-to-date guidance on assessing and managing children with suspected TB infection. (94.19)
2. The health facility offers routine screening for TB symptoms among children at risk (e.g. history of contact with a case of active TB, malnourished or with HIV/AIDS). (89.59)
3. Health facilities in areas with a high prevalence of HIV infection routinely offer HIV counselling and testing to all children. (91.51)
4. The health facility has child-friendly single or fixed-dose formulations of anti-TB medicines available at all times in adequate quantities without stock outs. (92.33)
5. The health facility has adequate supplies of antiretroviral therapy and preventive therapy (co-trimoxazole) available at all times for infants and children exposed to and/or infected with HIV. (92.47)
6. The professional staff at the health facility receive training and regular refresher sessions on TB prevention, case-finding and management at least once every 12 months. (88.00)

Process/output

7. Proportion of all children with a household contact with active TB who received TB preventive treatment. (83.99)
8. Proportion of all children with suspected TB who were investigated with an Xpert MTB/RIF for diagnosis of TB. (87.88)
9. Proportion of all children with diagnosed TB who received correct, appropriate treatment (i.e formulation, combination, dose and duration of treatment). (90.49)
10. Proportion of all children with diagnosed multi-drug-resistant TB who were appropriately referred. (89.00)
11. Proportion of all children started on TB treatment in the health facility who successfully completed the full course. 89.96)

12. Proportion of all children who attend health facilities in settings with a high HIV prevalence whose HIV status is known and documented in their medical records. (90.75)
13. Proportion of all HIV-positive women who delivered in the health facility who receive appropriate prophylaxis to prevent mother-to-child transmission and antiretroviral therapy according to WHO guidelines. (94.86)
14. Proportion of all children born to HIV-infected mothers who were tested for HIV infection within 8 weeks of birth and received appropriate antiretroviral therapy according to WHO guidelines. (92.50)
15. Proportion of all children with confirmed HIV infection who have started antiretroviral therapy. (96.05)

Outcome

16. Cure rate for childhood TB infection in the health facility. (83.58)
17. Case fatality rate among children with HIV infection in the facility. (88.71)

Quality statement 1.9: All children are assessed and checked for immunization status and receive appropriate vaccinations according to the guidelines of the WHO expanded programme on immunization.

Rationale: Immunization prevents illness, disability and death from common infectious diseases. The expanded programme on immunization has a targeted approach and defined schedules for vaccination against common vaccine-preventable diseases and against human papillomavirus to reduce the risk of young adolescents for cervical cancer. All children should be vaccinated and given vitamin A as per the guidelines. Health facilities should use visits by sick children and all contacts with children as opportunities for vaccination.

The immunization and vitamin A supplementation status of all children attending the facility should be checked routinely, and they should receive their age-specific vaccinations. The facility should have a policy to encourage staff to open a new vaccine vial for each child who requires vaccination. Children who are admitted onto wards should be vaccinated. Parents and caregivers should be counselled and informed about the benefits of immunization and when to bring their children for the next dose of vaccine. Adolescents should also be fully informed and counselled about receiving HPV vaccination.



QUALITY MEASURES

Input

1. The health facility has written, up-to-date protocols and guidelines for providing routine child immunization services that are consistent with WHO guidelines. (95.16)

2. The health facility has a functioning refrigerator with a temperature monitoring device and sufficient storage capacity to accommodate all the vaccines required for the expected case load. (95.69)
3. The health facility has adequate supplies of immunization cards, tally sheets, ice packs and other supplies to provide daily immunization services at all times with no stock outs. (93.66)
4. The health facility has adequate supplies of all age-appropriate primary vaccines and human papillomavirus available to provide daily immunization services with no stock outs. (92.81)
5. The health facility has adequate supplies of puncture-resistant, rigid, leak-resistant containers designed to hold used sharps safely during collection, disposal and destruction. (91.51)
6. The health facility has at least one health professional trained in immunization service delivery, who receives regular refresher sessions at least once every 24 months. (89.51)

Process/output

7. Proportion of days on which the refrigerator temperature, monitored twice daily, was not out of the range 2–8 °C in the past month. (88.19)
8. Proportion of all children seen in the health facility whose vaccination and vitamin A status was checked. (88.46)
9. Proportion of all children under 5 years of age who attended the health facility and received vitamin A supplementation in the past 6 months. (86.33)
10. Proportion of all carers whose children are eligible for the next dose of vaccine who were counselled and know when to return. (80.76)

Outcome

11. Proportion of all children under 5 years of age who attended the health facility and left without receiving age-appropriate, up-to-date vaccination according to the guidelines of the WHO expanded programme on immunization. (81.62)
12. Proportion of all children admitted to the health facility for more than 24 h who were not fully vaccinated for their age. (84.73)

Quality statement 1.10: All children with chronic conditions receive appropriate care, and they and their families are sufficiently informed about their condition(s) and are supported to optimize their health, development and quality of life.

Rationale: Children with chronic conditions require management for a long period or for life and are more likely to make frequent visits to a health facility. Their activities may be limited, and, in many cases, their families must adjust to accommodate these changes. Chronic conditions in children require a multidisciplinary team approach and the engagement of the

children and their primary caregivers. Some treatments may be painful and frightening, which may decrease their ability to play and cause psychological problems.

A chronic condition must be accurately diagnosed as soon as possible, and the child and the family must be informed about the illness, how to detect symptoms, the likely consequences of treatment and how it will affect their daily lives. The health facility should ensure that every family receives a family-centred multidisciplinary assessment of their needs as soon as the diagnosis of the chronic condition is established. Children should undergo a holistic assessment of the full range of their medical, nursing, practical, social, educational, psychological and spiritual needs, taking into account the child's and the family's preferences. A management plan should be drawn up for each child and the child's clinical course monitored closely. Suitable information, in the form of booklets, pamphlets, charts, posters and electronic applications, should be provided to children and their families. The health facility should have special clinics or times allocated for seeing children with chronic conditions that do not overlap with those for children with acute problems.



QUALITY MEASURES

Input

1. The health facility has written, up-to-date policies, protocols and guidelines for screening, managing and ensuring the continuity of care in the community for children with common chronic conditions. (89.32)
2. The health facility has a model for chronic care that includes a coordinated, multidisciplinary team approach and the participation of children and their families. (81.32)
3. The health facility has the facilities, supplies and materials necessary to provide optimal care during both acute episodes and routine follow-up of children with chronic conditions. (88.08)
4. Health professionals receive in-service training or refresher sessions in the appropriate care of common chronic childhood conditions (e.g. asthma, sickle-cell disease, diabetes, epilepsy and cardiac disease) at least once every 12 months. (87.81)
5. The health facility has an established system for age-appropriate education and counselling for children about their condition, self-management and prevention of complications. (81.45)

Process/output

6. Proportion of all children with chronic conditions (e.g. asthma, sickle-cell anaemia, diabetes, epilepsy, cardiac disease) who are regularly followed up as per scheduled plan. (87.05)
7. Proportion of children with a chronic condition and/or their carers who understand and are able to describe their condition and the treatment being received correctly. (78.31)

8. Proportion of children who require palliative care, whose physical and emotional care, including pain, side-effects and other symptoms, is assessed and documented. (83.92)
9. Proportion of health professionals who care for children in the health facility who have received in-service training or refresher sessions in appropriate care of common chronic childhood conditions at least once every 12 months. (87.77)

Outcome

10. Proportion of all children with asthma who are followed at the health facility who were admitted with a severe acute asthmatic attack in the past 3 months. (85.64)
11. Proportion of all children with chronic, repeated seizures (epilepsy) who are followed up at the health facility who were admitted with status epilepticus in the past 12 months. (85.55)
12. Proportion of children with a chronic condition who know and can correctly describe the signs and symptoms that alert them to seek care for their condition. (80.52)

Quality statement 1.11: All children are screened for evidence of maltreatment, including neglect and violence, and receive appropriate care.

Rationale: Early case recognition and continuous care of child victims of maltreatment are critical to ensure safety and reduce reoccurrences that may have physical and psychological consequences. Child maltreatment includes all types of physical and emotional ill treatment, abuse and neglect, including sexual abuse or exploitation and other forms of exploitation that result in actual or potential harm to the child's health, survival, development or dignity. Children who have experienced physical abuse may present with unintentional injuries or suspicious fractures, and those who have been sexually abused may present with injuries around the genitalia, inappropriate sexual behaviour, unexplained pregnancy or sexually transmitted infection.

Staff who care for children should be able to recognize the warning signs of maltreatment, identify children and families who may require assistance and take appropriate, timely action. Children with possible maltreatment should be evaluated and managed and the cases reported or referred according to an established protocol. Child victims should be offered a culturally sensitive mental health assessment, psychosocial support and treatment by trained staff, with any necessary medical treatment. The facility should have a system for social and legal intervention when required. All health professionals and social workers should be trained in assessing, recognizing and caring for child victims.



QUALITY MEASURES

Input

1. The health facility has a comprehensive written protocol for identifying, assessing and managing children with suspected maltreatment. (90.57)
2. The health facility staff receive training and refresher sessions on screening, preventing, protecting and managing children with evidence of maltreatment, including neglect and violence. (88.56)
3. The health facility has the facilities, supplies and materials to provide optimal, coordinated care to children with suspected maltreatment. (86.67)

Process/output

4. Proportion of all children with suspected maltreatment who were managed according to established health facility procedures and protocols. (82.17)
5. Proportion of all children attending the health facility with suspected maltreatment who received psychological services (82.52)

Outcome

6. Proportion of children with maltreatment for whom a legal opinion was requested. (78.62)
7. Proportion of maltreatment events in which coordination was sought with other agencies or organizations (e.g. social services, police, judiciary) according to national laws and policies. (82.21)

Quality statement 1.12: All children with surgical conditions are screened for surgical emergencies and injuries and receive appropriate surgical care.

Rationale: The main objective is to assess appropriately and provide immediate management of common surgical emergencies and injuries in children. Children are physiologically different from adults, which influences the care they should receive before, during and after surgery. In view of their body composition and metabolism, doses of drugs, fluids and blood products must be calculated carefully on the basis of body weight or surface area for correct management of injuries, including burns.

Children with a surgical emergency or injury should be assessed for possible life-threatening complications as soon as they arrive at the facility. They should be resuscitated and stabilized before a complete, thorough physical examination and, when definitive services are not available, safely transferred to a facility with the necessary services. Standard procedures should

be in place to assess children for surgery (e.g. weight, haemoglobin level, blood group), and they should be prioritized on the operating list to avoid unnecessary starving. Children should be kept warm during surgery, IV fluids containing glucose given during long procedures and any blood loss closely monitored.



QUALITY MEASURES

Input

1. The health facility has written, up-to-date clinical protocols for emergency triage and assessment and appropriate case management of paediatric trauma and surgical conditions, consistent with WHO guidelines. (94.31)
2. The health facility that provides surgical care for children has a system to ensure a coordinated multidisciplinary team that includes a health professional with competence and skills in child surgery. (84.65)
3. Health professionals receive in-service training and refresher sessions in appropriate care of child injuries, trauma and other common paediatric surgical conditions at least once every 12 months. (87.73)
4. The health facility has a designated area for the management of children with surgical problems by health professionals who are trained or who have knowledge and skills in child care. (89.07)
5. All children who have undergone surgery are closely monitored, with careful documentation of intake (fluids and feeds) and output (e.g. urine, nasogastric drainage). (89.30)

Outcome

6. Proportion of children undergoing major surgery who received appropriate perioperative antibiotic prophylaxis within 30 min of incision, when indicated. (86.23)
7. Proportion of all children undergoing surgery who were admitted to a designated paediatric area staffed by health professionals trained in child care. (84.45)
8. Proportion of all children with trauma or injuries who were assessed within 15 min of arrival at the health facility. (87.70)
9. Proportion all children with moderate or severe pain whose pain was relieved (where indicated) within 30 min of arrival at the health facility. (83.89)

Outcome

10. Health facility complication rates for patients who underwent surgery. (89.88)
11. Health facility mortality rate for all children who underwent surgery. (95.70)
12. Case fatality rate of children with trauma and/or injuries. (94.64)

Quality statement 1.13: All sick children, especially those who are most seriously ill, are adequately monitored, reassessed periodically and receive supportive care according to WHO guidelines.

Rationale: Monitoring the clinical course of sick children and their response to treatment is an essential element of clinical care. Poor monitoring and inadequate supportive care contribute to poor outcomes, even when evidence-based care is provided. Health care providers should focus not only on the treatment of a specific disease or condition but also on the supportive care required in the management plan. An unconscious child being treated for meningitis might die of hypoglycaemia or aspiration rather than from meningitis.

All sick children should be given supportive care and closely monitored, and clinical progress and care should be documented routinely at regular intervals, including the care provided, medications, feeds and fluids administered. Potential complications should be anticipated and the condition of the child checked regularly for any deterioration, complications or adverse treatment outcomes. The frequency of monitoring depends on the child's condition and its severity. Children who require supportive care, such as oxygen, pain control or blood transfusion, should be given these interventions, and IV fluids should be given only when indicated. The health facility should ensure that all children receive appropriate diets and that those who are too sick to eat are fed appropriately.



QUALITY MEASURES

Input

1. The health facility has written, up-to-date protocols for monitoring and providing supportive care for various conditions for all children admitted to the wards. (91.11)
2. The health facility has age-appropriate patient monitoring charts that include a provision for recording details of clinical progress and vital signs and of the treatment and supportive care provided. (92.60)
3. The health facility has a designated area for managing seriously sick children that is close and easily visible to the nursing staff on the ward. (93.03)
4. Health professionals receive in-service training and regular refresher sessions on patient monitoring and supportive care at least once every 12 months. (89.55)

Process/output

5. Proportion of all unconscious children admitted to the wards who received a nasogastric tube for feeding. (82.66)
6. Proportion of all severely ill children who cannot feed orally for whom blood glucose monitoring is documented on their observation chart. (88.78)

7. Proportion of all children who received oxygen for which the prescribed method and rate of delivery are documented. (87.47)
8. Proportion of all children admitted to the health facility who were appropriately monitored and for whom observations were recorded by a nurse according to the guidelines. (88.56)
9. Proportion of all children admitted to the health facility who are reassessed every working day by a clinician trained in child health care. (87.16)
10. Proportion of all children with convulsions who were appropriately investigated and correctly prescribed anticonvulsant treatment (appropriate choice, dose and frequency). (89.29)
11. Proportion of all children who required antipyretics who were prescribed the correct treatment (appropriate choice, dose and frequency) to reduce their temperature. (86.15)
12. Proportion of all children in pain for whom analgesic treatment was correctly prescribed (appropriate choice, dose and frequency). (85.23)
13. Proportion of all children who required a blood transfusion for severe anaemia who received the transfusion. (90.91)

Outcome

14. Proportion of all severely ill children who died in the health facility whose death was attributed to aspiration. (78.23)

Quality statement 1.14: All children receive care with standard precautions to prevent health care-associated infections.

Rationale: Health care-associated infections are the most common adverse events in health care delivery. They increase the risk for death, the cost of care and the duration of hospital stay. The main causes include insufficient application of standard infection control procedures, insufficient equipment and supplies, prolonged, incorrect use of invasive devices, high-risk procedures, poor infrastructure, overcrowding and underlying immune-suppressed conditions. The most effective way of preventing health care-associated infection is implementation of standard infection control.

Health care providers should observe standard infection control protocols at all times, including hand hygiene and use of aseptic techniques during clinical procedures. The health facility should have systems for sterilization and disinfection of clinical materials, and staff should be trained in infection prevention and control, including detecting and responding to health facility-acquired infection.



QUALITY MEASURES

Input

1. The health facility has written, up-to-date guidelines, protocols and standard operating procedures for the prevention and control of infection in the facility. (95.66)
2. The health facility has specific guidelines and protocols on hand hygiene and aseptic technique and device management for clinical procedures (e.g. injection safety, use of indwelling catheters and other invasive procedures). (95.15)
3. The health facility has plans for infection prevention and control preparedness and response for public health emergencies due to communicable diseases (e.g. pandemics). (91.43)
4. The health facility has a functioning improved water source and hand-washing stations with soap and single-use hand towels and/or alcohol-based hand rub in all wards and consulting rooms. (95.82)
5. The health facility has appropriate sterilizing facilities and disinfectants for medical materials. (95.94)
6. The health facility has a functioning incinerator or other appropriate method for treatment of infectious waste and used instruments. (95.73)
7. The health facility has a system to ensure safe handling, collection, storage (puncture resistant) and final disposal of infectious waste. (95.00)
8. The health facility has at least one designated trained staff member and/or infection control team, with a sufficient budget to perform the tasks of the facility infection prevention and control programme. (89.97)
9. Health professionals who care for children receive training in standard infection prevention and control at least once every 12 months. (89.99)

Process/output

10. Proportion of health professionals in the health facility who have been trained in use of the WHO "5 moments for hand hygiene" audit tool. (89.57)
11. Evidence that the facility staff member or team responsible for infection prevention and control regularly collects data on episodes of hospital-acquired infection and has conducted at least one assessment of infection prevention and control practices in the past 6 months. (90.35)
12. Proportion of all children who received IV infusions who had an episode of phlebitis. (81.00)
13. Proportion of staff members in the health facility who meet biosafety standards when administering parenteral drugs. (82.16)

Outcome

14. Proportion of children admitted to the health facility who had proven hospital-acquired infections. (87.57)

Quality statement 1.15: All children are protected from unnecessary or harmful practices during their care.

Rationale: Despite the growing use of evidence-based practices and patient safety, unnecessary procedures and treatment and other harmful practices persist. Common harmful practices include unnecessary procedures, treatment or admissions, prolonged hospital stays, keeping newborns away from their mothers and allowing advertising and promotion of breast-milk substitutes and bottle-feeding.

Children are particularly vulnerable to medication errors and to receiving unnecessary medical interventions that may cause harm. Prescription of antibiotics for coughs or colds when not required may contribute to antimicrobial resistance, high health care costs and a risk of adverse events. Unnecessary IV fluids and remedies increase the probability of side-effects and accidental overdose.

The health facility should have clinical guidelines and a mechanism for monitoring and avoiding such practices. Health professionals should adhere to evidence-based practices and not perform unnecessary or harmful procedures.



QUALITY MEASURES

Input

1. The health facility has written, up-to-date guidance on unnecessary procedures, harmful practices and unnecessary interventions for children. (84.11)
2. The health facility does not promote infant formula on the wards, and samples are not distributed to mothers or staff. (86.46)
3. The health facility does not display infant formula or bottles and teats, including on posters or placards. (86.82)
4. Health care staff in the facility receive in-service training and regular refresher sessions on harmful practices and unnecessary interventions at least once every 12 months. (83.56)

Process/output

5. Proportion of young infants on formula when this is not indicated for the health of the mother or the infant. (78.96)

6. Proportion of children admitted to wards with no indication for hospital admission. (75.36)
7. Proportion of children admitted to the health facility who receive IV fluids with no clear indication. (76.96)
8. Proportion of children admitted to the health facility who receive blood when not indicated. (80.45)
9. Proportion of children up to 5 years seen at the health facility with cough who receive harmful cough remedies for respiratory tract infections. (78.56)
10. Proportion of children admitted to the health facility for whom there were proven medication errors or hospital-acquired infections. (81.92)
11. Proportion of children seen at the health facility who received unnecessary oral or parenteral medicines. (81.27)
12. Proportion of children admitted to the health facility who received antibiotics when not indicated. (83.54)

Bibliography used in setting standard 1

- Agency for Healthcare Research and Quality (2012) Item set for children with chronic conditions. Rockville (MD) (<https://www.ahrq.gov/cahps/surveys-guidance/item-sets/children-chronic/index.html>, accessed 12 December 2017).
- Aluvaala J, Nyamai R, Were F, Wasunna A, Kosgei R, Karumbi J et al. (2014) Assessment of neonatal care in clinical training facilities in Kenya. *Arch Dis Child*. 100:42–7.
- Amboko BI, Ayieko P, Ogero M, Julius T, Irimu G, English M et al. (2016) Malaria investigation and treatment of children admitted to county hospitals in western Kenya. *Malar J*. 15:506.
- American Academy of Pediatrics (2013, 2014, 2016) Ten things physicians and patients should question. Philadelphia (PA) (<http://www.choosingwisely.org/societies/american-academy-of-pediatrics/>, accessed 12 December 2017).
- American Diabetes Association (2011) Standards of medical care in diabetes – 2011. *Diab Care*. 34:S11–61.
- American Diabetes Association (2016) Strategies for improving care. *Diab Care*. 39(Suppl 1):S6–12.
- American Diabetes Association (2017) Promoting health reducing disparities in populations. *Diab Care*. 40(Suppl 1):S6–10.
- Centers for Disease Control and Prevention (2016) Pediatric HIV in resource limited settings: stopping the HIV epidemic in children. Atlanta (GA) (<https://www.cdc.gov/globalhivtb/who-we-are/resources/keyareafactsheets/pediatric-hiv-in-resource-limited-settings.pdf>, accessed 12 December 2017).
- Collins S, Dent N, Binns P, Bahwere P, Sadler K, Hallam A (2006) Management of severe acute malnutrition in children. *Lancet*. 368:1992–2000.
- Department of Health and Human Services (2016) The standards for pediatric immunization practice. Washington DC (<https://www.hhs.gov/nvpo/nvac/reports-and-recommendations/the-standards-for-pediatric-immunization-practice/index.html>, accessed 12 December 2017).
- Department of Health and Human Services (2017) Common indicators for HHS-funded HIV programs and services. Washington DC (<https://www.aids.gov/pdf/hhs-common-hiv-indicators.pdf>, accessed 12 December 2017).

- Gathara D, Nyamai R, Were F, Mogoia W, Karumbi J, Kihuba E et al. (2015) Moving towards routine evaluation of quality of inpatient pediatric care in Kenya. *PLoS One*. 10:e0117048.
- Gill CJ, Young M, Schroder K, Carvajal-Velez L, McNabb M et al. (2013) Bottlenecks, barriers, and solutions: results from multicountry consultations focused on reduction of childhood pneumonia and diarrhoea deaths. *Lancet*. 381:1487–8.
- HIV/AIDS Bureau (2013) Performance measure portfolio. Washington DC: Health Resources and Services Administration (<http://hab.hrsa.gov/deliverhivaidscares/habperformmeasures.html>, accessed 12 December 2017).
- Hussein J, Mavalankar DV, Sharma S, D’Ambruoso L (2011) A review of health system infection control measures in developing countries: what can be learned to reduce maternal mortality. *Globalization Health* 7:14.
- KNVC (Royal Netherlands Chemical Society) (2015) KNVC benchmarking tool for childhood TB policies, practices and planning. The Hague (https://www.kncvtbc.org/uploaded/2015/09/childhood_tb_benchmarks_31-05-20151.pdf, accessed 12 December 2017).
- Lamberti LM, Fischer Walker CL, Taneja S, Mazumder S, Black RE (2015) The association between provider practice and knowledge of ORS and zinc supplementation for the treatment of childhood diarrhea in Bihar, Gujarat and Uttar Pradesh, India: a multi-site cross-sectional study. *PLoS One*. 10:e0130845.
- McCollum ED, King C, Deula R, Zadutsa B, Mankhambo L, Nambiar B et al. (2016) Pulse oximetry for children with pneumonia treated as outpatients in rural Malawi. *Bull World Health Organ*. 94:893–902.
- NCD Alliance (2011) A focus on children and non-communicable diseases (NCDs). Geneva (https://ncdalliance.org/sites/default/files/rfiles/20110627_A_Focus_on_Children_%26_NCDs_FINAL_2.pdf, accessed 12 December 2017).
- Quinonez RA, Garber MD, Schroeder AR, Alverson BK, Nickel W, Goldstein J et al. (2013) Choosing wisely in pediatric hospital medicine: five opportunities for improved healthcare value. *J Hosp Med*. 8:479–85.
- Schuchat A, Zywicki SS, Dinsmoor MJ, Mercer B, Romaguera J, O’Sullivan MJ et al. (2000) Risk factors and opportunities for prevention of early-onset neonatal sepsis: a multicentre case-control study. *Pediatrics*. 105:21–6.
- South African Development Community (2017) Minimum standards for child and adolescent HIV, TB and malaria continuum of care and support in the SADC region (2013–2017). Gaborone (https://www.sadc.int/files/2814/1898/8336/SADC__MINIMUM_STANDARDS_FOR_HIV_AND_AIDS_TB_HEPATITIS_B_AND_C_AND_SEXUALLY_TRANSMITTED_INFECTIONS_PREVENTION_TREATMENT_CARE_AND_SUPPORT_IN_PRISONS_IN_THE_SADC_REGION_A4.pdf, accessed 12 December 2017).
- The Lancet (2013) Childhood pneumonia and diarrhoea. London (<http://thelancet.com/series/childhood-pneumonia-and-diarrhoea>, accessed 12 December 2017).
- Tietjen L, Bossemeyer D, McIntosh N (2003) Infection prevention guidelines for healthcare facilities with limited resources. Baltimore (MD): JHPIEGO.
- University Research Co., LLC (2017) Quality improvement in HIV/AIDS care, prevention of mother-to-child transmission, and related services: collaboration between the Ministry of Health and Social Welfare and USG-supported partners. Chevy Chase (MD) (<http://www.urc-chs.com/resources/quality-improvement-hivaids-care-prevention-mother-child-transmission-and-related-services>, accessed 12 December 2017).
- Were WM, Daelmans B, Bhutta Z, Duke T, Bahl R, Boschi-Pinto C et al. (2015) Children’s health priorities and interventions. *BMJ* 351:h4300.

World Health Organization (2004) Serious childhood problems in countries with limited resources. Background book on Management of the Child with a Serious Infection or Severe Malnutrition. Geneva (<http://apps.who.int/iris/bitstream/10665/42923/1/9241562692.pdf?ua=1&ua>, accessed 12 December 2017).

World Health Organization (2007) Improving paediatric referral care in the context of child survival activities and IMCI. Review of processes to improve paediatric care in small hospitals in developing countries. Denpasar, Indonesia, 15–19 January 2007. Geneva (http://apps.who.int/iris/bitstream/10665/43843/1/9789241596428_eng.pdf, accessed 12 December 2017).

World Health Organization (2009) WHO guidelines on hand hygiene in health care. Geneva (http://www.who.int/gpsc/information_centre/hand-hygiene-2009/en/, accessed 12 December 2017).

World Health Organization (2009) WHO policy on TB infection control in health-care facilities, congregate settings and households. Geneva (http://www.who.int/tb/publications/2009/infection_control/en/, accessed 12 December 2017).

World Health Organization (2012) The monitoring & evaluation / accountability framework for the global vaccine action plan. 2: The monitoring indicators. Geneva (http://www.who.int/immunization/sage/meetings/2012/november/2_MA_Framework_monitoring_indicators_final.pdf, accessed 12 December 2017).

World Health Organization. Planning and implementing palliative care services: a guide for programme managers (2014). Geneva (http://www.who.int/ncds/management/palliative-care/palliative_care_services/en/, accessed 12 December 2017).

World Health Organization (2014) International standards of care for TB. Geneva (<http://www.who.int/tb/publications/standards-tb-care-2014/en/>, accessed 12 December 2017).

World Health Organization (2015) Guide to monitoring and evaluation for collaborative TB/HIV activities: 2015 revision. Geneva (<http://www.who.int/tb/publications/monitoring-evaluation-collaborative-tb-hiv/en/>, accessed 12 December 2017).

World Health Organization (2015) Implementing the end TB strategy. Geneva (http://www.who.int/tb/publications/2015/The_Essentials_to_End_TB/en/, accessed 12 December 2017).

World Health Organization Regional Office for Europe (2014) Hospital care for mothers and newborn babies: quality assessment and improvement tool. Copenhagen (<http://www.euro.who.int/en/health-topics/Life-stages/maternal-and-newborn-health/publications/2014/hospital-care-for-mothers-and-newborn-babies-quality-assessment-andimprovement-tool.pdf?ua=1>, accessed 12 December 2017).

World Health Organization, UNICEF (1993) Indicators for assessing health facility practices that affect breastfeeding. Report of the Joint WHO/UNICEF Informal Interagency Meeting, 9–10 June 1992, WHO, Geneva. Geneva: World Health Organization (<http://apps.who.int/iris/handle/10665/62140>, accessed 12 December 2017).

World Health Organization, UNICEF (2009) Baby-friendly Hospital Initiative: revised, updated and expanded for integrated care. Geneva: World Health Organization (http://www.who.int/nutrition/publications/infantfeeding/bfhi_trainingcourse/en/, accessed 12 December 2017).

World Health Organization, UNICEF, USAID, AED, UCDAVIS, IFPRI (2010) Indicators for assessing infant and young child feeding practices. Part II. Measurement. Geneva: World Health Organization (<http://www.who.int/nutrition/publications/infantfeeding/9789241599290/en/>, accessed 12 December 2017).



STANDARD 2

ACTIONABLE HEALTH INFORMATION SYSTEMS

Standard 2: The health information system ensures the collection, analysis and use of data to ensure early, appropriate action to improve the care of every child.

Overview

The aim of this standard is to ensure that all vital information on patients is recorded and registered accurately and used to make appropriate decisions to maximize patient safety and the quality of care, to support professional best practice and to comply with the health information management system. A system and the capacity to obtain, process and understand basic health information and services must therefore be in place. Clinical records should include fields to alert staff to important areas of practice, such as paediatric pain scores, family diagram, weight and height charts, immunization status and previous attendance. A mechanism should be in place for collecting information from children and their families about their experience of the care provided.

Standardized registers, patient clinical care records, critical pathways and clinical audit forms should be in place, with a standardized system to ensure the confidentiality of all these patient records. The facility should have a mechanism for allowing families to access their data and to provide feedback on their experience of care in the facility. The data should be appropriately de-identified, disaggregated and analysed and the results used to report, provide feedback, monitor and improve performance at all levels of the health care system, including the performance of health care staff.

Quality statements

- 2.1 Every child has a complete, accurate, standardized, up-to-date medical record, which is accessible throughout their care, on discharge and on follow-up.
- 2.2 Every health facility has a functional mechanism for data collection, analysis and use as part of its activities for monitoring performance and quality improvement.
- 2.3 Every health facility has a mechanism for collecting, analysing and providing feedback on the services provided and the perception of children and their families of the care received.

Quality statement 2.1: Every child has a complete, accurate, standardized, up-to-date medical record, which is accessible throughout their care, on discharge and on follow-up.

Rationale: Registers and medical recording forms or an electronic system for documenting the process of care are critical for ensuring appropriate patient care, early detection of complications, accurate hand-over and patient safety. Standardized patient care registers and medical records that are accurate, complete and legible must be in place. They should be available at all points of care and throughout care, in outpatient departments and clinics, on admission and hospitalization, on the wards and at discharge for referral within or between facilities and providers.

The facility should have a standard format for recording clinical information in outpatient departments and on admission, hand-over and discharge, and complete medical records should be available at all times during care. The medical records should be standardized, with chronological documentation that reflects the continuum of care, with the date and time (24-h clock) of every entry written legibly and signed by the person making the entry; alterations should also be countersigned, with the date and time. Entries should be made as soon as possible after an assessment or procedure, upon receipt of reports of investigations by relevant staff or before going off duty. Records of newborns should include gestational age and birth weight and be readily linked to maternal records when required. International Classification of Diseases (ICD) or another standardized disease classification linked to the ICD should be used to code the final diagnosis.



QUALITY MEASURES

Input

1. The health facility has standardized, age-appropriate child care registers, clinical records, observation charts and patient cards in place at all times for recording and monitoring all care processes and outcomes. (93.71)
2. The health facility has an established storage system for medical records that ensures confidentiality and safety and allows rapid retrieval, access and distribution of patients' medical records. (93.31)

3. The health facility has a registration system for admissions, discharges, births and deaths that is linked to the national vital registration system at all times. (93.13)
4. The health facility has a standardized system for classifying clinical conditions, diseases and health outcomes, including births and deaths, which is aligned with the ICD. (92.48)
5. The health facility has a system for creating unique identifiers for new patients and locating pre-existing unique identifiers for returning patients. (90.59)
6. The health facility staff receive training and refresher sessions at least once every 12 months on the use of standardized medical records, including birth and death registration, and classification of conditions and diseases in accordance with the ICD. (86.28)
7. The health facility has sufficient supplies of the necessary registers, patient medical forms, charts and patient cards (e.g. immunization cards) in stock at all times. (93.49)

Process/output

8. Proportion of all children currently in the health facility who have a patient identifier and individual clinical medical record. (89.32)
9. Proportion of medical records in which every entry is dated, timed (24-h clock), legible and signed by the person making the entry. (88.86)
10. Proportion of all children discharged from the health facility within the past 24 h who had an accurately completed discharge summary of the care provided, outcomes and diagnoses (with ICD codes). (90.23)
11. Proportion of all births and deaths occurring in the health facility that were appropriately registered in the national vital registration system. (91.36)

Outcome

12. Proportion of all medical records that include legible documentation of relevant demographic and clinical information on the child and the process and outcomes of the care provided. (87.80)
13. Proportion of all deaths that occurred in the health facility in the past 3 months that were appropriately recorded, with a correct, complete death notification and the cause of death consistent with the ICD classification. (92.13)

Quality statement 2.2: Every health facility has a functional mechanism for data collection, analysis and use as part of its activities for monitoring performance and quality improvement.

Rationale: Use of data for decision-making is an important aspect of quality improvement at all levels of the health system. Data management involves collection, analysis and use of data collected from medical records to provide information that can be used to improve case management and health outcomes, feedback to health providers and for decision-making and planning.

The health facility should routinely verify, analyse and use collected data to make decisions about clinical management and planning in order to improve clinical services. Data should be available to and used by facility staff for continuous improvement of care and by physicians, nurses, supervisors and mentors to influence policies and to make recommendations and plans for better performance. Accurate, complete data should be submitted to the appropriate levels routinely in a timely manner and used for periodic reviews of mortality and morbidity in order to improve the quality of care and performance.



QUALITY MEASURES

Input

1. The health facility has a system with standard operating procedures and protocols for data collection and for checking, validating and analysing relevant indicators to make timely reports and visual charts. (92.61)
2. Managers, health professionals and support staff in the health facility meet regularly (at least once a month) to review patient care and outcomes for decision-making and monitoring performance. (90.92)
3. The health facility managers and community representatives meet regularly (at least every 3 months) to review the health facility statistics and performance and use the recommendations for decision-making. (87.42)
4. The health facility regularly (at least once a month) reviews paediatric deaths and has mechanisms in place to implement the recommendations of the reviews. (93.46)
5. Evidence that the health facility analyses and produces monthly visual charts and reports for monitoring performance. (86.67)

Process/output

6. Number of meetings between health facility management and community representatives in the past 6 months. (82.72)
7. Proportion of all paediatric deaths that occurred in the health facility in the past 3 months that were reviewed with standard death audit tools. (91.42)

Outcome

8. Proportion of all recommendations from paediatric death reviews conducted at the health facility in the past 6 months that were fully implemented. (86.95)
9. Proportion of monthly reports from the health facility received by the next highest level of administration in the past 6 months. (84.01)

Quality statement 2.3: Every health facility has a mechanism for collecting, analysing and providing feedback on the services provided and the perception of children and their families of the care received.

Rationale: Patient satisfaction reflects the experience and perception of the quality of the care received. The views of children and/or their caregivers can improve the services provided and ensure that they meet children's needs. Children's and caregivers' perceptions of their desired health outcome, access to and choice of health care and their relationships with health care providers constitute useful information on the quality of care provided.

The health facility should have a feedback mechanism that allows for collection and periodic analysis of the perceptions and experiences of care of children and their caregivers, and the feedback should be used in planning and improving the quality of care at the facility.



QUALITY MEASURES

Input

1. The health facility has a functioning, age-appropriate system and procedures in place for collecting information and responding to the perceptions of children and their carers of the services provided. (87.97)
2. The health facility has visual materials to inform children and their carers on how to make a complaint (e.g. a suggestion box) and provide feedback to the health facility. (89.40)
3. Health facility staff (clinical and nonclinical) receive training or orientation in customer service and provision of child- and family-centred care at least once every 12 months. (86.29)

Process/output

4. Proportion of carers of children who are aware of the mechanism for patient complaints and feedback (e.g. suggestion box) in the health facility. (81.05)
5. Proportion of children and/or their carers who participated in patient satisfaction surveys or provided feedback on the services received in the past 3 months. (82.28)

Outcome

6. Proportion of children and/or their carers who are satisfied with the time they spent waiting for care, the procedures and other processes in the health facility. (84.23)
7. Proportion of all complaints from children and/or their carers received by the health facility in the past 6 months that were reviewed and acted upon. (85.38)

Bibliography used in setting standard 2

Brien SE, Lorenzetti D, Lewis S, Kennedy J, Ghali WA (2010) Overview of formal scoping review on health system report cards. *Implementation Sci.* 5. doi: 10.1186/1748-5908-5-2.

Directorate-General for Justice and Consumers (European Commission) (2015) Evaluation of legislation, policy and practice on child participation in the European Union. Brussels (<https://publications.europa.eu/en/publication-detail/-/publication/3f3c50b2-6a24-465e-b8d1-74dcac7f8c42/language-en>, accessed 12 December 2017).

Gathara D, Nyamai R, Were F, Mogoia W, Karumbi J, Kihuba E et al. (2015) Moving towards routine evaluation of quality of inpatient pediatric care in Kenya. *PLoS One.* 10:e0117048.

Guerreiro AIF, Fløtten K (2016) Article 12: the translation into practice of children's right to participation in health care. In: Liefgaard T, Sloth-Nielsen J, editors, *The United Nations Convention on the Rights of the Child: taking stock after 25 years and looking ahead*. Leiden: Leiden University.

Guerreiro AIF, Kuttumuratova A, Monolbaev K, Boderscova L, Pirova Z, Weber MW (2016) Assessing and improving children's rights in hospitals: case-studies from Kyrgyzstan, Tajikistan and Moldova. *Health Human Rights J.* 18:235-48.

Kilkelly U, Savage E (2013) *Child-friendly healthcare: a report commissioned by the Ombudsman for children*. Cork: University College Cork and Ombudsman for Children (<https://www.oco.ie/wp-content/uploads/2014/03/ChildFriendlyHealthcareOCO.pdf>, accessed 12 December 2017).

Lippeveld T, Sauerborn R, Bodart C, editors (2000) *Design and implementation of health information systems*. Geneva: World Health Organization (<apps.who.int/iris/bitstream/10665/42289/1/9241561998.pdf>, accessed 12 December 2017).

Liu L, Oza S, Hogan D, Perin J, Rudan I, Lawn JE et al. Global, regional, and national causes of child mortality in 2000-13, with projections to inform post-2015 priorities: an updated systematic analysis. *Lancet.* 2015;385:430-40.

Moses S, Urgoiti G (2008) *Child rights education for professionals (CRED-PRO), pilot of the children's participatory workshops*. Cape Town: Children's Institute.

United Nations (2015) Sustainable Development Goal 3.2. In: *Transforming our world; the 2030 agenda for sustainable development*. New York City (NY) (http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&lang=E, accessed 12 December 2017).

United Nations Committee on the Rights of the Child (2009) General comment No. 12: The right of the child to be heard, 20 July 2009 (CRC/C/GC/12). New York City (NY) (<http://www.refworld.org/docid/4ae562c52.html>, accessed 12 December 2017).

World Health Organization (2003) *Health facility survey. Tool to evaluate the quality of care delivered to sick children attending outpatient facilities*. Geneva (http://www.who.int/maternal_child_adolescent/documents/9241545860/en/, accessed 12 December 2017).

World Health Organization (2005) *Components of a strong health information system. A guide to the HMN Framework*. Geneva (<https://www.hrresourcecenter.org/node/5927>, accessed 12 December 2017).

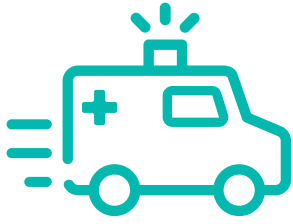
World Health Organization (2008) *Health information systems. Toolkit on monitoring health systems strengthening*. Geneva (http://www.who.int/healthinfo/statistics/toolkit_hss/EN_PDF_Toolkit_HSS_InformationSystems.pdf, accessed 12 December 2017).

World Health Organization (2015) Global Health Observatory data repository. Number of deaths (thousands) by country. Geneva (<http://apps.who.int/gho/data/node.main.ChildMort-1?lang=en>, accessed 12 December 2017).

World Health Organization (2015) Service availability and readiness assessment (SARA). An annual monitoring system for service delivery. Reference manual, version 2.2. Geneva; 2015 (http://www.who.int/healthinfo/systems/sara_indicators_questionnaire/en/, accessed 12 December 2017).

World Health Organization Regional Office for Europe (2016) Toolkit on social participation. Methods and techniques for ensuring the social participation of Roma populations and other social groups in the design, implementation, monitoring and evaluation of policies and programmes to improve their health. Copenhagen (http://www.euro.who.int/__data/assets/pdf_file/0003/307452/Toolkit-social-participation.pdf, accessed 12 December 2017).

World Health Organization, UNICEF (2015) WHO countdown to 2015: a decade of tracking progress for maternal, newborn and child survival. The 2015 report. Geneva (<http://www.countdown2015mnch.org/reports-and-articles/2015-final-report>, accessed 12 December 2017).



STANDARD 3

FUNCTIONING REFERRAL SYSTEMS

Standard 3: Every child with condition(s) that cannot be treated effectively with the available resources receives appropriate, timely referral, with seamless continuity of care.

Overview

The aim of this standard is to ensure appropriate, timely referral of all children who require further care that cannot be provided at the referring health facility. The standard also ensures a referral network of facilities within a geographical area, with predefined types of services available at each facility, and referral protocols and guidelines that reflect the resources and capacity of each health facility in the network, including mechanisms for communication among facilities (e.g. telephone, radio) and transport services that operate 24 h a day, 7 days a week. Health care professionals trained in paediatric life support are available to escort critically ill children within or between health facilities. Complete referral and counter-referral notes are available, and feedback on the condition of the child is sought periodically to improve care in both the referring and referral health facility.

Quality statements

- 3.1 Every child who requires referral receives appropriate prereferral care, and the decision to refer is made without delay.
- 3.2 Every child who requires referral receives seamless, coordinated care and referral according to a plan that ensures timeliness.
- 3.3 For every child referred or counter-referred within or among health facilities, there is appropriate information exchange and feedback to relevant health care staff.

Quality statement 3.1: Every child who requires referral receives appropriate prereferral care, and the decision to refer is made without delay.

Rationale: Although most cases of childhood illness are managed at primary health facilities, severely ill children and those who require further or specialized care may have to be referred to another facility. Health care providers should be able to identify children with life-threatening conditions who should be urgently referred. The health facility should have up-to-date, readily accessible referral protocols and guidelines that reflect the health facility's capacity and resources. They should have the competence to determine which cases should be referred urgently to ensure appropriate, timely referral with no unnecessary delay.

The decision to refer should be made as soon as a condition that requires referral is identified. The child is first stabilized, the appropriate prereferral treatment is given, and the child is then urgently transferred to the receiving facility. Once the decision to refer is made, patients and their parents or caregivers should be informed and their concerns addressed, the receiving facility should be informed and appropriate transport organized.



QUALITY MEASURES

Input

1. The health facility has written, up-to-date clinical protocols and guidelines for prereferral management of all infants, children who require referral. (94.13)
2. The health facility is equipped with age-appropriate medicines and other supplies for stabilization and prereferral treatment of critically ill children who require referral. (94.09)
3. The health facility has at least one health professional on duty at all times who is trained and competent in first aid, emergency triage, assessment and treatment or basic paediatric life support. (92.90)
4. The professional staff communicate clearly with family members about the condition of their child and about why and where the child will be referred for further care. (82.19)

Process/output

5. Proportion of all children who require referral who are given prereferral treatment and transferred within 2 h of arrival at the referring health facility. (88.13)
6. Proportion of all children with surgical emergencies that require referral to a facility with surgical capacity who were transferred within 2 h of arrival at the referring health facility. (86.12)

7. Proportion of all children who require referral who received appropriate prereferral treatment when indicated. (89.40)

Outcome

8. Proportion of children seen in the health facility within the past 3 months who fulfilled the facility's criteria for referral and who were actually transferred to a referral facility. (83.43)
9. Proportion of all children with an indication that requires referral who died at the health facility. (88.30)
10. Number of children who died as a result of delayed referral. (83.81)

Quality statement 3.2: Every child who requires referral receives seamless, coordinated care and referral according to a plan that ensures timeliness.

Rationale: A pre-established plan for referral expedites the process, prevents unnecessary delay and results in timely care and better outcomes. Health facilities should standardize their plans and coordinate with other facilities in the network to determine which facilities receive which patients. Staff should be aware of alternatives if the usual receiving facility cannot accept a patient. Communication with the referral facility before transfer is essential, so that the appropriate arrangements can be made to receive the child. The health facility should have up-to-date, readily accessible referral protocols and guidelines that reflect the health facility's capacity and resources.

A list of facilities in the network and their telephone numbers should be available, and the referral system should be supervised and accountable, with a policy to protect children and their families from financial barriers to referral. Adequately equipped transport services should be available and operate 24 h a day, 7 days a week. Vehicle emergency equipment and supplies should be appropriate for all child age groups and sizes.



QUALITY MEASURES

Input

1. The health facility is part of a referral network of facilities in the same geographical area with agreed arrangements. (92.92)
2. The health facility has local financial arrangements to ensure that children who cannot be managed at the health facility are referred and transferred with their parent or caregiver without delay, 24 h a day, 7 days a week. (86.82)
3. The health facility has a functioning vehicle with fuel or proximate access to a vehicle that is routinely available for emergency transport to referral facilities. (92.78)

4. The health facility vehicle is regularly maintained, clean and carries basic consumables, medications and equipment suitable for resuscitation and supportive care of children of all ages. (88.68)

Process/output

5. Proportion of children who were referred without appropriate emergency transport. (81.24)
6. Proportion of children referred from the health facility whose families or carers contributed financially to their referral transport. (74.52)
7. Proportion of all severely ill children who required referral who were transferred to a receiving facility accompanied by a health care professional. (74.12)
8. Proportion of children referred to a referral health facility or their carers who reported receiving immediate attention (within 15 min) on arrival at the referral health facility. (80.07)

Outcome

9. Proportion of children who died before or during transfer to a higher-level facility for further management. (89.68)
10. Proportion of newborns referred from the facility who reached the referral facility. (87.06)
11. Proportion of all children referred from the health facility who completed their referral. (86.23)
12. Proportion of all children referred from the health facility whose families refused referral (80.77)

Quality statement 3.3: For every child referred or counter-referred within or among health facilities, there is appropriate information exchange and feedback to relevant health care staff.

Rationale: Efficient communication channels among facilities in the referral network are vital for appropriate information exchange and feedback. Good communication improves patient care, increases the motivation of health care providers, facilitates learning from experience and improves patient outcomes. Network facilities should standardize and agree on sharing of information on patients and on quality assurance mechanisms, including education of referring facility staff by proactive mentoring and support.

A functioning communication system (e.g. radio, telephone, pagers) should be in place within the referral network. Information exchange and feedback protocols and standardized referral and counter-referral forms should be available and accessible at all times. On counter-referral, the receiving facility should send information about the services and care provided and any follow-up required.



QUALITY MEASURES

Input

1. The health facility has a standardized referral form to document relevant demographic and clinical information (summary of history, clinical findings, investigations, diagnosis and treatment given) and the reason for referral. (94.99)
2. The health facility has reliable methods of communication (mobile phone, landline or radio) that are functioning at all times for facilitating referrals. (93.13)
3. The health facility has formal agreements, communication arrangements and a feedback system with the network referral facilities. (88.25)

Process/output

4. Proportion of all children referred by a health facility for whom written counter-referral feedback information was provided by the receiving facility. (84.60)
5. Proportion of all children referred for whom there were documented prereferral communications (verbal, written) with the receiving facility. (85.63)

Outcome

6. Proportion of all children referred who had an appropriate referral note. (89.04)

Bibliography used in setting standard 3

Lawn J, McCarthy BJ, Ross R (2002) The healthy newborn: a reference manual for program managers. Atlanta (GA): Centers for Disease Control and Prevention, CARE International (<https://stacks.cdc.gov/view/cdc/6506>, accessed 12 December 2017)..

Maine D, Ward V, Eitahir AH (1993) Meeting the community halfway: programming guidelines for the reduction of maternal mortality. New York City (NY): UNICEF.

World Health Organization (2003) Health facility survey. Tool to evaluate the quality of care delivered to sick children attending outpatient facilities. Geneva (http://www.who.int/maternal_child_adolescent/documents/9241545860/en/, accessed 12 December 2017).

World Health Organization (2014) Pocket book of hospital care for children: guidelines for the management of common childhood illnesses. Second edition. Geneva (http://www.who.int/maternal_child_adolescent/documents/child_hospital_care/en/, accessed 11 December 2017).

World Health Organization (2015) Service availability and readiness assessment (SARA). An annual monitoring system for service delivery. Reference manual, version 2.2. Geneva; 2015 (http://www.who.int/healthinfo/systems/sara_indicators_questionnaire/en/, accessed 12 December 2017).

World Health Organization (2016) Paediatric emergency triage, assessment and treatment: care of critically-ill children. Geneva (http://www.who.int/maternal_child_adolescent/documents/paediatric-emergency-triage-update/en/, accessed 12 December 2017).

World Health Organization Regional Office for the Western Pacific (1998) District health facilities: guidelines for development and operations. Manila (http://iris.wpro.who.int/bitstream/handle/10665.1/5467/9290611219_eng.pdf, accessed 12 December 2017).

World Health Organization, UNICEF (2005) Handbook: Integrated management of childhood illness. Geneva (<http://apps.who.int/iris/handle/10665/42939>, accessed 12 December 2017).



STANDARD 4

EFFECTIVE COMMUNICATION AND MEANINGFUL PARTICIPATION

Standard 4. Communication with children and their families is effective, with meaningful participation, and responds to their needs and preferences.

Overview

Children should receive care that is integrated and coordinated with their particular needs and the needs of their families. Care that is child- and family-centred, that recognizes the developmental and behavioural characteristics of children and the integral role of the child's carers and that encourages mutually beneficial collaboration among patients, families and health care providers. As parents and carers often help to determine the presence and severity of symptoms, communication must be suitable not only for children but also for accompanying family members and carers. Children may be remarkably perceptive and can become involved in discussions of their treatment. Therefore, effective communication and meaningful participation are every child's right and are essential components of the experience of care received. Effective communication with children and their families results in the best patient outcomes. Children and their parents and carers should be given understandable information during care and follow-up about the disease or condition, potential long-term effects and how to access further support.

Communication and participation should be tailored to the evolving capacity of children. They contribute not only to children's effective involvement in decision-making but also to their development, learning and progressive autonomy. Effective communication between health care providers and children and their carers will reduce unnecessary anxiety and stress and make the hospital stay a positive experience. Children and their families should participate in care both in the health facility and at home (e.g. giving medications, feeding, accident prevention, clinical monitoring to alert health staff of a change in condition or danger signs, keeping children warm) and should be aware of when to return to the facility for urgent or follow-up care.

Quality statements

- 4.1 All children and their carers are given information about the child's illness and care effectively, so that they understand and cope with the condition and the necessary treatment.
- 4.2 All children and their carers experience coordinated care, with clear, accurate information exchange among relevant health and social care professionals and other staff.
- 4.3 All children and their carers are enabled to participate actively in the child's care, in decision-making, in exercising the right to informed consent and in making choices, in accordance with their evolving capacity.
- 4.4 All children and their carers receive appropriate counselling and health education, according to their capacity, about the current illness and promotion of the child's health and well-being.

Quality statement 4.1: All children and their carers are given information about the child's illness and care effectively, so that they understand and cope with the condition and the necessary treatment.

Rationale: Communication between children and/or their families and health care providers is a critical component of safe care and the foundation of child- and family-centred care. Engaging children and their families in the right way promotes trust and cooperation with health care providers, reduces anxiety and enables children and carers to understand the illness and the treatment and procedures offered. The health facility should have an established set of protocols whereby children and their families are invited and supported to become members of the care team. Children and their families should be given information to help them understand how to participate in their care and the roles of different staff members in the care team.

Staff should introduce themselves, giving their name and their role, and use the child's or carer's name when addressing them. Staff should have the appropriate competence and communication skills, use effective methods for sharing information (i.e. explaining in ways that children and/or carers can understand and avoiding medical jargon) and listen actively to children and parents or carers, so as to be able to allay doubts and fears. Staff should be vigilant in identifying families with limited health literacy, to ensure that information on care, instructions on discharge and patient education materials are suitable.



QUALITY MEASURES

Input

1. The health facility has an up-to-date, written policy and provisions to ensure that all staff are identifiable, with name badges, and that they always introduce themselves to children and their carers, state their name and role and use the name of the child or carer when communicating with them. (90.31)

2. Health facility policy provides that children and their families are entitled to receive appropriate information about the child's care and other relevant aspects during their stay in the facility. (92.67)
3. The health facility provides information materials to children and their families to help them understand the opportunities for engagement, how to participate in their care and the roles of the different members of the health care team. (87.00)
4. The health facility makes available child-friendly, age-appropriate health information materials that are accessible, in the language(s) relevant to the population and in appropriate formats (e.g audiovisuall or visual material, diagrams, illustrations) to facilitate understanding by children and carers. (88.65)
5. The health facility has a system for providing information to patients about their medical conditions and their treatment care plan in a way that is understandable to them and allays their doubts and fears. (85.28)
6. Health care staff receive training and regular mentoring or refresher training at least every 12 months in fully explaining a condition to children and their carers, giving "bad news" and supporting children and parents in coping with the information given. (91.75)

Process/output

7. Proportion of health care staff in the health facility wearing identification badges. (84.94)
8. Proportion of health care staff, by cadre and social professionals who received proper continuous training in communication and counselling. (86.84)
9. Proportion of health care staff in the health facility who demonstrate good communication skills: asking and listening to children and carers, enabling them to ask questions, explaining with examples to ensure understanding and verifying their understanding. (85.16)
10. Proportion of children and their carers who consider that they were given the information they required in a timely, respectful manner. (85.55)

Outcome

11. Proportion of children and/or carers seen in the outpatient department of the health facility who can correctly state the reason that a particular treatment was given, when to return and how to take the treatment at home. (92.04)
12. Proportion of children discharged from the health facility or their carers who were given written instructions about treatment and care at home and can describe correctly how to take or give the discharge treatment at home. (94.02)
13. Proportion of children and/or their carers who reported that they were satisfied with the quality of the health information and support they received from health care staff during their care. (87.79)

Quality statement 4.2: All children and their carers experience coordinated care, with clear, accurate information exchange among relevant health and social care professionals and other staff.

Rationale: Coordinated care and accurate transmission of information among health care providers are essential to maintain continuous patient care and to avoid unnecessary delays in treatment. Usually, various health care providers are involved in assessment, investigations and treatment, and such changes of staff may compromise the safety of patients. Essential information may not be transmitted or may be miscommunicated. Sufficient time must be allowed for staff to ask and respond to questions without interruption, when possible (repeat-back and read-back steps should be included in the hand-over process). Any gap in communication may result in a serious breakdown in the continuity of care and could lead to inappropriate treatment and unintended harm to the patient.

The health facility should have a system for ensuring proper patient hand-over, with verbal and written information for referrals among units and at discharge. A standard format should be used for information exchange among care providers (e.g. during staff shift changes and referrals, with social care services, for sending laboratory results). Information on the patient's medications, treatment plan, advance directives and any significant change in status should be limited to that which is necessary to ensure safe care. Staff should be oriented periodically on effective hand-over communication, with a standardized approach to communication among staff, patient care units and health facilities.



QUALITY MEASURES

Input

1. The health facility has a written, up-to-date, structured, standard form to facilitate written hand-over of patients among caring teams at shift changes or during transfer among facilities. (94.89)
2. The health facility has a functioning communication system for exchanging information among relevant service providers that reaches all critical staff 24 h a day, 7 days a week. (93.20)
3. Staff who care for children receive orientation or refresher sessions in clinical hand-over policy and communication at least once every 12 months. (93.73)

Process/output

4. Proportion of clinical records that demonstrate that all correspondence about investigations and clinical interventions received were reviewed by health care staff, signed and acted upon in a timely manner. (89.00)
5. Proportion of children admitted to the health facility for whom there is an up-to-date, appropriately completed monitoring chart that indicates that vital signs were monitored regularly. (97.97)

6. Proportion of all children admitted to the health facility or their carers who know their primary health care provider by name. (80.33)

Outcome

7. Proportion of children or their carers who express satisfaction with the information shared and the continuity of care received from different health care providers. (92.19)
8. Proportion of health care staff, by cadre, who are satisfied that the information in daily patient notes ensures understanding of current diagnoses, the treatment plan and planned or pending investigations. (86.84)
9. Proportion of paediatric transfers within the facility for which there is a complete transfer form with clinical notes, including timely reception of diagnostic test results for transferred patients. (91.40)

Quality statement 4.3: All children and their carers are enabled to participate actively in the child's care, in decision-making, in exercising the right to informed consent and in making choices, in accordance with their evolving capacity.

Rationale: All children have the right to participate in making decisions that affect their health in a manner consistent with their age and evolving capacity. It is important to understand children's developmental stage, their psychological needs and the wider needs of family members. Children's participation in decision-making should be voluntary, progressive and considered a learning experience, even for younger children. As children and their carers become more involved, their knowledge improves, their anxiety lessens, and they are more satisfied. The health facility should have clear guidelines on what constitutes informed consent and how it is to be documented in patients' medical records.

Children and their carers should be given enough information to make informed decisions, including the purpose, importance, benefits, risks and possible costs associated with proposed investigations, referrals or treatments. The understanding of children and their caregivers should be verified. Staff should be non-judgemental, so that patients are not embarrassed to ask questions about their treatment. Signed consent forms should be available for procedures and treatments, as required by national law. Staff should use demonstrations (audiovisual and culturally sensitive resources, as appropriate) to provide explanations and clear instructions on use of medicines, possible side-effects, when to seek advice and potential problems.



QUALITY MEASURES

Input

1. The health facility has up-to-date protocols, guidelines and job aides for providing information to children and their carers about the purpose, importance, benefits, risks and possible costs of proposed investigations, referrals or treatments. (88.32)
2. The health facility has an up-to-date "clients' charter" that states the policies for child- and family-centred care, guidance on confidentiality and the practice and culture of family presence during clinical examinations, procedures and treatment of children. (91.37)
3. The health facility has appropriate forms for patients, parents or carers to sign in order to give their consent to procedures, investigations and treatment. When consent is given orally, this is registered on the patient's chart. (92.16)
4. The health facility has various visual resources (e.g. models, charts, posters, videos, electronic material) in the consulting room for use by clinical staff and other health professionals to provide explanations to children and their carers. (88.22)
5. Staff who care for children receive orientation or training in patient-centred care and legal and medical ethical principles of autonomy, informed consent, confidentiality and privacy at least once every 12 months. (88.70)

Output/Process

6. Proportion of children or their carers who were informed about their right to express their views and participate in making decisions about their care. (87.20)
7. Proportion of parents or carers in the health facility who were offered the option and were present with their child during medical procedures. (88.63)

Outcome

8. Proportion of children and/or their carers who considered that their views had been taken into consideration or sought in making decisions about their care. (83.21)
9. Proportion of children of legal age in the health facility who gave documented informed consent for procedures or treatment provided. (88.30)
10. Proportion of parents or caregivers who gave their informed, documented consent for procedures and treatment of their children. (91.15)

Quality statement 4.4: All children and their carers receive appropriate counselling and health education, according to their capacity, about the current illness and promotion of the child's health and well-being.

Rationale: The health and health-related behaviour of parents and other family members affects their child's health. Parents and carers play a crucial role in children's development, health and well-being, and attendance at a health facility presents an opportunity for health education and counselling. In the holistic approach to care, each child's circumstances are considered when providing health promotion, preventive care, early detection and interventions.

The health facility should provide facilities and up-to-date resources for counselling and health promotion. Children and their families should be informed about health promotion and prevention activities for national priorities in child health, such as hygiene, sanitation, immunization, malaria, nutrition, feeding, HIV/AIDS and violence against children. Health education should be adapted to the needs, characteristics and acceptance of the population. Messages and activities should be harmonized and delivered by all staff, and reinforced with relevant resource materials in well-child or chronic conditions clinics, outpatient departments and wards.



QUALITY MEASURES

Input

1. The health facility has information materials for distribution to children and carers about common conditions, promoting and supporting appropriate feeding and nutrition and promoting disease prevention, including hygiene and sanitation practices. (90.54)
2. The health facility provides a booklet for the health record of each child at birth or at the first visit to the health facility, which is kept by a parent or carer and used by health providers to document relevant information. (95.29)
3. The health facility holds regular "well-being clinics" (e.g. well-child and immunization clinics, counselling services, growth and development monitoring clinics, adolescent clinics), which are used as opportunities for health promotion and preventive care. (94.18)
4. The health facility has a system for detecting whether a child has missed a vaccination and offers "catch-up" vaccination within the national immunization programme, according to WHO guidelines. (91.26)
5. The health facility has an effective system for implementing community-based activities to promote children's health and well-being. (85.86)

Output/Process

6. Proportion of children or their parents or carers who attended at least one health education or promotion session at the health facility. (82.46)
7. Proportion of children under 2 years of age whose parents or carers were counselled and received information about breastfeeding, complementary foods and feeding practices during the current illness. (91.48)
8. Proportion of children with chronic diseases for whom regular follow-up is routinely scheduled and documented in the health facility records. (90.29)
9. Proportion of adolescents seen individually by a health professional without the presence of a parent. (80.13)

Outcome

10. Proportion of all children whose vaccination card or history indicates that their vaccination is not complete who leave the health facility with all the necessary vaccinations. (92.64)
11. Proportion of children under 5 years whose carers are advised to give them extra fluid and to continue feeding. (80.15)
12. Proportion of children or carers who received targeted health information or counselling for the condition of their child, including malnutrition, obesity, mental health or substance abuse. (85.68)
13. Proportion of all children with diarrhoea whose carers know how to prepare and administer ORS, give extra fluids, continue feeding and recognize danger signs.

Bibliography used in setting standard 4

Alderson P (2007) Competent children? Minors' consent to health care treatment and research. *Soc Sci Med.* 65:2272–83.95:314.

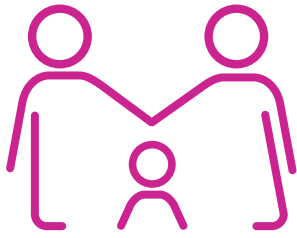
Coulter A, Parsons S, Askham J (2008) Where are the patients in decision-making about their own care? Health systems and policy analysis. Policy brief. Copenhagen: WHO Regional Office for Europe and European Observatory on Health Systems and Policies.

Council of Europe (1997) Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine: Convention on Human Rights and Biomedicine (European Treaty Series – No. 164). Oviedo (<https://rm.coe.int/168007cf98>, accessed 13 December 2017).

Coyne I, Harder M (2011) Children's participation in decision-making: balancing protection with shared decision-making using a situational perspective. *J Child Health Care.* 15:312–9.

Guerreiro AIF, Fløtten K (2016) Article 12: the translation into practice of children's right to participation in health care. In: Liefgaard T, Sloth-Nielsen J, editors, *The United Nations Convention on the Rights of the Child: taking stock after 25 years and looking ahead*. Leiden: Leiden University.

United Nations Committee on the Rights of the Child (2009) General comment No. 12: The right of the child to be heard, 20 July 2009 (CRC/C/GC/12). New York City (NY) (<http://www.refworld.org/docid/4ae562c52.html>, accessed 13 December 2017).



STANDARD 5

RESPECT, PROTECTION AND FULFILMENT OF CHILDREN'S RIGHTS

Standard 5. Every child's rights are respected, protected and fulfilled at all times during care, without discrimination.

Overview

The aim of standard 5 is to ensure compliance with and understanding of the rights, principles and elements that are essential to realization of the rights of children to health care. The standard complements and reinforces the rights of children embedded in all the other standards, to ensure that health care providers treat children with respect and sensitivity and ensure their dignity, give them the care they need without discrimination, respect their privacy and confidentiality, provide age- and culturally appropriate food and nutrition and protect them from any form of violence while in care, including physical, sexual and verbal abuse, neglect, detainment or extortion.

"Child protection" consists of safeguarding children from maltreatment, including physical abuse, neglect, factitious or induced illness, sexual abuse, emotional effects of poor parenting, domestic violence and the effects of parental drug misuse or poor mental health. The identification and management of vulnerable children requires special skills and liaison. All staff who care for children should be vigilant in detecting harmful carer-child interactions.

Statements of the rights of the child and of the patient should be displayed in a format that is easily understood by children and their carers. Children's right to health should be clearly spelt out in the patients' charter for provision of health care, including immunization and equal access to health care, nutritious food, sanitation and clean water. Health professionals should be trained in providing information and counselling on health-related issues.

Quality statements

- 5.1 All children have the right to access health care and services, with no discrimination of any kind.
- 5.2 All children and their carers are made aware of and given information about children’s rights to health and health care.
- 5.3 All children and their carers are treated with respect and dignity, and their right to privacy and confidentiality is respected.
- 5.4 All children are protected from any violation of their human rights, physical or mental violence, injury, abuse, neglect or any other form of maltreatment.
- 5.5 All children have access to safe, adequate nutrition that is appropriate for both their age and their health condition during their care in a facility.

Quality statement 5.1: All children have the right to access health care services, with no discrimination of any kind.

Rationale: All children should have access to health care, with no discrimination with regard to sex, race, colour, language, religion, political or other opinion, national or social origin, association with a national minority, property, birth or other status. Any gaps or inconsistencies in legislation, health facility policies and protocols may significantly affect children’s health status and outcomes. Nondiscrimination should be a guiding principle and is enshrined in the charter of children’s rights.

The health facility should provide all services (emergency, outpatient and inpatient care) without discrimination to ensure that all children receive care, regardless of their or their carers’ race, colour, sex, language, religion, political or other opinion, national, ethnic or social origin, disability, birth or any other status. Vulnerable children (including those with disabilities) should be able to access health facility services that are of good quality and acceptable to all. Common barriers to care (e.g. poverty and financial, sociocultural, ethnic and linguistic barriers and physical disability) should be addressed. An exemption scheme should be in place for children whose families cannot afford services, and services should be child- and adolescent-friendly. All staff should have positive attitude towards all children, without discrimination.



QUALITY MEASURES

Input

1. The health facility has adopted and implements a policy that guarantees free or affordable health care for all children, in accordance with and as defined by national legal or regulatory frameworks. (94.87)

2. The health facility has adopted and implements a policy that guarantees nondiscrimination of any kind against children or their carers in the provision of care, including poor, vulnerable and disabled children. (90.44)
3. The health facility has measures and facilities in place to ensure that children with disabilities or developmental delay have full physical access to all the facilities and services they require, including sanitation and recreation facilities. (93.40)
4. The health facility staff receive training and periodic refresher courses on nondiscrimination practices, promoting equity and cultural competence. (87.38)

Process/output

5. Proportion of children and their parents or carers who were exempted from out-of-pocket payment for treatment, medicines, interventions and other health care-related costs. (91.41)
6. Proportion of children with a disability or their carers who report no physical barriers to accessing services and facilities in the health facility. (90.88)

Outcome

7. Proportion of children and their carers who report any form of discrimination or refusal of care because of their economic, social, religious, linguistic or other status. (88.85)
8. Proportion of children in a minority, migrant or other vulnerable group who were satisfied with the services provided. (83.63)
9. Proportion of children who receive care in the health facility whose financial access is mitigated or covered by health insurance. (88.86)

Quality statement 5.2: All children and their carers are made aware of and given information about children's rights to health and health care.

Rationale: Children's right to health must be known and understood by managers, health care providers, children and their parents or carers. Children and families who are aware of their rights are more likely to understand and identify both good practices and faults in the care provided and to provide feedback accordingly. The care provided should be in the best interests of the child, balancing the wishes of the child and the legal responsibility of the carer. One means to ensure that the facility is complying with children's rights is the adoption and implementation of a charter of children's right to health.

The health facility should respect the rights of children and their special needs at all times. Children and their caregivers should be consulted and kept informed about their care. Children should be cared for by appropriately trained staff, who are fully aware of the children's physical and emotional needs and evolving capacities. Children should be cared for in separate areas, with other children of the same age. They should be fully informed about ward routines, protected from unnecessary medical interventions and encouraged and supported to participate in their care.



QUALITY MEASURES

Input

1. The health facility has an up-to-date charter of children's rights, in line with the United Nations Convention on the Rights of the Child. (93.49)
2. The health facility visibly displays and makes available information about the charter in leaflets and posters, including child-friendly formats, in all areas in which children are cared for (wards, waiting rooms and play areas). (89.91)
3. The health facility promotes awareness-raising events about children's rights, such as celebrating a children's day. (82.80)
4. The charter on children's rights is integrated into the system for improving the quality of care in the health facility. (83.42)
5. The health facility has a team or focal person responsible for overseeing observance of the charter on children's rights in the health facility. (85.47)

Process/output

6. Proportion of staff in the health facility who care for children who understand the charter on children's rights and how to apply it in practice. (84.83)
7. Proportion of children or their carers who are told about the charter on children's rights as it pertains to the right to care in an appropriate local language at admission. (82.01)

Outcome

8. Proportion of children and their parents or caregivers who consider that they were adequately informed about their rights to care. (85.23)
9. Proportion of children in the health facility who were admitted appropriately on the basis of clinical findings, diagnosis or the severity of the condition. (85.49)

Quality statement 5.3: All children and their carers are treated with respect and dignity, and their right to privacy and confidentiality is respected.

Rationale: Health providers must treat children and their carers with respect, kindness, dignity, compassion, understanding, courtesy and honesty. Respect for privacy and confidentiality is essential for maintaining trust. Like adults, all children and young adolescents have the right to privacy and to decide how their personal information is shared. Usually, a parent is present at consultations, where they may bring up their own rights to consent and confidentiality and their anxieties, expectations and ambitions for their child. The right to privacy includes the physical environment in which children are examined, informed and treated. As children age, their wishes and expectations may sometimes conflict with those of their parents, but they should be respected.

The cultural beliefs and practices of children and parents should be respected and taken into consideration in providing care. The health facility should have a framework for effective, respectful communication with culturally and linguistically diverse families. The facility should provide some privacy for older children and young adolescents, away from smaller children. While children and their carers must have access to their personal records, the facility should control access to the stored information and how it is used and disclosed to third parties.



QUALITY MEASURES

Input

1. The health facility has written, up-to-date policies, guidelines and mechanisms to ensure written and verbal confidentiality. (93.00)
2. The health facility has a policy on children's right to confidential advice and counselling services without the presence of a parent or carer. (89.91)
3. The health facility has facilities in which children can be examined with both visual and auditory privacy when required. (93.94)
4. Health facility staff are trained in providing care with respect for dignity and for maintaining confidentiality during the care of children and have received refresher training at least once in the past 12 months. (87.36)

Process/output

5. Proportion of health facility health care providers who have attended training or received orientation in respecting and protecting the dignity of children and their carers. (90.73)

Outcome

6. Proportion of older children cared for in the health facility who were satisfied with the privacy they enjoyed during care. (89.12)
7. Proportion of children and their carers in the health facility who perceived that they were treated with compassion and respect and their dignity was preserved. (90.20)

Quality statement 5.4: All children are protected from any violation of their human rights, physical or mental violence, injury, abuse, neglect or any other form of maltreatment.

Rationale: “Child protection” is safeguarding children from maltreatment and any action that either limits or avoids their exposure to risks or potential harm. Child’s rights are violated in families, communities and health facilities in many forms, often in places of trust. The health facility may be the first opportunity for professionals to identify children who require protection. Health facility staff should be vigilant in detecting harmful caregiver–child interactions, such as hostility, excessive anxiety, arguments with family or staff and threats to remove the child from the facility before the medical evaluation has been completed and excessive disciplining of the child.

Children should be helped by well-trained, sensitive staff. When there is no medical indication for admission, children should not be discharged into an environment in which they would continue to be in contact with a person suspected of maltreating them, unless a full risk assessment (ideally involving the police and social services) has been undertaken. When such services are not available, the facility staff should work closely with the child’s caregivers or extended family to ensure the optimal arrangement for care. A referral and notification system should be established for efficient exchange of information with multidisciplinary teams and relevant agencies, such as the police, medical social workers, school health nurses and child protection officers, 24 h a day.



QUALITY MEASURES

Input

1. The health facility has clear mechanisms, procedures and up-to-date national protocols that comply and are consistent with the Convention on the Rights of the Child and legal requirements for protecting children subject to suspected maltreatment. (94.88)
2. The health facility has protocols, job aides or checklists that provide guidance for staff on detecting, documenting (taking forensic samples, photographs when allowed and forensic examination) and caring for child victims of maltreatment. (95.12)

3. The health facility has a system for registering and/or monitoring children who have been or are victims of any kind of suspected maltreatment. (92.32)
4. The health facility has clear mechanisms and protocols for sharing appropriate information and concerns with relevant agencies. (92.78)
5. The health facility has an effective multidisciplinary team and/or responsible person to investigate, care for and provide the necessary appropriate support to children with suspected maltreatment. (90.67)
6. The health facility staff receive training and orientation in identifying, assessing, communicating with and providing care and support for child victims of any form of maltreatment and on child protection procedures. (92.12)

Process/output

7. Number of cases of suspected child maltreatment identified in the health facility in the past 12 months. (90.68)
8. Proportion of staff who care for children at the health facility who are trained in child protection, care and support. (92.29)

Outcome

9. Proportion of children identified as victims of maltreatment who received protection, psychological support and appropriate referral. (90.56)

Quality statement 5.5: All children have access to safe, adequate nutrition that is appropriate for both their age and their health condition during their care in a facility.

Rationale: Adequate, balanced nutrition is important for the wellness, health, development of children and their recovery from illness. Infants, children and young adolescents must eat sufficient food to meet their nutritional and growth requirements. Infants and young children are particularly vulnerable to undernutrition because of their rapid physical and cognitive development; they have smaller energy stores and use energy at a higher rate and are therefore unable to go without food for as long as adults. The health facility should ensure that children who are admitted have access to safe, appropriate, adequate food and fluids, and breastfeeding mothers should be supported in continuing breastfeeding while on wards.

Menus should allow children and carers to select culturally acceptable food that satisfies their nutritional requirements, is appropriate for their stage of development and enhances their experience in hospital. Menus should be nutritious and balance healthy options with familiar or favourite foods. Menus should cater for diverse requirements, including those of patients with good and poor appetites, high nutritional needs (failure to thrive, cachexia, trauma, surgery or burns), therapeutic diets (severe acute malnutrition and certain diseases) or cultural and religious restrictions. The facility meal service must provide adequate quantities of appropriate foods and fluids according to dietary requirements. Parents or carers should have access to facilities in which they can prepare special foods or drinks for their children, when appropriate and feasible.



QUALITY MEASURES

Input

1. The health facility has a food and nutrition policy and guidelines to meet children's nutritional needs, including special needs, consistent with dietary requirements. (94.64)
2. The health facility has an up-to-date, written policy on breastfeeding that adheres to the International Code of Marketing of Breast-milk Substitutes and is routinely communicated to all health care staff. (93.66)
3. The health facility has an adequately equipped, designated kitchen (area or room) with facilities for food preparation. (92.64)
4. The health facility has a dedicated staff (or nutrition specialist) responsible for preparing children's menus. (91.70)
5. The health facility provides regular, safe, nutritious, appetizing, high-quality meals of sufficient variety to meet the needs of paediatric patients. (87.59)

Process/output

6. Proportion of health facility staff who received training or orientation on child nutrition, including counselling on breastfeeding, at least once in the past 12 months. (92.02)
7. Proportion of breastfeeding mothers who report that they were shown how to express breast milk or who were given written information about expressing breast milk. (91.69)
8. Proportion of children and their carers in the health facility who are satisfied with the facility meal service in terms of choice, quantity and number of servings per day. (84.92)

Outcome

9. Proportion of children admitted to the health facility who were given food appropriate to their dietary requirements. (87.66)
10. Proportion of young infants under 6 months of age who are exclusively breastfed at discharge from the health facility. (87.53)

Bibliography used in setting standard 5

- Agency for Clinical Innovation (2011) Nutrition standards for paediatric inpatients in NSW hospitals. Chatswood (NSW) (https://www.aci.health.nsw.gov.au/__data/assets/pdf_file/0005/160556/Nutrition-standards-for-paediatric-inpatients-in-NSW-hospitals.pdf, accessed 14 December 2017).
- Committee on Economic, Social and Cultural Rights (2000) CESCR general comment No. 14: The right to the highest attainable standard of health. Geneva (<http://www.refworld.org/pdfid/4538838d0.pdf>, accessed 14 December 2017).
- Committee on Economic, Social and Cultural Rights (2011) CESCR general comment No. 13: The right of the child to freedom from all forms of violence. Geneva (http://www2.ohchr.org/english/bodies/crc/docs/CRC.C.GC.13_en.pdf, accessed 14 December 2017).
- Convention on the Rights of the Child (1989) New York City (NY): United Nations (<http://www.ohchr.org/EN/ProfessionalInterest/Pages/CRC.aspx>, accessed 14 December 2017).
- European Association for Children in Hospital (1988) European Charter for Children in Hospitals (<https://www.each-for-sick-children.org/each-charter/introduction-each-charter-annotations>, accessed 14 December 2017).
- Guerreiro AIF, editor (2012) Manual and tools for the assessment and improvement of children's rights in hospitals. Task Force on Health Promotion for Children and Adolescents in and by Hospitals and Health Services: International Network of Health Promoting Hospitals and Health Services (http://www.hphnet.org/index.php?option=com_content&view=article&id=1551:hp-for-children-a-adolescents-in-a-by-hospitals-&catid=20, accessed 14 December 2017).
- Guerreiro AIF, Kuttumuratova A, Monolbaev K, Boderscova L, Pirova Z, Weber MW (2016) Assessing and improving children's rights in hospitals: case-studies from Kyrgyzstan, Tajikistan and Moldova. *Health Human Rights J.* 18:235–48.
- Kickbusch I, Pelikan JM, Apfel F, Tsouros AD, editors (2013) Health literacy. The solid facts. Copenhagen: World Health Organization Regional Office for Europe (http://www.euro.who.int/__data/assets/pdf_file/0008/190655/e96854.pdf, accessed 14 December 2017).
- Lansdown G (2011) Every child's right to be heard: a resource guide on the UN Committee on the Rights of the Child General comment No. 12. London: Save the Children, UNICEF (https://www.unicef.org/french/adolescence/files/Every_Childs_Right_to_be_Heard.pdf, accessed 14 December 2017).
- Mahery P, Proudlock P, Jamieson L (2010) A guide to the Children's Act for health professionals. Fourth edition. Cape Town: Children's Institute, University of Cape Town (http://www.ci.uct.ac.za/sites/default/files/image_tool/images/367/Projects/Current_Projects/ca_guide_health%20prof_2010.pdf, accessed 14 December 2017).
- Mcdaid D (2016) Investing in health literacy: What do we know about the co-benefits to the education sector of actions targeted at children and young people? Policy Brief 19. Copenhagen: World Health Organization Regional Office for Europe (http://www.euro.who.int/__data/assets/pdf_file/0006/315852/Policy-Brief-19-Investing-health-literacy.pdf?ua=1, accessed 14 December 2017).
- National Institute of Clinical Excellence (2009) Clinical guideline 89. When to suspect child maltreatment in under 18s. London (<http://guidance.nice.org.uk/CG89>, accessed 14 December 2017).
- National Institute of Clinical Excellence (2012) Quality standard [QS15] Patients are treated with dignity, kindness, compassion, courtesy, respect, understanding and honesty. London (<https://www.nice.org.uk/guidance/qs15>, accessed 14 December 2017).
- Office of the United Nations High Commissioner for Human Rights (2014) Technical guidance on the application of a human rights-based approach to the implementation of policies and programmes

to reduce and eliminate preventable mortality and morbidity of children under 5 years of age (document A/HRC/27/31). New York City (NY): United Nations (www.ohchr.org/EN/HRBodies/HRC/RegularSessions/.../A_HRC_27_31_ENG.doc, accessed 14 December 2017).

Peden M, Oyegbite K, Ozanne-Smith J, Hyder AA, Branche C, Fazlur Rahman AKM et al., editors (2008) World report on child injury prevention. Geneva: World Health Organization, UNICEF (http://apps.who.int/iris/bitstream/10665/43851/1/9789241563574_eng.pdf, accessed 14 December 2017).

Runeson I, Hallström I, Elander G, Hermerén G (2002) Children's participation in the decision-making process during hospitalization: an observational study. *Nurs Ethics*. 9:583–98.

Sainsbury CPQ (1986) Care by parents of their children in hospital. *Arch Dis Childh*. 61:612–5.

Save the Children (2009) Legislative frameworks for child survival. Save the Children survival campaign. London (<https://resourcecentre.savethechildren.net/library/legislative-frameworks-child-survival-save-children-survival-campaign>, accessed 14 December 2017).

Sethi D, Bellis M, Hughes K, Gilbert R, Mitis F, Galea G, editors (2013) European Report on preventing child maltreatment. Copenhagen: WHO Regional Office for Europe (http://www.euro.who.int/__data/assets/pdf_file/0019/217018/European-Report-on-Preventing-Child-Maltreatment.pdf, accessed 14 December 2017).

Special Representative of the Secretary-General on violence against children (2006) Report of the independent expert for the United Nations study on violence against children. New York City (NY): United Nations (document A/61/299). (http://srsg.violenceagainstchildren.org/document/a-61-299_51, accessed 14 December 2017).

Strode A, Slack C, Essack Z (2010) Child consent in South African law: implications for researchers, service providers and policy-makers. *S Afr Med J*. 100:247–9.

Terre des Hommes, Sportello Bambino Adoloscenete Maltrattato (2013) Maltrattamento sui Bambini: come lo riconoscono i medici di Milano? [Child maltreatment: how is it recognized by doctors in Milan?]. Milan: Clinica Mangiagalli (<https://terredeshommes.it/img/INFOGRAFICA.pdf>, accessed 14 December 2017).

United Nations Committee on the Rights of the Child (2003) CESCR general comment No. 4: Adolescent health and development in the context of the Convention on the Rights of the Child, (CRC/GC/2003/4). Geneva (<https://www.unicef.org/CRCCommitAdolesc.doc>, accessed 14 December 2017).

United Nations Committee on the Rights of the Child (2011). Convention on the Rights of the Child, Article 19 (CRC/C/GC/13 GE.11). Geneva (<http://www.ohchr.org/EN/ProfessionalInterest/Pages/CRC.aspx>, accessed 14 December 2017).

Wolfe I, McKee M, editors (2013) European child health services and systems: lessons without borders. Maidenhead: Open University Press (http://www.euro.who.int/__data/assets/pdf_file/0003/254928/European-Child-Health-Services-and-Systems-Lessons-without-borders.pdf, accessed 14 December 2017).

World Health Organization (2002) World report on violence and health. Chapter 3, Child abuse and neglect by parents and other caregivers. Geneva (http://www.who.int/violence_injury_prevention/violence/world_report/en/, accessed 14 December 2017).

World Health Organization (2014). Reproductive, maternal, newborn and child health and human rights: a toolbox for examining laws, regulations and policies. ISBN 978 92 4 150742 4. Geneva.

World Health Organization (in preparation) Guidelines for the health sector response to child maltreatment. Geneva (http://www.who.int/violence_injury_prevention/violence/child/child_maltreatment_guidelines/en/, accessed 14 December 2017).

World Health Organization, UNAIDS (2015) Global standards for quality health-care services for adolescents: a guide to implement a standards-driven approach to improve the quality of health care services for adolescents. Geneva (<http://apps.who.int/iris/handle/10665/183935>, accessed 14 December 2017).

World Health Organization, UNICEF (2012) Care for child development: improving the care for young children. Geneva (http://www.who.int/maternal_child_adolescent/documents/care_child_development/en/, accessed 14 December 2017).

World Health Organization Collaborating Centre for Patient Safety Solutions (2007). Communication during patient hand-overs. Patient Saf Solutions. 1, solution 3 (<http://www.who.int/patientsafety/solutions/patientsafety/PS-Solution3.pdf>, accessed 14 December 2017).

World Health Organization Regional Office for Europe (2015) Children's rights in primary health care: manual and tools for assessment and improvement. Copenhagen



STANDARD 6

EDUCATIONAL, EMOTIONAL AND PSYCHOLOGICAL SUPPORT

Standard 6. All children and their families are provided with educational, emotional and psychosocial support that is sensitive to their needs and strengthens their capability.

Overview

Emotional and psychosocial support are essential components of care, including during diagnosis, treatment and supportive care. The aim of this standard is to ensure such support. Children may feel threatened or stressed by visiting a health facility or being hospitalized, because of the unfamiliarity of the facility and of medical procedures and poor understanding of the reasons for hospitalization. Frightening or distressing experiences can have a profound, lasting effect on a child's attitude to health services and can have lasting effects on their psychological development. They can result in anger, uncertainty, anxiety and feelings of helplessness.

The physical environment must therefore promote psychosocial well-being by providing opportunities for activities such as play, recreation and education. Continuing support from parents, family and friends who feel comfortable both physically and emotionally in the setting is also crucial. Play and recreational activities are vital elements of the normal growth and development of children and are widely used to alleviate the stress experienced by paediatric patients and their families during hospitalization.

Quality statements

- 6.1 All children are allowed to be with their carers, and the role of carers is recognized and supported at all times during care, including rooming-in during the child's hospitalization.
- 6.2 All children and their families are given emotional support that is sensitive to their needs, with opportunities for play and learning that stimulate and strengthen their capability.
- 6.3 Every child is assessed routinely for pain or symptoms of distress and receives appropriate management according to WHO guidelines.

Quality statement 6.1: All children are allowed to be with their carers, and the role of carers is recognized and supported at all times during care, including rooming-in during the child's hospitalization.

Rationale: The health facility should ensure that parents and carers can stay with their children during examinations, procedures (including anaesthesia induction), treatment and on the ward. Family members can often aid medical staff in preparing children for and during procedures by reassuring the child; they can also help staff to better understand their child's condition. The environment of a health facility may be traumatic, particularly during long stays, as children are vulnerable to unfamiliarity. Children should not be separated from their families, and a family-centred philosophy should guide the facility's organization of care.

Accompaniment by parents and carers provides comfort and helps to reduce anxiety, which can be beneficial for the child's health. Parents or carers should be allowed to room-in and encouraged to be with their children at all times; siblings and other family members should be allowed to visit. Care should be planned with parents so that they can provide the necessary treatment for their child. All health professionals and support staff who care for children should receive specific training in children's special needs.



QUALITY MEASURES

Input

1. The health facility has an up-to-date, family-centred policy on parents' and carers' right to stay with their children at all times, including during medical procedures. (90.75)
2. The health facility has a rooming-in policy so that parents or carers can stay with their children and provides accommodation close to the child's bed. (93.06)
3. The health facility has areas where parents or carers can breastfeed, prepare special meals for their children or for themselves and meet family and friends. (90.60)

4. The health facility staff receive training and regular mentoring or refresher training in children's rights, including the right not be separated from their parents, and also in parents' rights and responsibilities. (88.62)

Process/output

5. Proportion of parents and/or carers who were given the opportunity to room-in with their children. (88.78)
6. Proportion of infants under 6 months of age admitted to the facility who are exclusively breastfeeding or given only expressed breast milk by cup and spoon. (86.42)

Outcome

7. Proportion of children in the health facility whose parents or carers stayed with them during medical procedures. (86.57)
8. Proportion of children admitted to the health facility whose parents or carers were allowed to room-in or were provided with nearby accommodation at night. (88.54)
9. Proportion of children admitted to the health facility whose parents or carers were provided with food or had access to facilities to prepare food. (88.16)

Quality statement 6.2: All children and their families are given emotional support that is sensitive to their needs, with opportunities for play and learning that stimulate and strengthen their capability.

Rationale: Play and learning have important roles in children's development and add value to therapeutic care during hospitalization. The educational needs of children and young adolescents are closely related to the therapeutic process. Teamwork between medical and educational staff is important for the well-being of children and young adolescents. Play and recreation help to reduce children's anxiety in the facility and to prepare them for procedures and treatment. The health facility should make available a playroom or dedicated play space and provide recreational and learning facilities for children, with a comprehensive play and recreation programme for all children according to their age and development.

Play should be used routinely to alleviate anxiety and stress, to enable children to cope with pain and to help in the management and outcomes of procedures. The health facility should also meet the educational needs of school-aged children, with appropriate books and materials. All children should have equitable access to education programmes, regardless of their special needs or their location in the facility. Health staff should be trained in using different forms of play in therapeutic care. Recreational activities that support therapeutic care should be provided, such as videos, music, art, dance and group activities.



QUALITY MEASURES

Input

1. The health facility has a written, up-to-date policy to protect children's right to play and learn while at the facility. (93.51)
2. The health facility has a system for meeting the educational and learning needs of school-aged children. (87.95)
3. The health facility has dedicated spaces for age-appropriate play, which are accessible to all children, including those with a disability. (93.82)
4. The health facility staff are trained in using various forms of play, including sensory stimulation for young infants. (86.53)

Process/output

5. Proportion of children in the health facility who were involved in play and recreation provided by the facility within the past 24 h. (75.85)
6. Proportion of health providers who routinely use play techniques during medical procedures as part of therapeutic care. (78.72)

Outcome

7. Proportion of children who accessed the playroom during their stay in the health facility. (81.00)
8. Proportion of children who cannot leave their room who had access to some form of play provided by the health facility or a play therapist. (85.46)
9. Proportion of children who received play therapy during their most recent medical procedure or treatment. (81.91)
10. Proportion of school-aged children who accessed and used the facility's educational programme during their hospitalization. (85.49)

Quality statement 6.3: Every child is assessed routinely for pain or symptoms of distress and receives appropriate management according to WHO guidelines.

Rationale: Pain and other symptoms of distress are unpleasant, delay recovery and add to the trauma of illness or injury. Pain due to illness and invasive medical procedures affects children and their families and may result in distress or other problems, such as depression, anxiety or physical or social limitations. The emotional and psychological needs of children should receive the same attention during care, and health care providers should take all steps to assess and minimize their impact on children. Pain should be appropriately managed with standard pain management protocols, and children undergoing invasive procedures should receive adequate analgesia and psychological preparation and support.

Invasive and painful medical procedures should be minimized. When they are inevitable, children should be prepared through play, education, distraction, psychological therapy or coping and cognitive-behavioural approaches. A standard system should be used to assess pain, including in children who cannot verbally express their level of pain. Pain management (choice of drug, dose, route, frequency and duration) should be based on standard, evidence-based guidelines. The facility should have standard protocols for pain management in children with acute pain, post-operative pain, pain related to procedures and long-term pain, such as in those with cancer, sickle-cell anaemia or HIV infection. Child- and family-centred palliative care should be provided, with attention to the specific needs and preferences of children as individuals and their families.



QUALITY MEASURES

Input

1. The health facility has an up-to-date policy and protocols for the assessment, recognition, prevention and management of pain in infants, children and young adolescents. (94.38)
2. The health facility has guidelines and tools used by clinical staff in assessing and managing pain in infants, children and young adolescents. (91.91)
3. The health facility uses individual plans for pain treatment or non-pharmacological strategies to reduce pain and relieve distressing symptoms, with the active involvement of children. (87.95)
4. The health facility has facilities for providing psychological and spiritual support to children who require palliative care and to their families. (88.83)
5. The health staff receive training and regular refresher courses in assessing, preventing and controlling children's pain at least once every 12 months. (89.48)
6. The health facility has protocols and procedures in place to support the safe storage and use of pain-control medicines and conducts regular audits of pain management. (91.63)

Process/output

7. Proportion of health professionals in the facility who are aware of the facility's protocols and procedures for pain management. (90.09)
8. Proportion of staff who have received training or refresher training in children's pain management and palliative care within the past 12 months. (89.57)
9. Proportion of health professionals who know how to perform both pharmacological and non-pharmacological interventions to manage pain in children. (86.26)
10. Proportion of children's clinical records reviewed that include an assessment or a pain score card. (90.92)

11. Proportion of children seen in the health facility in the past 6 months who required palliative care and who received it or were referred to an appropriate centre. (88.10)

Outcome

12. Proportion of children who received adequate analgesia after surgery or a painful medical procedure. (90.48)
13. Proportion of parents or carers who reported that their child's pain or symptoms of distress were alleviated by the action of health workers. (84.67)

Bibliography used in setting standard 6

Department of Health (2003) Getting the right start: national service framework for children: standard for hospital services. London: National Health Services ([https://www.nhs.uk/NHSEngland/AboutNHSservices/Documents/NSF%20children%20in%20hospitalDH_4067251\[1\].pdf](https://www.nhs.uk/NHSEngland/AboutNHSservices/Documents/NSF%20children%20in%20hospitalDH_4067251[1].pdf), accessed 15 December 2017).

Guerreiro AI (2014) Assessing the respect of children's rights in hospitals in Kyrgyzstan and Tajikistan. WHO project: improving the quality of paediatric care in the first level referral hospitals in selected countries of Central Asia. Copenhagen: World Health Organization Regional Office for Europe (http://www.euro.who.int/__data/assets/pdf_file/0020/252542/Assessing-the-respect-of-childrens-rights-in-hospitals-in-Kyrgyzstan-and-Tajikistan-Eng.pdf?ua=1, accessed 11 December 2017).

Hedén L (2012) Distressing symptoms in children with cancer in general, during needle procedures, in particular. Acta Universitatis Upsaliensis. Digital comprehensive summaries of Uppsala dissertations from the Faculty of Medicine 772 (<https://www.diva-portal.org/smash/get/diva2:516011/FULLTEXT01.pdf>, accessed 15 December 2017).

International Children's Palliative Care Network (2008) ICPCN Charter of Rights for Life Limited and Life Threatened Children. Assagay (<http://www.icpcn.org/icpcn-charter/>, accessed 15 December 2017).

Lester S, Russell W (2010) Children's right to play: an examination of the importance of play in the lives of children worldwide. Working papers in early childhood development. The Hague: Bernard Van Leer Foundation (https://www.researchgate.net/publication/263087157_Children's_Right_to_Play_An_Examination_of_the_Importance_of_Play_in_the_Lives_of_Children_Worldwide, accessed 15 December 2017).

United Nations Committee on the Rights of the Child (2013) General comment No. 17 (2013) on the right of the child to rest, leisure, play, recreational activities, cultural life and the arts (art. 31). New York City (NY) (CRC/C/GC/17) <http://www.refworld.org/docid/51ef9bcc4.html>, accessed 15 December 2017).

United Nations Committee on the Rights of the Child (2013) General comment No. 15 (2013) on the right of the child to the enjoyment of the highest attainable standard of health (art. 24). New York City (NY) (<http://www.refworld.org/docid/51ef9e134.html>, accessed 15 December 2017).

World Health Organization (2012) WHO guidelines on the pharmacological treatment of persisting pain in children with medical illnesses. Geneva (http://apps.who.int/iris/bitstream/10665/44540/1/9789241548120_Guidelines.pdf, accessed 15 December 2017).

World Health Organization (2014) Pocket book of hospital care for children: guidelines for the management of common childhood illnesses. Second edition. Geneva (http://www.who.int/maternal_child_adolescent/documents/child_hospital_care/en/, accessed 11 December 2017).



STANDARD 7

COMPETENT, MOTIVATED, EMPATHETIC HUMAN RESOURCES

Standard 7. For every child, competent, motivated, empathic staff are consistently available to provide routine care and management of common childhood illnesses.

Overview

Good leadership and management of a health facility are necessary to ensure support and continuous quality improvement. The facility should have mechanisms for recruitment and deployment, regular orientation, mentoring and competence- and skills-building for staff. The facility should have an open culture and systems for reflective review, non-punitive enquiry to ensure learning and positive practice development.

Infants, children and young adolescents should be cared for by staff who have been specifically trained to recognize and meet their health, physical, psychosocial, developmental, communication and cultural needs. All clinical staff who routinely care for children must be trained in paediatric life support, management of common childhood illnesses and developmentally appropriate and culturally sensitive communication.

Staff must be available 24 h a day (or during all the working hours of the service) in sufficient numbers and with the appropriate skills for the expected work load. They should be fully aware of children's rights and other relevant national legal entitlements, regulatory and policy frameworks, clinical guidelines and protocols that meet the needs of children for health care, including their protection. These resources and their accessibility should be reviewed periodically or at least annually to ensure that they are up to date.

Quality statements

- 7.1 All children and their families have access at all times to sufficient health professionals and support staff for routine care and management of childhood illnesses.
- 7.2 Health professionals and support staff have the appropriate skills to fulfil the health, psychological, developmental, communication and cultural needs of children.
- 7.3 Every health facility has managerial leadership that collectively develops, implements and monitors appropriate policies and legal entitlements that foster an environment for continuous quality improvement.

Quality statement 7.1: All children and their families have access at all times to sufficient health professionals and support staff for routine care and management of childhood illnesses.

Rationale: Health care staff must be available 24 h a day, 7 days a week to ensure optimal routine and timely management of illnesses. Staff who have the skills and competence to care for children and young adolescents should be available at all times. The staffing policy should be reviewed regularly and updated as necessary; it should specify the number, types and necessary competence of staff to ensure an adequate number and skill mix of staff for the volume of work 24 h a day, 7 days a week.

Staff should have access at all times to a health professional with paediatric clinical experience and expertise and to social workers for families in distress. Clinical and nonclinical staff should be oriented in their specific roles and responsibilities in the facility or unit to which they are assigned. A staff roster, listing the duties and the times on duty, must always be up-to-date and displayed. Written information on how to access services and what to do in emergencies should be available, with signs indicating key service areas, such as the emergency department, wards, the pharmacy, the laboratory and the X-ray service.



QUALITY MEASURES

Input

1. The health facility has a written, up-to-date staffing policy that defines the staffing criteria and standards, lists the numbers, types and competence (job description) of each staff member and is reviewed regularly according to the work load. (92.50)
2. The health facility has standard procedures and plans for recruitment, deployment, motivation (recognition and reward scheme) and retention of all staff. (91.42)
3. The health facility has a written, up-to-date policy on triage and waiting times for emergency and non-emergency consultations and treatment. (91.80)

4. The health facility has a roster displayed in all areas with the names of staff on duty, the times of their shifts and their specific roles and responsibilities. (91.92)
5. The health facility has competent child health care providers available at all times, in sufficient numbers to meet the anticipated work load. (90.60)
6. The health facility has a system for access to the staff necessary for the psychosocial, developmental, communication and cultural needs of children at all times. (84.37)
7. The health facility has a clear structure and communication channels to reach staff on duty at all times. (92.01)

Process/output

8. Proportion of available posts in the health facility that were filled by staff with the necessary competence for the job description to ensure that the facility can provide 24-h service. (88.86)
9. Proportion of staff who have been oriented to their functions, roles and responsibilities in the facility or unit to which they are assigned. (87.90)
10. Proportion of children or carers who attended the health facility who reported being attended to within the appropriate time for their condition as per facility policy on triage and waiting times. (82.65)
11. Proportion of nurses who care for children admitted to the facility who have had paediatric training or in-service medical education in child care. (92.07)

Outcome

12. Proportion of children in the health facility who were attended by health professionals specifically trained in child health care. (85.84)
13. Proportion of children and their families who attended the health facility who reported satisfactory, prompt access to appropriate medical and support staff when required. (86.48)
14. Proportion of health professional and support staff in the health facility who are satisfied with their workload in terms of their roles and responsibilities in the facility or the unit to which they are assigned. (85.06)
15. Proportion of all health professional staff who care for children in the health facility who left the facility or were transferred during the past 12 months. (80.97)

Quality statement 7.2: Health professionals and support staff have the appropriate skills to fulfil the health, psychological, developmental, communication and cultural needs of children.

Rationale: Qualification, training and orientation of staff improve their performance and build their capacity for more senior roles and responsibilities. Staff should be specifically trained to meet the physical, psychosocial, developmental, communication and cultural needs

of infants, children and young adolescents. The job descriptions of all staff should list the necessary competence, roles and responsibilities and the verified educational qualifications and credentials required for licensing or by law. The facility should have a system for recruitment, retention, regular orientation, professional development and continuing education of all staff.

All staff should be sufficiently trained and informed about policies and legal entitlements and receive continuing orientation on protocols and responsibilities, with continuous supportive supervision, mentoring and professional development, an annual performance appraisal and recognition of good performance. Staff must have ready access to regularly updated paediatric clinical practice guidelines and to a poisons helpline.



QUALITY MEASURES

Input

1. The health facility has a programme for continuing professional education and attitude and skills development for all child health care professionals and support staff. (91.01)
2. The health facility periodically appraises all staff, has a mechanism for recognizing good performance and has protocols for staff feedback. (88.91)
3. The health facility has sufficient numbers of competent, licensed, motivated, regulated child health professionals, with an appropriate skills mix, working in multidisciplinary teams. (88.22)
4. Health professionals and staff who care for children in the health facility receive in-service training and supportive supervision with regard to the legal entitlements and rights of children in relation to health care. (87.34)
5. The health facility provides an enabling, supportive environment for professional staff development, with regular supervision and mentoring. (86.75)
6. The health facility facilitates interprofessional collaborative practice, with clear roles and responsibilities for quality improvement according to the professional scope of practice and the needs for child health care. (81.69)

Process/output

7. Proportion of clinical and nonclinical health care staff at the health facility who received a written job description on deployment to the facility. (88.99)
8. Evidence that the health facility has a mechanism in place for soliciting feedback from staff on issues that might affect or improve staff performance. (87.28)
9. Proportion of health professionals who care for children who received in-service training and/or refresher sessions within the past 12 months. (90.93)
10. Number of supervisory visits to the health facility to improve clinical competence and performance in the past 12 months. (89.89)
11. Proportion of staff at the health facility who had a performance assessment with feedback at least once in the past 12 months.

12. Proportion of staff who had interactions with professional mentors to ensure clinical competence and improve performance in the past 3 months. (89.94)

Outcome

13. Proportion of all staff at the health facility who could identify and report on at least one activity for improving clinical quality in which they were personally involved in the past 6 months. (82.80)
14. Proportion of health professionals and support staff who care for children at the health facility whose preceding performance appraisal was satisfactory. (82.44)
15. Proportion of all children and their carers at the health facility who were satisfied with the care and support they received from facility staff. (86.62)
16. Proportion of all staff at the health facility who reported that they were “highly satisfied” with their job. (84.80)
17. Number of improvement projects completed in the past 6 months. (82.39)

Quality statement 7.3: Every health facility has managerial leadership that collectively develops, implements and monitors appropriate policies and legal entitlements that foster an environment for continuous quality improvement.

Rationale: Good managerial and clinical leadership improve performance by showing direction and creating a workplace culture that is conducive to continuous quality improvement. The facility should have a culture in which high-quality care of patients is the priority and that promotes interprofessional teamwork; it should set strategic goals for quality improvement and support efforts to achieve the goals. The facility leadership should provide resources for strengthening systems, remove obstacles to high-quality care and require and maintain high performance from health care providers. The leadership should ensure collective responsibility, appropriate policies and procedures and an environment of support for staff to undertake continuous quality improvement.

The facility should have a defined leadership structure and authority, lines of accountability and a quality improvement team with resources. Staff should collectively develop and implement quality improvement and patient safety programmes, with support, supervision and mentoring. There should be a policy and a plan to manage financial risks and ensure children’s rights, and the facility should undertake regular audits (paediatric death reviews) and make recommendations for improving quality. The leadership should use data to guide decisions and to monitor performance.



QUALITY MEASURES

Input

1. The health facility has a written, up-to-date leadership structure, with defined roles and responsibilities, standard governing policies and protocols and lines for reporting and accountability. (92.86)
2. The health facility has a written, up-to-date plan for ensuring patient safety and improvement of the quality of care. (91.91)
3. The health facility has a system of regular meetings between administrators and health professionals to exchange feedback on the performance of staff and of the facility leadership to ensure quality improvement. (90.44)
4. The health facility has a team or at least one person designated to champion or lead initiatives for improving the quality of care in the facility. (89.30)
5. The health facility has a costed, budgeted plan and established mechanisms to support identified activities for quality improvement. (90.88)
6. The health facility holds at least one meeting a month to review data, monitor performance, make recommendations to address any problems, honour good performance and encourage staff or teams who are struggling to improve quality. (91.36)
7. The health facility holds at least two meetings a year with stakeholders (e.g. the community, service users, partners) to review its performance, identify problems and make recommendations for joint actions to improve quality. (89.06)

Process/output

8. Proportion of health facility leaders trained in quality improvement leadership and management, data use and leading change (use of information, enabling behaviour, continuous learning). (89.35)
9. Evidence that the health facility regularly tracks and monitors performance to improve the quality of care from up-to-date dashboards or performance charts. (91.45)

Outcome

10. Proportion of all children and their families who were satisfied with the care and support received from facility staff. (86.53)
11. Proportion of staff members who gave positive feedback about internal policies and activities for continuous quality improvement, including on-the-job training and personal mentoring. (83.45)
12. Proportion of health professionals who actively participated in a quality improvement activity (meeting, audit, project) in the health facility in the past 12 months (88.59)

Bibliography used in setting standard 7

Boston Children's Hospital (2017) Patient and family rights and responsibilities. Boston (MA) (<http://www.childrenshospital.org/legal/patient-and-family-rights>, accessed 16 December 2017).

Dwamena F, Holmes-Rovner M, Gaulden CM, Jorgenson S, Sadigh G, Sikorskii A, et al. (2012) Interventions for providers to promote a patient-centred approach in clinical consultations. *Cochrane Database Syst Rev.* 12:CD003267.

Reader T, Gillespie A (2013) Patient neglect in healthcare institutions: a systematic review and conceptual model. *BMC Health Serv Res.* 13:156.

de Sliva A (2000) A framework for measuring responsiveness (GPE Discussion Paper Series, No. 32). Geneva: World Health Organization (<http://www.who.int/responsiveness/papers/paper32.pdf?ua=1>, accessed 16 December 2017).

Whittaker S, Shaw C, Spieker N, Linegar A (2011) Quality standards for healthcare establishments in South Africa. In: Padarath A, English R, editors. *South African Health Review 2011*. Durban: Health Systems Trust:59–68 (http://www.cohsasa.co.za/sites/cohsasa.co.za/files/publication_pdfs/chap_5_quality_standards_pgs_59-_68_0.pdf, accessed 16 December 2017).

World Health Organization (2006) *The world health report 2006 – working together for health*. Geneva (<http://www.who.int/whr/2006/en/>, accessed 16 December 2017).

World Health Organization (2015) *The prevention and elimination of disrespect and abuse during facility-based childbirth*. WHO statement. Geneva (http://apps.who.int/iris/bitstream/10665/134588/1/WHO_RHR_14.23_eng.pdf, accessed 16 December 2017).

Worthington R (2006) Standards of healthcare and respecting children's rights. *J R Soc Med.* 99: 208–10.



STANDARD 8

CHILD-FRIENDLY PHYSICAL RESOURCES

Standard 8. The health facility has an appropriate, child-friendly physical environment, with adequate water, sanitation, waste management, energy supply, medicines, medical supplies and equipment for routine care and management of common childhood illnesses.

Overview

Children, including young adolescents, are different from adults and require distinct, tailored services. Care should be provided in buildings that are easily accessible, safe, secure and suitable for children and with a family-friendly environment. Every health facility should have child- and adolescent-appropriate and -friendly basic infrastructure and amenities, including water, sanitation, hygiene, electricity and waste disposal, a stock of essential medicines, supplies and equipment, including for play and learning.

The health facility should have outpatient, emergency and inpatient care areas dedicated for children and young adolescents, separate from areas for adults, which are appropriately furnished. There should be dedicated areas with adequate facilities for parents or caregivers to sleep, wash, cook or stay with their children. The health facility should have appropriately equipped child- and adolescent-friendly facilities, including an appropriately furnished play and learning area. The environment should be clean, comfortable and logically organized and furnished to maintain continuity of care and minimize a detrimental impact on the experience of the child or the family of health care.

Quality statements

- 8.1 Children are cared for in a well-maintained, safe, secure physical environment with an adequate energy supply and which is appropriately designed, furnished and decorated to meet their needs, preferences and developmental age.
- 8.2 Child-friendly water, sanitation, hand hygiene and waste disposal facilities are easily accessible, functional, reliable, safe and sufficient to meet the needs of children, their carers and staff.
- 8.3 Child-friendly, age-appropriate equipment designed to meet children's needs in medical care, learning, recreation and play are available at all times.
- 8.4 Adequate stocks of child-friendly medicines and medical supplies are available for the routine care and management of acute and chronic childhood illnesses and conditions.

Quality statement 8.1: Children are cared for in a well-maintained, safe, secure physical environment with an adequate energy supply and which is appropriately designed, furnished, and decorated to meet their needs, preferences, and developmental age.

Rationale: The health facility environment should be secure, safe and well ventilated, with a reliable, adequate source of power for ample lighting and other energy needs. There should be dedicated care areas for children and young adolescents that are separate from those for adults (e.g. reception, triage and assessment areas; outpatient and certain inpatient wards; units for neonatal and paediatric intensive care, sick neonates and general medical and surgical paediatric care; treatment rooms; and an isolation area for infectious children). Their design should allow easy observation and supervision of children at all times, provide privacy for older children and adolescents (e.g. curtain, wall) and be appropriately decorated and furnished for children's needs and developmental age.

The facility should have designated areas for play, entertainment, education and other activities that are appropriate for their developmental age and that protect children from psychosocial harm. There should be safety and security measures to safeguard children, such as covered electrical outlets, appropriate window locks and door latches, padding of all sharp edges and non-slip, easily maintained floor covering. Facilities should be available for parents and caregivers so that they can stay with or near their children, including a kitchen, a breast-milk storage space and a family room for visitors.



QUALITY MEASURES

Input

1. The health facility is designed to provide child-friendly, seamless access to dedicated areas for the care of children (neonates, children and young adolescents), which are separate from reception, emergency care, outpatient and inpatient areas or wards. (91.27)

2. The health facility areas dedicated for children (outpatients and inpatients) are furnished and decorated appropriately for the children's age and educational and play needs. (91.43)
3. The health facility has a room or a screened-off area in the outpatient department and on wards that is sufficient to ensure normal conversation without being overheard and for examination of children unobserved by other patients. (90.23)
4. The surgical services of the health facility have dedicated recovery and hospitalization areas for children located close to the children's ward. (89.57)
5. The health facility practises and has facilities for rooming-in for mothers or carers with their children 24 h a day. (94.88)
6. The health facility is adequately maintained, safe, clean, appropriately lit and well ventilated and ensures privacy for children and their families when required. (93.57)
7. The health facility has a power source (e.g. solar, generator, grid) that can meet all the demands of the facility and associated infrastructure for electricity at all times, with a back-up power source. (95.16)
8. The health facility has an energy management plan supported by an adequate budget, maintained by appropriately trained staff and regulated by a competent authority. (86.97)
9. The health facility has a fuel management plan and a local buffer stock, supported by an adequate budget for all the fuel needs for vehicles, cooking and heating, as relevant and as required, at all times. (88.95)
10. The health facility has sufficient funds and staff for rehabilitation, improvement and continuous operation and maintenance of the facility infrastructure. (88.76)
11. The health facility has sufficient safety measures, including safe windows and doors, operational fire extinguishers for each area and floor, a clearly designed plan of evacuation in case of emergency and sufficient external barriers. (92.21)

Process/output

12. Number of power failures lasting > 2 h during the past month. (86.03)

Outcome

13. Proportion of all children and their families who attended the health facility who were satisfied with its cleanliness. (85.85)
14. Proportion of all children and their families who attended the health facility who were satisfied with the availability of child-friendly amenities for education and play. (84.64)
15. Proportion of children and their families who attended the health facility who would recommend the health facility to friends and family. (82.79)

Quality statement 8.2: Child-friendly water, sanitation, hand hygiene and waste disposal facilities are easily accessible, functional, reliable, safe and sufficient to meet the needs of children, their carers and staff.

Rationale: A safe, clean, hygienic environment with continuous supplies of clean water, sanitation and safe waste disposal are critical in the provision of high-quality care. A consistent supply of safe water should be available on site at all times for drinking, cleaning and hand-washing in all clinical care areas and operating theatres. Sanitation services and hand hygiene stations should be accessible to all children, their families and staff.

All children and their carers should practise good hygiene, including regular hand-washing with soap, safe disposal of nappies and facilities for safe, hygienic food preparation. A mechanism for the segregation, collection, transport, treatment and safe disposal of waste should be in place, including impermeable containers for sharps that are inaccessible to children. The facility should have a budget and a protocol for the operation and maintenance of energy, safe water and sanitation services.



QUALITY MEASURES

Input

1. The health facility has written, up-to-date protocols and awareness-raising materials (e.g. posters) on cleaning, disinfection, hand hygiene, maintenance of water, sanitation and hygiene facilities and safe waste management. (93.65)
2. The health facility has a functioning source of safe water located on the premises that is adequate to meet all demands (according to WHO standards), for drinking, personal hygiene, medical interventions (formula, ORS, nutritional supplements and medicines), cleaning, laundry and cooking for use by staff, children and their families. (94.47)
3. The health facility has drinking-water stations that are either low or have a stool for easy reach, and small cups are available for children. (87.25)
4. The health facility has leak-proof, covered, labelled waste bins and impermeable sharps containers in every treatment area to allow segregation of waste into three categories: sharps, non-sharps infectious waste and general non-infectious waste. (93.39)
5. The health facility has at least one functioning hand hygiene station per 10 beds, with soap and water or alcohol-based hand rubs, in all wards, at least one of which is accessible to children (i.e. lower or with a stool to reach taps). (92.70)
6. The health facility has baths and other hygiene facilities on the premises that are appropriately lit, accessible to people with limited mobility, adapted for use by young children and segregated by sex for older children and carers. (92.01)

7. The health facility has sanitation facilities (e.g. pans, toilets, latrines) on the premises for infants, children and young adolescents that are adapted for their use (with, e.g. smaller seats or latrines, child-sized bed pans), segregated by sex for older children, appropriately lit and accessible to people with limited mobility. (91.44)
8. The health facility that offers surgery has a designated station for preoperative hand scrubbing and adequate supplies of appropriate surgical scrub materials. (95.35)
9. The health facility has a dedicated nappy-changing station, with appropriate waste disposal and hand-washing facilities nearby. (88.93)
10. The health facility has sufficient trained, competent staff for cleaning, operating and maintaining water, sanitation, hygiene and health care waste facilities, on site when needed, and clear descriptions of their responsibilities. (91.96)
11. The health facility has sufficient funds for rehabilitation, improvement and continuous operation and maintenance of water, sanitation, hygiene and waste management infrastructure. (87.86)
12. The health facility has adequate laundry facilities, including water, detergent and space for drying. (91.70)
13. Health facility professionals and support staff and carers are educated and trained in good hygiene, including regular hand-washing after changing nappies, before feeding and after using toilets. (90.87)
14. The health facility has an environmental health management risk plan, with an adequate budget, for managing and improving water, sanitation, hygiene and waste management services, including infection prevention and control. (89.53)
15. Health facility staff promote safe hygiene practices in caring for infants, children and young adolescents, including safe disposal and management of children's faeces (88.40)

Process/output

16. Proportion of days in the past 3 months when water from an improved source was not available on the premises. (87.27)
17. Proportion of days in the past 3 months when soap or hand disinfectant were not available. (86.82)
18. Proportion of days per calendar year on which wastes were not safely segregated into at least three bins in the consultation area and sharps and infectious wastes were not treated and disposed of safely. (77.53)
19. Proportion of health facility health professionals and support staff who received training or mentoring in sanitation, hand hygiene and infection prevention and control in the past 6 months. (89.66)

Outcome

20. Proportion of children and their families at the health facility who are satisfied with the water, sanitation and waste management services. (83.67)

21. Proportion of all health care staff at the health facility who are satisfied with the water, sanitation and waste management services. (86.02)
22. Proportion of children and their families who attended the health facility who observed that the health providers washed their hands or used an alcohol rub before examining them. (77.06)

Quality statement 8.3: Child friendly, age appropriate equipment designed to meet children's needs in medical care, learning, recreation and play are available at all times.

Rationale: Children receive optimal care when the equipment is specifically designed to meet their size and their learning, recreational and development needs. Basic laboratory and diagnostic facilities must be available 24 h a day, including X-ray imaging for thoracic, abdominal, skull and orthopaedic studies; clinical laboratory equipment for haematology, blood chemistry, blood gas measurement and basic microbiology; and blood-banking services. Medical, resuscitation and diagnostic equipment appropriate for age and size, including for newborns, must be available at all times in all emergency, outpatient, inpatient, surgical and recovery areas for child care. Safe, age- and size-appropriate bedding (cots, high and low beds, bed rails, mattresses, bed linen), play, entertainment and education equipment should be available for all age groups. Telephone and Internet access for schooling and contact with peers should be provided when appropriate and feasible.

The health facility should have a list of essential paediatric equipment in clean, secure storage, an efficient inventory tracking system, guidelines for appropriate use of the equipment and a system for regular maintenance and disposal. Essential paediatric equipment such as a resuscitation trolley with readily accessible age-appropriate equipment and supplies, a warming device, a defibrillator designed for paediatric use, age-appropriate weighing scales and a stadiometer for infants and older children, thermometers and a blood pressure measuring device with a complete selection of cuffs appropriate for the full spectrum of paediatric patients, pulse oximeters, cardiorespiratory monitors, a backboard for cardiopulmonary resuscitation, portable lamps for emergency bedside procedures, motor-driven nebulizers and suction machines, an electrocardiograph, paediatric nasogastric tubes, equipment for IV, phlebotomy and lumbar puncture appropriate for children, wheelchairs, crutches, slings and splints for all paediatric age groups.



QUALITY MEASURES

Input

1. The health facility has functioning, clean, age-appropriate essential equipment and supplies for routine care and management of complications at all times in all areas for child care. (94.01)

2. Equipment user manuals and instructions are available, with laminated job aids on how to operate and use the equipment. (89.57)
3. The health facility has a functioning, well-equipped resuscitation trolley for paediatric emergency resuscitation and care with readily accessible and identifiable age-appropriate medicines, resuscitation equipment and supplies (e.g. suction device, pulse oximeter, laryngoscope, endotracheal tubes, bag valve masks, infusion sets) available at all times in areas designated for emergency care in outpatient areas and inpatient wards. (89.57)
4. The health facility has a safe, uninterrupted source of oxygen and equipment for delivery (age-appropriate nasal prongs, catheters and face masks) available at all times in children's wards and emergency areas. (95.72)
5. The health facility has basic equipment (X-ray, ultrasound and basic laboratory equipment) for diagnosis and management of common childhood illnesses and conditions. (94.30)
6. The health facility has culturally and age-appropriate toys, games, books and facilities for play and entertainment of children on wards and in play and recreational areas. 85.25)
7. The health facility has a dedicated budget for essential equipment and its maintenance. (89.19)
8. The health facility has the minimum requirements for an adequate cold chain, with a functioning refrigerator and a temperature monitoring device, and the temperature has been maintained between 2 and 8 °C for the past 30 days. (95.09)
9. The health facility has an updated inventory of medical equipment, with documentation of breakage or malfunction and dates of repair or replacement. (91.18)
10. The health facility has functioning age- and size-appropriate beds and furnishings (chairs, tables) on paediatric wards or areas designated for child care. (90.81)

Process/output

11. Proportion of all children admitted to the health facility who received age-appropriate play and entertainment materials during the last 3 days of their stay. (78.23)
12. Proportion of days per calendar year during which one or more essential item of equipment was not available. (81.28)

Outcome

13. Proportion of days per calendar year during which an oxygen source and delivery were not available. (87.19)
14. Proportion of patients who did not receive essential care to the normal standard because one or more items of essential equipment was unavailable. (81.82)
15. Proportion of reviewed child deaths in which the child did not receive appropriate care because of lack of essential age-appropriate equipment. (90.28)

Quality statement 8.4: Adequate stocks of child-friendly medicines and medical supplies are available for the routine care and management of acute and chronic childhood illnesses and conditions.

Rationale: Adequate child-friendly essential medicines and other medical supplies are critical for the provision of optimal care to infants, children and young adolescents. Children are not small adults. They need special, different care and therefore age-appropriate formulations of medicines and age-specific supplies for efficiency, efficacy and safety. Use of adult dosage formulations may result in inaccurate dosing for children or difficulty in administration, which may lead to medical errors such as under- or overdosing. The health facility should have continuously available age-appropriate essential medicines, medical supplies and laboratory reagents that are readily accessible to staff in all child care areas at all times.

The facility should have a list of essential medicines and supplies based on the WHO Essential Medicines List for children. The facility should have an orderly, clean, secure storage area and an efficient stock management system to avoid stock outs. Laboratory and diagnostic test supplies (e.g. for haematology, rapid diagnostic tests, blood chemistry, urinalysis, basic microbiology, blood culture, X-ray films) must be available, and blood must be available for transfusion. Medicines and supplies for resuscitation and emergency care must be readily accessible for staff on the emergency trolley, in the emergency area and on wards.



QUALITY MEASURES

Input

1. The health facility has up-to-date, written protocols and guidance for safe storage of medicines in designated pharmacy cupboards or stores and for safe administration. (93.00)
2. The health facility has an on-site pharmacy with trained pharmacists or dispensers available during all facility operating hours, who maintain an essential list of child-appropriate medicines and supplies, adequate stocks and an efficient stock management system. (95.08)
3. The health facility has supplies of emergency and prereferral medicines that are readily accessible for severely ill children. (94.22)
4. The health facility has supplies of first- and second-line injectable antibiotics, antimalarial agents and other essential medicines available at all times for the management of children. (94.70)
5. The health facility has supplies of essential vaccines available at all times for vaccination of children and young adolescents. (94.52)
6. The health facility has supplies of thermometers, age-appropriate weighing scales and wooden boards or metal beams with a mounted rule that permit measurement of crown-to-heel length (infants < 2 years lying down) or height (older children standing up) in centimetres. (95.36)

7. The health facility has adequate essential child-friendly equipment and medical supplies, including an oxygen source, to support routine and emergency management of children. (94.04)
8. The health facility has essential laboratory supplies (e.g. needles, reagents, specimen bottles) to support routine and emergency management of children. (94.88)
9. The facility has a system for the storage and distribution of all vaccines and their diluents in a cold-chain system maintained in the WHO-recommended temperature ranges at all times. (95.87)

Process/output

10. Proportion of health professionals who provide child health services who have received training in appropriate child medication. (88.67)

Outcome

11. Proportion of days in the past 3 months when there were stock outs of one or more essential medicines. (90.74)
12. Proportion of days in the past 3 months when there was a stock out of blood. (90.98)
13. Proportion of days in the past 3 months when oxygen was not available in the health facility in areas in which children are cared for. (91.40)
14. Proportion of reviewed child deaths in which the child did not receive appropriate care due to lack of essential medicines or supplies. (91.23)

Bibliography used in setting standard 8

Adams J, Bartram J, Chartier Y, editors (2008) Essential environmental health standards in health care. Geneva: World Health Organization (http://www.who.int/water_sanitation_health/hygiene/settings/ehs_health_care.pdf, accessed 17 December 2017).

Campbell H, Duke T, Weber M, English M, Carai S, Tamburlini G et al. (2008) Global initiatives for improving hospital care for children: state of the art and future prospects *Pediatrics*. 121: e984–92.

Chartier Y, Emmanuel J, Pieper U, Prüss A, Rushbrook P, Stringer R et al. (2014) Safe management of wastes from health-care activities. Second edition. Geneva: World Health Organization (http://www.who.int/water_sanitation_health/publications/wastemanag/en/, accessed 17 December 2017).

Giacoia GP, Taylor-Zapata P, Mattison D (2008) Eunice Kennedy Shriver National Institute of Child Health and Human Development Pediatric Formulation Initiative: selected reports from working groups. *Clin Ther*. 30:2097–101.

Institute for Healthcare Improvement (2012) Science of improvement. Establishing measures. Cambridge (MA) (<http://www.ihi.org/resources/Pages/HowtoImprove/ScienceofImprovementEstablishingMeasures.aspx>, accessed 17 December 2017).

Knoppert DC (2009) Pediatric formulations: international issues and potential solutions. *Paediatr Drugs*. 11:55–6.

Nahata MC (1999) Pediatric drug formulations: challenges and potential solutions. *Ann Pharmacother*. 33:247–9.

de Savigny D, Adam T, editors (2009) Systems thinking for health systems strengthening. Geneva; Alliance for Health Policy and Systems Research, World Health Organization (<http://www.who.int/alliance-hpsr/resources/9789241563895/en/>, accessed 17 December 2017).

World Health Organization (2008) Chapter 5. Infrastructure. In: Operations manual for delivery of HIV prevention, care and treatment in high-prevalence, resource-constrained settings. Edition 1 for field-testing. Geneva; 61–95 (http://www.who.int/hiv/pub/imai/om_5_infrastructure.pdf, accessed 17 December 2017).

World Health Organization (2011) Evaluating household water treatment options: health based targets and microbiological performance specifications. Geneva; 2011 (http://apps.who.int/iris/bitstream/10665/44693/1/9789241548229_eng.pdf, accessed 17 December 2017).

World Health Organization (2012) Annex 5. Development of paediatric medicines: points to consider in formulation. In: WHO Expert Committee on Specifications for Pharmaceutical preparations. Forty-sixth report (WHO Technical Report Series, No. 970). Geneva; 197–225 (http://www.who.int/medicines/areas/quality_safety/quality_assurance/expert_committee/TRS-970-pdf1.pdf, accessed 17 December 2017).

World Health Organization (2015) Service availability and readiness assessment. An annual monitoring system for service delivery. Reference Manual. Version 2.2 (WHO/HIS/HIS/204.5 Rev.1). Geneva (http://apps.who.int/iris/bitstream/10665/149025/1/WHO_HIS_HSI_2014.5_eng.pdf, accessed 17 December 2017).

World Health Organization, UNICEF (2014) Progress on drinking-water and sanitation: 2014 update. Geneva (http://apps.who.int/iris/bitstream/10665/112727/1/9789241507240_eng.pdf?ua=1, accessed 17 December 2017).

World Health Organization, UNICEF (2014) WASH targets and indicators post-2015: outcomes of an expert consultation. Geneva (https://www.unicef.org/wash/files/4_WSSCC_JMP_Fact_Sheets_4_UK_LoRes.pdf, accessed 17 December 2017).

World Health Organization, UNICEF (2015) Water, sanitation and hygiene in health care facilities. Status in low- and middle-income countries and way forward. Geneva (http://apps.who.int/iris/bitstream/10665/154588/1/9789241508476_eng.pdf, accessed 17 December 2017).

World Health Organization, UNICEF (2017) Water and sanitation for health facility improvement tool (WASH FIT). A practical guide for improving quality of care through water, sanitation and hygiene in health care facilities. Geneva (http://www.who.int/water_sanitation_health/publications/water-and-sanitation-for-health-facility-improvement-tool/en/, accessed 17 December 2017).

World Health Organization (2017) The Sixth WHO Essential Medicines List for Children (EMLc) (updated in March 2017). Geneva; 2017 (http://www.who.int/medicines/publications/essentialmedicines/6th_EMLc2017_FINAL_amendedAug2017.pdf?ua=1, accessed 6 February 2018).



Annex 1. Participants and agenda of the technical consultation on the framework and standards for improving the quality of paediatric care in health facilities

Technical experts

Dr James Amini, Chief Paediatrician, Port Moresby General Hospital, Boroko, National Capital District, Papua New Guinea

Dr Tatien Bucyana, Paediatrician in charge of child deaths audit, Kigali, Rwanda

Dr Harry Campbell, Edinburgh University, Department of Public Health Sciences, Edinburgh, United Kingdom

Dr Andrew Clarke, Clinical Lead Health Visitor, Healthy Child Programme, Lancashire Care NHS Trust, Preston, United Kingdom

Professor Ashok Deorari, Department of Paediatrics, WHO Collaborating Centre, All India Institute of Medical Sciences, New Delhi, India

Dr Queen Dube, Head Department of Paediatrics, College of Medicine, Blantyre, Malawi

Professor Trevor Duke, Professor of International Child Health, paediatric intensive care physician, Centre for International Child Health, University of Melbourne, Melbourne, Australia

Dr Mike English, Collaborative Programme, KEMRI-Wellcome Trust, Nairobi, Kenya

Dr Suzan Farhoud, independent consultant in child health, Cairo, Egypt

Dr Laura Ferguson, Associate Director, Program on Global Health and Human Rights, Kenyatta National Hospital University campus, Keck School of Medicine of University of Southern California, Los Angeles, California, USA

Ms Ana Isabel F. Guerreiro, independent consultant in children's rights, Lisbon, Portugal

Dr Dewan Md Emdadul Hoque, Project Coordinator, Centre for Child and Adolescent Health, International Centre for Diarrhoeal Disease Research, Bangladesh, Dhaka, Bangladesh

Professor Grace W. Irimu-Thinwa, Senior Lecturer, Department of Paediatrics and Child Health, University of Nairobi, Kenya

Dr Praveen Kumar, Department of Paediatrics, Kalawati Saran Children's Hospital, Lady Hardinge Medical College, New Delhi, India

Dr Marzia Lazzerini, Institute of Child Health, IRCCS Burlo Garofolo, Trieste, Italy

Dr Nigel Livesley, Country Director, University Research Co. India Pvt. Ltd, New Delhi, India

Professor Leyla Namazova-Baranova, Professor of Paediatrics and Deputy Director, National Centre for Child Health of the Russian Academy of Medical Science, Moscow, Russian Federation

Professor Ecaterina Stasii, State Medical University, Chisinau, Republic of Moldova

Professor Laxman Shrestha, Head, Department of Paediatrics, Institute of Medicine, Maharajgunj, Kathmandu, Nepal

Dr Gezahegn Nekatibeb Techane, Debre Berhan University, Debre Berhan, Ethiopia

Consultant

Dr Senait Kebede, Consultant and Rapporteur, Atlanta, Georgia, USA

External observers

Ms Imma Guerras-Delgado, Adviser on Child Rights, Office of the United Nations High Commissioner for Human Rights, Geneva, Switzerland

Dr Troy Jacobs, USAID, Washington DC, USA

Dr Catherine Kirk, Associate Director of Paediatrics, Partners In Health-Rwanda, Kigali, Rwanda

Dr Nosa Orobato, Deputy Director, Maternal, Newborn and Child Health Global Development, Bill & Melinda Gates Foundation, Seattle, Washington, USA

Dr Michel Pacque, Maternal and Child Survival Program, USAID Grantee, Washington DC, USA

Dr Zeenat Patel, Maternal and Child Survival Program, Washington DC, USA

Dr Mark Young, Senior Child Health Adviser, UNICEF, New York City, New York, USA

Secretariat

Headquarters

Dr Anthony Costello, Director, Department of Maternal, Newborn, Child and Adolescent Health (MCA)

Dr Cynthia Boschi-Pinto, Epidemiology, Monitoring and Evaluation, MCA

Dr Bernadette Daelmans, Coordinator, Policy, Planning and Programmes, MCA

Dr Guilheim Labadie, Policy, Planning and Programmes, MCA

Dr Blerta Maliqi, Policy, Planning and Programmes, MCA

Dr Zainab Naimy, Policy, Planning and Programmes, MCA

Ms Annie Portela, Research and Development, MCA

Dr Shamim Qazi, Research and Development, MCA

Dr Nigel Rollins, Research and Development, MCA

Mr Marcus Stahlhofer, Policy, Planning and Programmes, MCA

Dr Wilson Were, Policy, Planning and Programmes, MCA

Dr Maggie Montgomery, Department of Public Health, Environmental and Social Determinants of Health

Ms Mwansa Nkowane, Department of Human Resources for Health

Dr Peter Olumese, Global Malaria Programme

Mr Salim Sadruddin, Global Malaria Programme

Dr Kathryn O'Neill, Health Statistics and Information Systems

Dr Shams B. Syed, Department of Service Delivery and Safety

Dr Gerardo Zamora, Department of Nutrition for Health and Development

Mrs Zita Weise Prinzo, Department of Nutrition for Health and Development

Agenda

Objectives:

- Review the draft framework on the quality of paediatric care, and harmonize it with the framework for the quality of maternal and newborn care.
- Review the scope, format and content of the draft standards for improving the quality of paediatric care in health facilities.
- Discuss the process for identifying measures and monitoring indicators of the quality of care in health facilities.
- Discuss facilitation of uptake of these standards.

Monday 5 December

Chairperson: Dr Trevor Duke		Presenter or facilitator
9:00–9:20	Welcome and introductions	Anthony Costello, Director, MCA
	Overview and objectives	Dr Bernadette Daelmans
9:20–10:30	The new global strategy for women, children and adolescent health	Dr Anthony Costello, Director, MCA
	WHO vision for quality of care and framework for maternal and newborn health	Dr Bernadette Daelmans
	Maternal and newborn health facility standards of care around the time birth	Dr Ozge Tunçalp
	<i>Plenary discussion</i>	
10:30–11:00	<i>Coffee break</i>	
Framework and standards of the quality of paediatric care		Presenter or facilitator
Chairperson: Dr Trevor Duke		

11:00–13:00	Draft framework and standards of the quality of paediatric care (scope, structure and content) <i>Plenary discussion</i> Draft quality statements under each standard <ul style="list-style-type: none"> • Provision of care • Experience of care • Cross-cutting areas <i>Plenary discussion</i>	Dr Wilson Were
13:00–14:00	<i>Lunch</i>	
14:00–15:30	Group work to review and refine the standards and quality statements	Facilitators
15:30–16:00	<i>Coffee break</i>	
16:00–17:00	Plenary – Report back by groups	Group rapporteurs

Thursday, 6 December

Measurement of quality improvement		Presenter or facilitator
Chairperson: Dr Trevor Duke		
09:00–10:30	Plenary – Report back by groups (continued)	Group rapporteurs
10:30–11:00	<i>Coffee break</i>	
11:00–12:00	Adapting national standards and approaches to improving quality of care. Experience from the WHO Western Pacific Region Data collection and measurement of the quality of care at health facilities <i>Discussion</i>	Dr Trevor Duke Dr Mike English
12:00–13:00	Proposed process for identifying measures and indicators of quality improvement <i>Discussion</i>	WHO secretariat
13:00–14:00	<i>Lunch</i>	
Experience in quality of care improvement		Presenter or facilitator
Chairperson: Dr Mike English		
14:00–15:30	Experience in institutionalizing and implementing quality of care in health facilities <ul style="list-style-type: none"> • India and SEARO • Ethiopia • Malawi 	Dr Ashok Deorari Dr Gezahegn Techane Dr Queen Dube
15:30–16:00	<i>Coffee break</i>	
16:00–17:00	Next steps: process, timeline, products	WHO Secretariat

Annex 2. Participants in the online Delphi consultation on quality measures and possible indicators.

Dr Elfatih Abdelraheem, United Nations Development Program, Turkey

Dr Fizan Abdullah, Ann & Robert H. Lurie Children's Hospital, USA

Dr Charlotte Adamczick, Germany

Dr Joel Adze Kaduna State University, Nigeria

Prof Abdourahmane Diparide Agbere, Togo

Dr Olga Agbodjan-Prince, World Health Organization, Burkina Faso

Dr Manal Ahmed, Federal Ministry of health, Sudan

Dr Nada Ahmed, Federal Ministry of health, Sudan

Dr Fahad Al-Aql, Ministry of health, Saudi Arabia

Mr Mohammed AL-EMAD, World Health Organization, Yemen

Dr Essam Al-Ghamdi, Ministry of health, Saudi Arabia

Dr Fatima Al-Hinai, Ministry of health, Oman

Dr Barry Ally, Mali

Dr Mona Al-Mudhwahi, World Health Organization, Somalia

Dr Hanan Al-Najmey, Ministry of health, Jordan

Dr Jamela AL-Raihy, World Health Organization, Egypt

Dr Nagiba Al-Shawafi, Ministry of Health and Population, Yemen

Dr Shally Awasthi, King George's Medical University, India

Dr Mary Azayo, Ministry of health and social welfare, Tanzania

Dr Lesley Bamford, National Department of Health, South Africa

Dr Juliet Evelyn Bataringaya, World Health Organization, Rwanda

Dr Suher Bekderna, National Centre for Disease Control, Libya

Dr S K Masum Bilah, International Centre for Diarrhoeal Disease Research, Bangladesh

Ms Rihab Blidi, Youth Peer Education Network, Tunisia

Dr Bongomin Bodo, World Health Organization, Uganda

Dr Mary Nana Ama Brantuo, World Health Organization, Namibia

Dr Luisa Brumana, UNICEF, Panama

Dr Tatiana Bucyana, Ministry of Health, Rwanda

Dr Francois Busogoro, World Health Organization, Burundi

Dr Mary Bwalya, World Health Organization, Zambia

Dr Susanne Carai, Germany

Dr Juan Carlos de Jesus, Ministry of Health, Dominican Republic

Dr Deepak Chawla, Government Medical College Hospital, India

Dr Harish Chellani, Safdarjung Hospital, India

Dr Paata Chikvaidze, World Health Organization, Afghanistan

Dr Tamar Chitashvili, Assist USAID, USA

Ms Shelly Chitsungo, UNICEF, Zimbabwe

Mr Modrick Chiyenda, District Health Office, Malawi

Ms Samina Choudhury, UNAIDs, Bangladesh

Mr Hillary Christopher, Ministry of Health, Guyana

Mr Andrew Clarke, Lancashire Care NHS Foundation Trust, United Kingdom

Dr Tim Colbourn, University College London, United Kingdom

Prof Helen Cross, University College London, United Kingdom

Dr Hirondina Cucubica, Ministry of Health, Angola

Dr Brigitte de Hulsters, World Health Organization, PAHO, Dominican Republic

Prof Fatima Dehbi, Mohammed University, Morocco

Dr Ashok Deorari, All India Institute of Medical Sciences, India

Dr Teshome Desta, World Health Organization, Zimbabwe

Dr Ibrahima Diallo, Helping children worldwide, Switzerland

Dr Adrian Diaz, World Health Organization, PAHO, Ecuador

Dr Roseline Dansowaa Doe, World Health Organization, Ghana

Dr Maria Dos Anjos, World Health Organization, Sao Tome

Dr Trevor Duke, University of Melbourne, Australia

Dr Els Duval Maastricht University Medical Center, Belgium

Dr Musu Duworko, World Health Organization, Liberia

Ms Nester Edwards, Regional Nursing, Grenada

Dr Hala A.R. Ele Hennawy, World Health Organization, EMRO, Egypt

Prof Mike English, KEMRI-Wellcome Trust, Kenya

Dr Laura Ferguson, Kek School of Medicine of USC, USA

Mr Fabrice Fotso, Independent Consultant, Senegal

Dr Dao Fousseni, World Health Organization, Burkina Faso

Dr Mukul Gaba, Indian Academy of Pediatrics, India

Dr Preeti Galagali, India Academy of Paediatrics, India

Dr Ajay Gambhir, National Neonatology Forum of India, India

Prof Omaima Gibaly, Assiut, Egypt

Dr Mahlet Gizaw, St. Paul's Millenium Medical College, Ethiopia

Dr Nhamo Gonah, Bindura Hospital, Zimbabwe

Dr Steve Graham, The Royal Children's Hospital, University of Melbourne, Australia

Dr Amy Gray, University of Melbourne, Australia

Dr Sufang Guo, UNICEF, Nepal

Dr Tedbabe Degeffie Hailegebriel, UNICEF, USA

Dr Irina Hajiyeva, Armenia

Dr Andreas Hansmann, Germany

Dr Kim Harper, Frere Hospital, South Africa

Dr Hans Hartmann, Hannover Medical School, Germany

Dr Hanan Hasan, World Health Organization, Iraq

Dr Nilmini Hemachandra, Family Health Bureau, Sri Lanka

Dr Rosalinda Hernandez Munoz, PAHO, Bolivia

Dr Stephen Howie, New Zealand

Ms Fathimath Hudha, World Health Organization, Maldives

Dr Richard Idro, Mulago Hospital and Makerere Medical School, Uganda

Dr Abdul Ikram USAID Afghanistan

Dr Nemes Joseph Iriya AFRO Tanzania

Dr Rasa Izadnegahdar Bill & Melinda Gates Foundation USA

Dr Troy Jacobs, USAID, Washington DC, USA

Dr Bakary Jargo, World Health Organization, Gambia

Dr Anoma Jayathilaka, World Health Organization, Myanmar

Dr Mariyam Jenyfa, Ministry of health, Maldives

Dr Trevor M. Kanyowa, World Health Organization, Zimbabwe

Dr Wezi Kaonga, Zambia

Dr Neena Khadka, USA

Dr Najwa Khuri, University of Jordan, Jordan

Dr Colleta Kibassa, UNICEF, Botswana

Ms Mary Kinney, Save the Children, South Africa

Dr Catherine Kirk, Partners In Health- Rwanda, Rwanda

Dr Reinhard Klinkott, Forum for International Health, Germany

Dr Mehretie Kokeb, University of Gondar, Ethiopia

Carsten Kruger Germany

Dr Eva Kudlova University Prague Czech Republic

Dr Tatiana Kulichenko, National Centre for Child Health of the Russian Academy of Medical Science, Russian Federation

Dr Praveen Kumar, Lady Hardinge Medical College & Associated Hospitals, India

Dr Sharad Kumar Singh, Ministry of Health & Family Welfare, India

Dr Aigul Kuttumuratova, World Health Organization, EURO, Denmark

Dr Benjamin Downs Lane, World Health Organization, Philippines

Ms Maxine Lashley, Barbados Community College, Department of Nursing, Barbados

Dr Rufina Latu, World Health Organization, Papua New Guinea

Dr Koko Lawson, World Health Organization, Togo

Ms Marva Lawson-Byfield, chief nursing officer in the Ministry of Health, Jamaica

Dr Rakesh Lodha, All India Institute of Medical Sciences, India

Dr Juan Lozano, Florida International University, Colombia

Mr Norman Lufesi, Community Health Service, Ministry of Health, Malawi

Dr Aziza Lyaghfour, Ministry of Health, Morocco

Dr Loubna Maaroufi, Ministry of Health, Morocco

Ms Alison Macintyre, WaterAid, Australia

Dr Ian Maconochie, St Mary's Hospital, London, United Kingdom

Dr Bernard Madzima, Ministry of Health, Zimbabwe

Dr Lamia Mahmoud, World Health Organization, Pakistan

Dr Kuhu Maitra, Abt Associates Inc. USA

Dr Angelo Makpenon, National TB Program, Ministry of Health, Benin

Dr Suleman Malik, UNICEF, Newyork, USA

Dr Emma Manalac, Independent Consultant, Philippines

Mrs Makali Maqhama, World Health Organization, Lesotho

Dr Fernanda Isabel Martins, World Health Organization, Guinea Bissau

Dr Elia Maurizio, Istituto di Ricovero e Cura a Carattere Scientifico (IRCCS), Italy

Dr Andrew Mbew, World Health Organization, Nigeria

Dr Neil McKerrow, Ministry of Health, South Africa

Dr Dewan Md. Hoque, Centre for Child and Adolescent Health, Bangladesh

Dr Peter Meaney, The Children Hospital of Philadelphia, USA

Dr Rajesh Mehta, World Health Organization, SEARO, India

Dr Amha Mekasha, Addis Ababa University, Ethiopia

Dr Marina Melkumova, "Arabkir" Medical centre, Armenia

Dr Merlene Allen, Community College, St. Vincent and the Grenadines

Prof Julije Mestrovic, University of Split, Croatia

Dr Leslie David Mgalula, World Health Organization, Malawi

Dr Maina Michuki, KEMRI-Wellcome Trust Research Programme, Kenya

Prof Elizabeth Molyneux, Independent Consultant Paediatrician, United Kingdom

Dr Kubanychbek Monolbaev, World Health Organization, Kyrgyzstan

Dr Guy Moutounou, World Health Organization, Congo

Dr Eva Movsesyan, Arabkir Joint Medical Centre
Institute of Child and Adolescent Health, Armenia

Dr Flavia Mpanga, UNICEF, Uganda

Ms Ana Guerreiro, Independent consultant, Child Rights, Portugal

Dr Adela Mubasher, World Health Organization, Afghanistan

Dr Hilda Mujuru, University of Zimbabwe College of Health Sciences, Zimbabwe

Dr Dagnev Muluneh, Federal Ministry of Health, Ethiopia

Dr Dagnev Muluneh, Federal Ministry of Health, Ethiopia

Dr Assumpta Muriithi, World Health Organization, AFRO, Congo

Dr Fadzai Mutseyekwa, Maternal and Child Health Integrated Program (MCHIP) Zimbabwe

Dr Victoria Nakibuka, Nsambya Hospital, Uganda

Dr Elizabeth Namagala, Ministry of health, Uganda

Prof Leyla Namozova-Baranova, National Centre for Child Health of the Russian Academy of Medical Science, Russian Federation

Prof Kissoon Niranjana, University of British Columbia, Canada

Dr Briget Nsiku, World Health Organization, Congo

Dr Isabel Nthave, Maternal Child Survival Program, Mozambique

Dr Yaqub Nuhu, World Health Organization, Sierra Leone

Dr Rachel Nyamai, Ministry of Health, Kenya

Dr Oscar Noel Ocho, University of the West Indies, Trinidad and Tobago

Dr Divinal Ogaoga, Ministry of Health, Solomon Islands

Ms Keiko Osaki, Japan International Cooperation Agency (JICA), Japan

Dr Miyako Otsuka, Ministry of Health, Labor and Welfare, Japan

Dr Lylia Oubraham, World Health Organization, Algeria

Dr Michel Pacque, Maternal and Child Survival Program, Washington DC, USA

Ms Jessie-Ann Panchoo-Bruno, Marrayshow Community College, Grenada

Dr Zeenat Patel, Maternal and Child Survival Program, Washington DC, USA

Dr Jeane Patrick

Mrs Payden, World Health Organization, SEARO India

Dr Stefan Peterson, UNICEF, New York, USA

Dr Sano Phal, World Health Organization, Cambodia

Dr Jeena Prakash, Nelson Mandela School of Medicine, South Africa

Prof Andrew Argent, University of Capetown, South Africa

Prof Adegoke Falade, University of Ibadan, Nigeria

Dr Nande Putta, UNICEF, New York, USA

Dr Betzabe Riveros, Pan American Health Organization, USA

Ms Marcia Rollock, Caribbean Regional Midwives Association, Trinidad and Tobago

Dr Alexander Rowe, US/Centre for Disease Control, USA

Dr Dhammica Rowel, Ministry of Health, Sri Lanka

Dr Isabella Sagoe-Moses, Ministry of Health, Ghana

Dr Amel Salah, UNICEF, Sudan

Dr Haroon Saloojee, University of Witwatersand, South Africa

Dr Charles Sandy, National TB programme, Zimbabwe

Dr Hailu Nida Sarero, Ministry of Health, Swaziland

Dr Sergey Sargysyan, Chief pediatrician of RA, Armenia

Dr Andreas Schulz, Tropical and travel physician, Germany

Dr Nagham Shaqra, USAID, Jordan

Dr Alyssa Sharkey, UNICEF, Nepal

Dr Kyoko Shimamoto, UNICEF, Thailand

Dr Wegen Shiferaw Shirka, World Health Organization, Ethiopia

Dr Mekhri Shoismatuloeva, World Health Organization, Tajikistan

Prof Laxman Shrestha, Institute of Medicine, Maharajgunj, Nepal

Prof Shrijana Shrestha, Patan Academy of Health Sciences (PAHS), Nepal

Dr Khalid SIDDEEG, World Health Organization, EMRO, Egypt

Dr Faiqi Sinawi, Ministry of Health, Oman

Dr Howard Sobel, World Health Organization, WPRO, Philippines

Prof David Southall, Maternal & Childhealth Advocacy International, United Kingdom

Dr Elena Starets, Odesa State Medical University, Ukraine

Prof Ecaterina Stasii, State Medical University, Moldova

Dr Abner Tagoola, Ministry of Health, Uganda

Dr Maha Taha, Ministry of Health, Iraq

Prof Vladimir Tatochenko, National Centre for Child Health, Russian Federation

Dr Mira Taylor, Koforiduah Regional Hospital, Ghana

Dr Gezahegn Techane, Debre Berhan University, Ethiopia

Dr Lisi Tikoduadua, Colonial War Memorial Hospital, Fiji

Dr Raheleh Toghiani, University of medical Sciences, Iran

Dr Daisy Trovoada, World Health Organization, Gabon

Dr Delgermaa Vanya, World Health Organization, Mongolia

Dr Livui Vedrasco, World Health Organization, Thailand

Prof Robinson Wamanda, University of Zaria, Nigeria

Dr Tshering Wangden, Jigme Dorji Wangchuck National Referral Hospital, Bhutan

Dr Martin Weber, World Health Organization, EURO, Denmark

Dr Henriette Wembanya, Burundi

Dr Bridget Wills, University of Oxford, Vietnam

Dr Jo Wilmshurst, Red Cross Hospital, South Africa

Dr Janice Woolford, Pan American Health Organization, Guyana

Dr Bogale Worku, Executive Director, Ethiopian Pediatrics Society, Ethiopia

Dr Mark Young, UNICEF, New York, USA

Dr Muhammad Zaeem, Paediatrician Islamabad, Pakistan

Prof Shamsa Zafar, Ministry of Health, Pakistan

Dr Nabila Zaka, UNICEF, New York, USA

Dr Assefash Zehaie Kassahun, World Health Organization, Eritrea

Annex 3. Online process for developing quality measures

Participants

An online consultation was conducted to ensure a balanced approach to building consensus on the quality measures and identifying possible candidate indicators of quality of paediatric care. Various stakeholder groups were asked to suggest the names of experts in low-, middle- and high-income countries, and a list of experts was compiled. The areas of expertise and experience were:

- improvement of quality of care ;
- clinicians, nurses, pharmacists, laboratory technologists, social workers, academics and researchers;
- global, national and subnational policy-makers and managers;
- representatives of consumers, including community organizations working in child health and representatives of professional societies; and
- representatives of international and multilateral agencies.

Invitations were then sent by e-mail to 439 experts who had been identified to enquire about their interest in participating in the online consultation. The message described the purpose, scope and expected outcomes of the consultation, and informed them that their full participation would be acknowledged. To minimize or avoid attrition bias, only those participants who agreed to participate in the entire process were invited to participate in the first round of the Delphi process. Of the 439 experts invited, 296 accepted the invitation.

In accordance with WHO requirements, the experts were then asked to disclose any circumstances that might give rise to a potential conflict of interest. Potential conflicts of interest included financial, professional and other interests relevant to the subject or that could be affected by the outcome of the work. Potential conflicts of interest were assessed case by case, as a potential interest does not automatically disqualify or limit participation.

Delphi process

First round

In the first round, participants were sent a link through SurveyMonkey® and given 3 weeks to review the draft list of quality measures for validity, clarity and completeness and, when necessary, to revise the phrasing or suggest additional measures. Participants were given three choices, depending on their area of expertise, to review and comment on: all the measures: provision (standards 1–3) and experience (standards 4–6) of care and system inputs (standards

7 and 8); only on provision of care (standards 1–3) and system inputs (standards 7 and 8); or only on experience of care (standard 4–6) and system inputs (standards 7 and 8).

The consultation round remained open for 3 weeks, giving participants the opportunity to save and resume the survey at their own pace and to review their responses before submitting the completed survey. The time required to complete the survey depended on the choice but could take 2–4 h. Reminders were sent at the end of the first 2 weeks, every 2 days in the last week and 24 h before the closing day.

Of the 296 experts who were sent the link, 222 (75%) in 92 countries provided feedback and comments. The measures were then revised, additional measures were formulated by the working group on the basis of the feedback, and the standards were prepared for the second round of the Delphi process.

Second round

Only 191 experts who had participated in the first round agreed to participate in the second. They were sent the measures they had chosen in the first round: 44 were sent all the measures (standards 1–8); 121 were sent measures of provision of care and system inputs (standards 1–3, 7 and 8); and 26 were sent measures of experience of care and system inputs (standards 4–8). The experts were asked to prioritize the revised and updated quality measures on the basis of the criteria (importance, measurability, reliability, validity and usefulness) agreed upon during the expert meeting (see Box A2.1). For each of criterion, participants chose one of six graded options: no, probably no, not sure, probably yes, yes and no expertise (see Box A2.2).

Box A3.1. Five predefined criteria for measures of quality of standards of care

1. **Importance:** The topic of the measure is significant and strategically important to stakeholders (e.g. patients, clinicians, purchasers, public health officials, policy-makers). *Health importance:* The aspect of health addressed by the measure is important, as indicated by high prevalence or incidence and/or a significant effect on the burden of illness (i.e. effect on mortality or morbidity of a population).
2. **Measurability:** The requirements for data collection for the measure are understandable and feasible. The data source required for implementing the measure is available and accessible within the timeframe for measurement.
3. **Reliability:** The results of the measurement are reproducible for a fixed set of conditions, irrespective of who makes the measurement or when it is made.
4. **Validity:** The measure truly measures what it purports to measure.
5. **Usefulness:** The measure provides a meaningful measure of change over time, for decision-making.

Box A3.2. Six options for grading measures of quality of standards of care

- **No:** This quality measure does not fulfil this criterion.
- **Probably no:** This quality measure probably does not fulfil this criterion.
- **Not sure:** I am not sure whether this quality measure fulfils this criterion.
- **Probably yes:** This quality measure probably fulfils this criterion.
- **Yes:** This quality measure fulfils this criterion.
- **No expertise:** I don't have expertise in this area.

Analysis of responses:

Of the 191 experts who participated in the second round, 136 (71%) responded: 85 on measures pertaining only to provision of care, 34 on both provision and experience of care and 17 only on experience of care. The ratings given according to the criteria and the grading were used to estimate a mean score for each quality measure, as follows:

- No: This quality measure does not fulfil this criterion. = 0 points
- Probably no: This quality measure probably does not fulfil this criterion. = 0.25 point
- Not sure: I am not sure whether this quality measure fulfils this criterion. = 0.5 point
- Probably yes: This quality measure probably fulfils this criterion. = 0.75 point
- Yes: This quality measure fulfils this criterion. = 1 point
- No expertise: I don't have expertise in this area. = Blank

"Blank" responses were not used in calculating mean scores.

Calculation of mean scores

A mean score, termed the "intermediate" score (C), was then calculated for each quality measure on each criterion, as the sum of all the scores for each criterion divided by the number of respondents (excluding blanks). As there were five criteria, the mean of the five intermediate scores (C) was calculated to obtain the final priority score for each quality measure:

$$\text{Final score for a quality measure} = \text{Mean of the intermediate scores for the five criteria} \\ = (C1 + C2 + C3 + C4 + C5)/5.$$

The input, output and outcome quality measures were then ranked for each quality statement according to the final priority score as percentages.

“Children are not small adults.”



For more information, please contact:

Department of Maternal, Newborn, Child
and Adolescent Health (MCA)
World Health Organization
Avenue Appia 20, CH-1211 Geneva 27,
Switzerland

Fax: +41 22 791 4853
Email: mcah@who.int
Website: www.who.int

ISBN 978 92 4 156555 4

