Noncommunicable disease facility-based monitoring guidance

Framework, indicators, and application

World Health Organization

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Foreword

Every year noncommunicable diseases (NCDs) are responsible for 41 million deaths globally – three-quarters of these deaths occur in low- and middle-income countries. Today, just a handful of countries are on track to reduce premature NCD mortality by one third by 2030, which is the NCD target of the Sustainable Development Goals (SDGs). Additionally, many countries are lagging behind on the integration of NCD services into their health systems. And now, the COVID-19 pandemic has further disrupted access to critical NCD services where they are most needed. It is imperative that we strengthen and accelerate our efforts to reduce premature NCD mortality in a coordinated and strategic way.

The World Health Organization (WHO) has been actively supporting countries in the implementation of evidence-based prevention and control measures to tackle NCDs; however, we need to learn much more about the scope, scale, and impact of the interventions being made at a granular level. Currently, human resource and technological limitations in facilities have been major barriers to tracking the performance of NCD prevention and control programmes and their outcomes. It is vital that improvements be made in these areas and one key way to achieve that is through consistent and accurate data collection.

At the same time, we must also ensure equitable access to quality essential health services for all people, including NCD patients. And this will only be possible if we have high quality data along the entire continuum of care, from risk factor exposure, to early detection and diagnosis, to treatment and long-term care. It will also require that we measure the quality and coverage of the services being implemented the entire way.

In the NCD Implementation Roadmap 2023-2030 recently adopted at the 75th World Health Assembly, as well as within the Global NCD Compact 2020-2030, one of the key agreed upon actions governments can take is the establishment of effective health information systems. These systems should produce reliable and timely data at national and subnational levels on NCD risk factors, the prevalence of individual NCDs, mortality from these diseases, and the strength of their health systems for delivering NCD care. As we work towards the SDGs and universal health coverage for all, we have the responsibility to promote and harness data to track progress, to identify areas for improvement, and to guide our decisions and actions at each level of the health system.

This document will provide the indicators needed for NCD facility-based patient and programme monitoring. There is so much potential to be unlocked. Together, let us harness the power of health facility data, and achieve the global NCD targets and health for all.

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Disclosed interests in the field of management of noncommunicable diseases, specifically, cardiovascular diseases, diabetes, chronic respiratory diseases and cancers that may influence the opinions of the experts were referred to the WHO Ethics unit for final decision on exclusion of expert participation in the development of NCD facility-based indicators. None of the listed contributors were found to have conflicts of interest that significantly impacted on their expert judgement.

Abbreviations

BP	Blood pressure
BPMD	Blood pressure measuring device
CKD	Chronic kidney disease
COPD	Chronic obstructive pulmonary disease
CVD	Cardiovascular disease
DBP	Diastolic blood pressure
eGFR	Estimated glomerular filtration rate
FPG	Fasting plasma glucose
HbA1c	Glycated hemoglobin
HEARTS	HEARTS technical package for cardiovascular disease management in primary health care
HEARTS-D	HEARTS-D: diagnosis and management of type 2 diabetes
HPV	Human papillomavirus
NCD	Noncommunicable disease
PG	Plasma glucose
SABA	Short-acting β_2 agonist
SBP	Systolic blood pressure
SDG	Sustainable Development Goal
VIA	Visual inspection with acetic acid
WHO	World Health Organization
WHO PEN	WHO package of essential noncommunicable (PEN) disease interventions for primary health care

CHAPTER 1

Background

Noncommunicable diseases (NCDs) are responsible for 74% of all global deaths annually – a number equivalent to the loss of 41 million people each year. Within those annual losses, 17 million of the individuals who die are under age 70, and 86% of these premature deaths take place in low- and middle-income countries. Further, 81% of all premature mortality each year is caused by four categories of NCDs: cardiovascular diseases (CVDs) (17.9 million deaths), cancers (9.3 million deaths), chronic respiratory diseases (4.1 million deaths), and diabetes (2.0 million deaths) *(1)*.

In order to combat the impact the NCD burden has caused, countries have committed to achieving global NCD targets, including the Sustainable Development Goals target to reduce by one third premature mortality from noncommunicable diseases by 2030 (SDG 3.4) *(2)*. The World Health Organization (WHO) has developed a suite of effective interventions that help countries tackle the four groups of NCDs causing the majority of premature mortality in low- and middle-income countries. These include standards and tools for detection and screening, along with treatment and palliative care for NCDs as indicated in WHO technical packages such as the *WHO package of essential noncommunicable (PEN) disease interventions for primary health care* (WHO PEN) *(3)*, *HEARTS technical package for cardiovascular disease management in primary health care* (HEARTS) for improving cardiovascular health in primary care delivery settings *(4)*, and the module on *HEARTS-D: diagnosis and management of type 2 diabetes* (HEARTS-D) for diagnosis and management of type 2 diabetes *(5).*

Despite national and global commitments, as well as guidance on effective interventions for the management of NCDs, the progress toward the SDG 3.4 target has been slow, with NCD service integration into healthcare systems lagging significantly in the last two decades. Routine monitoring of the implementation of evidence-based effective NCD interventions can optimize service quality and coverage, especially in primary care delivery settings that serve as the patient first contact point where integrated, comprehensive and continuous care may be provided. Monitoring patients with NCDs along the care cascade can reveal gaps that affect service coverage and quality, and help countries prioritize and accelerate actions to achieve the SDG 3.4 target.

WHO has developed the *Noncommunicable disease facility-based monitoring guidance* for NCD patient and programme monitoring, including a framework and parsimonious set of relevant, valid, and feasible standardized indicators to guide recording and reporting of health services data at the primary care level. Countries can use this framework to strengthen monitoring for NCDs by leveraging existing national health information systems, particularly routine health facility reporting systems and health facility survey systems.

CHAPTER 2

Introduction

The *Noncommunicable disease facility-based monitoring guidance* provides advice for optimizing health services data to support early detection and treatment of NCDs in primary care settings. It can be used to identify information gaps and advocate for the inclusion of NCD monitoring in routine health information systems and health facility surveys, where it is currently lacking.

The *Noncommunicable disease facility-based monitoring guidance* aims to support countries in reviewing their performance against WHO or national standards for NCD management in resource-constrained settings. It can help countries identify barriers to service delivery at different levels of the health system, as well as track people with NCDs along the care cascade. It also promotes the strategic use of a small set of relevant, valid, and feasible indicators to inform national programme planning and implementation, guide resource management, and support clinical decisions.

The *Noncommunicable disease facility-based monitoring guidance* focuses on monitoring proven, effective, primary care interventions for tackling NCDs in resource-limited contexts as indicated in WHO PEN. These interventions include NCDs such as asthma, chronic obstructive pulmonary disease (COPD), breast cancer, cervical cancer, childhood cancer and other cancers, as well as CVDs including hypertension, and diabetes. Its development, monitoring domains and indicators, and sources and application in countries are described in the succeeding sections.

CHAPTER 3

The Noncommunicable disease facility-based monitoring guidance

Development process

WHO developed the *Noncommunicable disease facility-based monitoring guidance* in response to the need for a comprehensive framework for monitoring NCD management in facilities. The guidance builds upon the monitoring section and modules found in the WHO PEN, HEARTS and HEARTS-D technical packages.

Country health officials, experts, and partners in a WHO meeting assessed the implementation of data collection for hypertension management with a focus on HEARTS indicators, as well as other indicators used for monitoring hypertension at various levels of the health system *(6)*. Additional indicators were recommended to monitor the assessment of comorbidities and complications to effectively track patients along the cascade of care. These additional actions can help minimize losses to follow-up and ensure continuous quality improvement of clinical programmes. To enhance indicator standards, the use of equity measures such as socio-demographic dimensions in analysing indicators, alignment with country-specific clinical protocol and targets, and harmonization of hypertension, diabetes and other NCD monitoring frameworks were advised.

In light of these recommendations, WHO extended the list of facility-based indicators to cover information requirements for management of other NCDs in primary care delivery settings. Indicators and targets relevant to primary care that were part of current or planned NCD-specific monitoring frameworks from global programmes such as the WHO Global Diabetes Compact, WHO Global Breast Cancer Initiative, WHO Global Initiative for Childhood Cancer, and Cervical Cancer Elimination Initiative were also considered. WHO experts in the clinical management of hypertension, diabetes, chronic respiratory diseases, and cancers, as well as experts in primary health care, integrated service delivery and surveillance reviewed indicators and developed corresponding metadata. These experts took into account WHO guidelines, global priorities, standard definitions of related WHO indicators and data collection feasibility. Their iterative review and revision of indicators resulted in 86 proposed indicators.

Systematic reviews of prior studies on each indicator showed that monitoring the core indicators and the majority of optional indicators was effective in improving patient outcomes and/or quality of service. Moreover, the evidence demonstrated that the proposed guidance was comprehensive, as it included all indicators that are commonly used for monitoring clinical care for the NCDs in the proposal.

WHO also asked a broad group of experts from academic and research organizations, health service provider institutions, and development agencies with extensive knowledge and experience in disease management, primary health care, integrated service delivery, surveillance, or information systems to provide further scrutiny of the proposed *Noncommunicable disease facility-based monitoring guidance* indicators. A series of reviews ensued to get consensus from experts on priority indicators and indicator metadata. Through an online survey, each expert rated the indicators on six important characteristics: validity, having clear and standard definitions, sensitivity to performance, importance to stakeholders, collectability, and ease of interpretation. The experts also provided comments on indicator metadata.

Aggregated ratings and comments on indicators were presented and discussed by technical experts during WHO meetings held in March 2022. Experts reached an agreement on the inclusion of most of the proposed indicators, although several were dropped due to feasibility concerns. Out of the retained indicators, only two to four indicators per disease programme were ultimately classified as core indicators which countries must strive to report regularly. The remaining indicators were optional for collection depending on human resource and technological infrastructure capacities.

Experts also recommended the development of clearer, operationalized definitions of numerators and denominators. Contextualization of indicators according to varying modalities in service delivery and infrastructure in countries were recognized as being important, as was

engagement of stakeholders in setting the target for each indicator. Finally, the establishment of effective coordination mechanisms among health providers at different levels of care and strengthening routine health information systems for individual tracking and programme management through the use of appropriate technologies were suggested.

The final list included 22 core indicators and 59 optional indicators for monitoring primary care essential interventions for CVDs including hypertension, as well as diabetes, asthma, COPD, breast cancer, cervical cancer, childhood cancer and other cancers.

Monitoring domains and indicators

The noncommunicable disease facility-based monitoring framework for primary care (Fig. 1) is aligned with the WHO publication, *Primary health care measurement framework and indicators: monitoring health systems through a primary health care lens (7)*, with indicators organized by results-chain (inputs/processes, outputs/outcomes) and monitoring domains centered on the orientation of the health system, including programme determinants (system capacity and management), service delivery (early detection and diagnosis, treatment and complication assessment) and programme objectives (disease control). Indicators are also arranged by disease programmes, excluding four indicators that cut across programmes.

Monitoring health system capacity and management includes indicators that measure the availability of core drugs, technologies, and trained staff for the management of NCDs in primary care facilities, as well as the implementation of a continuous quality improvement process through regular supervisory visits and complete and timely facility reports. The service delivery monitoring domain evaluates the volume, quality, and continuity of care provided by each facility. Indicators include the level of various essential NCD services performed by each facility, such as early diagnosis of signs and symptoms, screening, diagnosis, treatment, and complication assessment as applicable to established care pathways, along with capacities of the health facility for management of specific NCDs. Service levels may depend on the uptake of services by targeted individuals and the resulting detection level of each NCD. The quality of care is measured by assessing the level of services complying with WHO or national protocols, while continuity of care is primarily assessed through losses to follow-up.

Monitoring disease control measures the combined effect of system capacities, and management and service delivery on the health status of people with NCDs who seek care in primary care facilities. All indicators are oriented to explore health inequities by facility-level attributes such as ownership type (public/private), and /or by individual-level attributes such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type, and health insurance.

Sources

These indicators on health capacity and management, health services, and disease status should ideally come from routine facility reporting systems with NCD patient monitoring. The routine reporting systems should get data from individual health records, service records, and resource records which health workers maintain daily as part of the care process. Health facility surveys can be alternate sources of indicators and likewise serve as validation of routine health service data.

Fig. 1 Noncommunicable disease primary care facility-based patient and programme monitoring framework

HYPERTENSION AND CARDIOVASCULAR DISEASES

INPUTS/PROCESSES

System capacity and management

- ► Availability of hypertension core medicines
- ► Availability of cardiovascular disease core medicines
- ► Availability of a functional blood pressure measuring device

OUTPUTS

Early detection and diagnosis

- ▪ Assessment of cardiovascular disease risk (aged ≥40 years)
- ▪ Screening for hypertension among adults as part of routine service
- ▪ Hypertension detection from opportunistic screening

Complication assessment

- ▪ Assessment for chronic kidney disease among people newly diagnosed with hypertension

OUTCOMES

Disease control

- ► Blood pressure control among people with hypertension
- ▪ Blood pressure control among people with hypertension (follow-up)

DIABETES

INPUTS/PROCESSES

System capacity and management

- ► Availability of diabetes core medicines
- ► Availability of plasma glucose testing
- ► Availability of Hemoglobin A1c testing

OUTPUTS

Treatment

- ▪ Pharmacological treatment among people with diabetes
- ▪ Statin therapy among people with diabetes
- ▪ Pharmacological treatment for chronic kidney disease among people with diabetes
- ▪ Pharmacological treatment for hypertension among people with diabetes

Complication assessment

- ▪ Assessment for diabetic chronic kidney disease among people with diabetes
- ▪ Assessment for diabetic foot among people with diabetes
- ▪ Referral for retinopathy screening among people with diabetes

OUTCOMES

Disease control

- ► Glycaemic control among people with diabetes
- ▪ Glycaemic control among people with diabetes (follow-up)
- ▪ Chronic kidney disease among people with diabetes
- ▪ Lower-limb amputation among people with diabetes
- ▪ Blindness among people with diabetes

ASTHMA AND CHRONIC OBSTRUCTIVE PULMONARY DISEASE

INPUTS/PROCESSES

System capacity and management

- ► Availability of asthma core medicines
- ► Availability of chronic obstructive pulmonary disease core medicines
- ▪ Availability of peak flow meter and mouthpiece

OUTPUTS

Early detection and diagnosis

- ▪ Asthma diagnosis using peak flow measurement
- ▪ Chronic obstructive pulmonary disease diagnosis using peak flow measurement

Treatment

- ▪ Treatment among people with asthma
- ▪ Treatment among people with chronic obstructive pulmonary disease

OUTCOMES

Disease control

- ► Asthma control
- ► Chronic obstructive pulmonary disease control
- ▪ Emergency visit among people with asthma
- ▪ Emergency visit among people with chronic obstructive pulmonary disease

BREAST CANCER

INPUTS/PROCESSES

System capacity and management

OUTPUTS

Early detection and diagnosis

- ► Clinical breast evaluation for early diagnosis of breast cancer among women aged 30–49 years with signs and/or symptoms associated with breast cancer
- ► Timeliness of referral for breast cancer diagnosis among women aged 30–49 years with associated signs and/or symptoms of breast cancer who had suspicious findings from clinical breast evaluation
- ▪ Referral for mammography screening among women aged 50–69 years
- ▪ Timeliness of breast cancer confirmatory diagnosis among women aged 30–49 years with suspicious findings from clinical breast evaluation

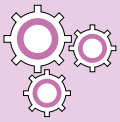
Treatment

- ▪ Timeliness of breast cancer treatment among women aged 30–49 years with suspicious findings from clinical breast evaluation

OUTCOMES

Disease control

PROGRAMME DETERMINANTS



SERVICE DELIVERY

PROGRAMME OBJECTIVES

CERVICAL CANCER

INPUTS/PROCESSES	OUTPUTS	OUTCOMES
System capacity and management ► Availability of human papillomavirus testing ▪ Availability of Pap smear testing ▪ Availability of visual inspection with acetic acid testing	**Early detection and diagnosis** ► Cervical cancer screening with high performance test among women aged 30–49 years ► Cervical cancer screening among women aged 30–49 years ► Cervical cancer screening test positivity among women aged 30–49 years ▪ Cervical cancer rescreening among women aged 30–49 years **Treatment** ▪ Pre-invasive cervical disease treatment among women aged 30–49 years ▪ Timeliness of referral for cervical cancer diagnosis among women aged 30–49 years with suspicious findings from cervical cancer screening	**Disease control**

CHILDHOOD CANCER

INPUTS/PROCESSES	OUTPUTS	OUTCOMES
System capacity and management	**Early detection and diagnosis** ► Clinical evaluation for early diagnosis of childhood cancer among children with signs and/or symptoms associated with childhood cancer ► Timeliness of referral for childhood cancer diagnosis among children with associated signs and/or symptoms of childhood cancer who had suspicious findings from clinical evaluation	**Disease control**

GENERAL CANCERS

INPUTS/PROCESSES	OUTPUTS	OUTCOMES
System capacity and management	**Early detection and diagnosis** ► Clinical evaluation for early diagnosis of cancer among people with signs and/or symptoms associated with cancer ► Timeliness of referral for cancer diagnosis among people with associated signs and/or symptoms of cancer who had suspicious findings from clinical evaluation	**Disease control**

CROSS-CUTTING

INPUTS/PROCESSES	OUTPUTS	OUTCOMES
System capacity and management ▪ Availability of trained staff ▪ Completeness and timeliness of reporting by health facilities ▪ Facilities receiving supervisory visit	**Early detection and diagnosis** ▪ Loss to follow-up **Treatment** ▪ Loss to follow-up **Complication assessment** ▪ Loss to follow-up	**Disease control**

► Core

■ Optional

Data sources: routine facility reporting systems; patient information systems/electronic medical records; logistic management information systems; health workforce information systems; health facility assessments/surveys.

CHAPTER 4

Application of the Noncommunicable disease facility-based monitoring guidance in country health facility-based monitoring systems

The application of the *Noncommunicable disease facility-based monitoring guidance* in country health facility-based monitoring systems may follow good practices outlined in other WHO monitoring frameworks. The WHO *Primary health care measurement framework and indicators: monitoring health systems through a primary health care lens* is one such resource. Integration and linkages with existing national NCD programme and health information systems are also important considerations for its successful adoption.

The following are key actions for country adaptation of *Noncommunicable disease facility-based monitoring guidance.*

Align the *Noncommunicable disease facility-based monitoring guidance* for primary care with the national NCD programme and review processes

Countries are at different phases of implementing effective NCD interventions indicated in WHO PEN as part of their national NCD programme. Some countries are in the early or pilot phase while others are already implementing interventions on a national scale, and several have incorporated parts of the technical package into their national guidelines. Due to the model of care and/or primary care benefit packages countries may utilize, primary care facilities may not offer comprehensive services for each NCD, thus requiring coordination with hospitals to ensure continuity of care. The *Noncommunicable disease facility-based monitoring guidance* should be aligned for consistency with the scope of the national NCD programme and should account for variation in service delivery designs. Similarly, the reporting cycles by each level of facility and health system should align with established review processes which may be health sector-wide, or disease programme-specific.

Select indicators according to priorities and capacities

Monitoring NCD interventions at the primary care level can be an additional burden to already overworked staff. Countries need to select indicators that are most relevant to their users based on priorities for NCD management and health system maturity. The *Noncommunicable disease facility-based monitoring guidance* provides a list of core and optional indicators that countries can select for monitoring their performance. Current human resource capacity for monitoring and technological infrastructure are also key factors to consider in selecting and prioritizing indicators to include in the national monitoring framework.

Set baseline values and targets for each indicator

The *Noncommunicable disease facility-based monitoring guidance* does not provide indicator targets at health facility, subnational or national levels. Countries have to specify baseline values and targets for each indicator at each reporting level. These should be agreed upon with relevant stakeholders to evaluate progress.

Address major gaps in health service data sources using innovative methods and digital technologies

The majority of the indicators in the *Noncommunicable disease facility-based monitoring Guidance* depend on reliable data from individual health records or facility disease registers that capture key information on patient encounters and disease status. Due to the high prevalence of NCDs that require long-term management, monitoring the patient uptake, level of services, and outcomes can be challenging for facilities that maintain paper records. Simple digital collection tools can

facilitate the recording and reporting of these indicators routinely or periodically. Countries should invest in scalable, sustainable solutions for improving their routine reporting systems with patient monitoring.

Strengthen capacities for data analysis, interpretation and dissemination

To guide data analysis, interpretation, and dissemination, countries can use the *Noncommunicable disease facility-based monitoring guidance* tool. The tool provides the indicators metadata, including definition, purpose, numerator, denominator, calculation methods, sources, frequency of reporting and limitations, along with guidance in the measurement and interpretation of indicators. Fidelity to the indicator metadata can ensure comparability of data across facilities, administrative and geographic levels within a country, and across countries and regions. It also allows consistent assessment of indicators across time.

Countries will additionally need to establish data analysis and use training programmes to build monitoring capacities at each health system level. They will also need to invest in appropriate data management solutions that facilitate easy translation of data into digestible information for a variety of users.

Conduct regular reviews to guide decisions and actions

Countries should establish regular indicator reviews at each level of the health system, utilizing clear guidance and evidence-based decision processes. Programme managers should provide the thresholds for each indicator that will alert health workers, facility-, subnational-, and national-level managers, as well as local/regional health authorities to implement recommended actions, ensure progress toward programme goals, and foster accountability. Reviews can be conducted monthly, quarterly, biannually, or annually to encourage systematic and regular use of the indicators for assessing progress against targets.

Individual-level indicators on disease control and loss to follow-up can support effective longitudinal tracking. The indicators need to be reviewed by the facility-level manager, along with the health workers who maintain individual health records and facility registers. Monitoring facility-level system capacities and management using indicators on essential medicines, testing capacities, equipment, trained staff, reporting, and supervision, as well as disease management outcomes can reveal gaps, trigger actions to improve the availability and quality of services at all levels of the health system, and inform progress toward goals. The *Noncommunicable disease facility-based monitoring guidance* provides the purpose of each indicator for different types of users and proposes reasonable timeframes for reporting indicators.

CHAPTER 5

Indicators and metadata by disease

Hypertension and cardiovascular diseases

Core indicators and their metadata

C1 Availability of hypertension core medicines

C2 Availability of CVD core medicines

C3 Availability of a functional blood pressure measuring device

C4 Blood pressure control among people with hypertension

C1

Availability of hypertension core medicines

Purpose	To ensure uninterrupted supply of essential medicines and thereby improve patient treatment adherence
Definition	Proportion of health facilities that have hypertension core medicines based on WHO and national treatment guidelines WHO recommends hypertension core medicines from the following classes of medications: • Thiazide and thiazide-like agents • Angiotensin-converting enzyme inhibitors • Angiotensin-receptor blockers • Long-acting dihydropyridine calcium channel blockers At least one medicine from each class needs to be available, and additional medicines may be added to the core list based on national treatment guidelines
Numerator	Number of health facilities reporting "no stock-out" of hypertension core medicines in the reporting period
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility medicine stock register, health facility reports, regional logistics information system or survey
Key data elements	Number of facilities reporting "no medicine stock-out"
Frequency of reporting	Quarterly
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities reporting medicine stock-outs, prevent medicine stock-out situations, and strengthen health systems to ensure uninterrupted medicine supply
Limitations/ comments	In some settings health facilities do not dispense medicines so the reporting units may be community medicine dispensaries/pharmacies The preferred data source among the sources listed for this indicator depends on the data source quality in the local context
Related links	Guideline for the pharmacological treatment of hypertension in adults https://apps.who.int/iris/bitstream/handle/10665/344424/9789240033986-eng.pdf HEARTS technical package for cardiovascular disease management in primary health care: evidence-based treatment protocols https://apps.who.int/iris/bitstream/handle/10665/260421/WHO-NMH-NVI-18.2-eng.pdf HEARTS technical package for cardiovascular disease management in primary health care: systems for monitoring http://apps.who.int/iris/bitstream/handle/10665/260423/WHO-NMH-NVI-18.5-eng.pdf;jsessionid=0ACE98717506BDB055D33488EC106A40?sequence=1 World Health Organization model list of essential medicines https://apps.who.int/iris/bitstream/handle/10665/325771/WHO-MVP-EMP-IAU-2019.06-eng.pdf

C2

Availability of cardiovascular disease core medicines

Purpose	To ensure uninterrupted supply of essential medicines and thereby improve patient treatment adherence
Definition	Proportion of health facilities that have CVD core medicines based on WHO or national guidelines WHO recommends the following CVD core medicines: • Aspirin • Beta blocker • Statin
Numerator	Number of health facilities reporting “no stock-out” of CVD core medicines
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health-facility medicine stock register, health facility reports, regional logistics information system or survey
Key data elements	Number of facilities reporting “no medicine stock-out”
Frequency of reporting	Quarterly
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities reporting medicine stock-outs, prevent medicine stock-out situations and strengthen health systems to ensure uninterrupted medicine supply
Limitations/ comments	In some settings health facilities do not dispense medicines so the reporting units may be community medicine dispensaries/pharmacies The preferred data source among the sources listed for this indicator depends on the data source quality in the local context
Related links	Guideline for the pharmacological treatment of hypertension in adults https://apps.who.int/iris/bitstream/handle/10665/344424/9789240033986-eng.pdf HEARTS technical package for cardiovascular disease management in primary health care: systems for monitoring http://apps.who.int/iris/bitstream/handle/10665/260423/WHO-NMH-NVI-18.5-eng.pdf;jsessionid=0ACE98717506BDB055D33488EC106A40?sequence=1 World Health Organization model list of essential medicines https://apps.who.int/iris/bitstream/handle/10665/325771/WHO-MVP-EMP-IAU-2019.06-eng.pdf

C3

Availability of a functional blood pressure measuring device

Purpose	To assess quality of blood pressure (BP) measurements
Definition	Proportion of health facilities reporting availability of at least one functional (validated and if applicable, calibrated) blood pressure measuring device (BPMD) WHO recommends accuracy validated automated or semi-automated BPMDs for clinical use, which measure and display BP by automated or semi-automated (hand pump) inflation and deflation of a pressure cuff usually positioned on the upper arm for even compression of the brachial artery, which is the standard location for BP measurement A validated device is one that has undergone rigorous, standardized testing against a gold standard to ensure that the device produces accurate measurements Calibration is done to ensure that a BPMD measures BP accurately and is done by testing the device against a gold standard Automated BPMDs that are inaccurate should be sent to the manufacturer for calibration
Numerator	Number of health facilities reporting availability of at least one functional (validated and if applicable, calibrated) BPMD
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility reports, regional logistics information system or survey
Key data elements	Number of facilities reporting availability of at least one functioning (standard and calibrated) BP instrument in the facility
Frequency of reporting	Annually
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities reporting no test capability, making facilities capable and strengthening health systems to ensure uninterrupted diagnostic services
Limitations/ comments	None
Related links	WHO technical specifications for automated non-invasive blood pressure measuring devices with cuff https://apps.who.int/iris/handle/10665/331749 Harmonized health facility assessment (HHFA): core questions https://www.who.int/publications/i/item/harmonized-health-facility-assessment-(hhfa) Service availability and readiness assessment (SARA): an annual monitoring system for service delivery : reference manual, Version 2.2, Revised July 2015 https://apps.who.int/iris/handle/10665/149025

C4

Blood pressure control among people with hypertension

Purpose	To measure the effectiveness of clinical services to control BP among patients treated for hypertension
Definition	Proportion of people registered for hypertension treatment in the facility with controlled BP based on WHO or national treatment guidelines Based on WHO guidelines, BP is considered controlled when: • Systolic blood pressure (SBP) <140 mmHg and diastolic blood pressure (DBP) <90 mmHg • SBP <130 mmHg among people with history of CVD • SBP <130 mmHg among high-risk people with hypertension, i.e., those with high CVD risk, diabetes mellitus, chronic kidney disease (CKD) BP control criteria may be based on national guidelines
Numerator	Number of people registered for hypertension treatment in the facility whose BP was controlled at the last clinical visit in the reporting period, excluding those who were newly diagnosed with less than 3 months of treatment
Denominator	Total number of people registered for hypertension treatment in the facility, excluding those who were newly diagnosed with less than 3 months of treatment
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Hypertension diagnosis, prescribed hypertension medication,visit date, SBP, DBP
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the proportion of people with hypertension at their facility achieving the BP control goal District-level managers to assess the overall quality of hypertension treatment services, and to identify poorly performing facilities and rectify problems at an early stage
Limitations/ comments	People with unknown status of BP control (missed appointment/dropped out) and patients referred to a higher-level care facility will be counted in the denominator and their BP control status will be counted as not controlled Patients known to have transferred to another facility during the reporting quarter will be counted in the denominator and their last known status prior to transfer will be used For comparison with other healthcare facilities the indicator needs to be age-standardized
Related links	Guideline for the pharmacological treatment of hypertension in adults https://apps.who.int/iris/bitstream/handle/10665/344424/9789240033986-eng.pdf HEARTS technical package for cardiovascular disease management in primary health care: systems for monitoring http://apps.who.int/iris/bitstream/handle/10665/260423/WHO-NMH-NVI-18.5-eng.pdf;jsessionid=0ACE98717506BDB055D33488EC106A40?sequence=1

Optional indicators and their metadata

01 Assessment of CVD risk among people aged over 40 years using WHO CVD risk charts

02 Screening for hypertension among people aged 18 and over as part of routine service

03 Hypertension detection from opportunistic screening

04 Assessment for chronic kidney disease among people newly diagnosed with hypertension

05 Blood pressure control among people with hypertension (follow-up)

06 Availability of trained staff who are providing services for hypertension management

07 Completeness and timeliness of reporting by health facilities

08 Facilities receiving supervisory visit

09 Loss to follow-up

O1

Assessment of CVD risk among people aged 40 years and over using WHO CVD risk charts

Purpose	To determine level of use of WHO CVD risk charts
Definition	Proportion of people aged 40 years and over who attended the facility without history of CVD risk assessment in the last 12 months and were assessed for CVD risk using WHO CVD risk charts
Numerator	Number of people aged 40 years and over without history of CVD risk assessment in the last 12 months who attended the facility and were assessed for CVD risk[1] using WHO CVD risk charts
Denominator	Total number of people aged 40 years and over without history of CVD risk assessment in the last 12 months who attended the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Age, CVD risk score assessment
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the proportion of people aged over 40 years at their facility that receive CVD risk screening District-, province- and state-level programme managers to focus on facilities with low level of CVD risk screening
Limitations/ comments	No age-standardization is required
Related links	HEARTS technical package for cardiovascular disease management in primary health care: risk-based CVD management https://apps.who.int/iris/bitstream/handle/10665/333221/9789240001367-eng.pdf

1. The WHO Guideline for the pharmacological treatment of hypertension in adults suggests cardiovascular risk assessment at or after initiation of pharmacological treatment for hypertension, but only where this is feasible and does not delay treatment

O2

Screening for hypertension among people aged 18 and over as part of routine service

Purpose	To determine the level of opportunistic screening
Definition	Proportion of people aged 18 and over who visited the facility and were screened for hypertension based on WHO or national guidelines
Numerator	Number of people aged 18 and over who visited the facility and were screened for hypertension in the reporting period
Denominator	Total number of people aged 18 and over who visited the facility in the reporting period
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Date of last visit, age, SBP, DBP
Frequency of reporting	Annually
Users of data	Facility-, district-, province-, and state-level programme managers to check if health workers/facilities are following protocol to screen people aged 18 and over for hypertension
Limitations/ comments	None
Related links	Guideline for the pharmacological treatment of hypertension in adults https://apps.who.int/iris/bitstream/handle/10665/344424/9789240033986-eng.pdf

O3

Hypertension detection from opportunistic screening

Purpose	To determine efficiency of opportunistic screening
Definition	Proportion of people aged 18 and over who were diagnosed with hypertension among those who were screened for hypertension in the facility based on WHO or national guidelines Hypertension is diagnosed if, on two visits on different days: • SBP on both days is ≥140 mmHg • DBP on both days is ≥90 mmHg
Numerator	Number of people aged 18 and over who were diagnosed with hypertension among those who were screened for hypertension at the facility in the reporting period
Denominator	Total number of people aged 18 and over who were screened for hypertension at the facility in the reporting period
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Date of last visit, age, SBP, DBP
Frequency of reporting	Annually
Users of data	Facility-, district-, province- and state-level programme managers to assess efficiency of hypertension screening based on national protocol National-level programme managers to adjust protocol to optimize resources for hypertension screening
Limitations/ comments	For comparison with other healthcare facilities the indicator needs to be age-standardized
Related links	Guideline for the pharmacological treatment of hypertension in adults https://apps.who.int/iris/bitstream/handle/10665/344424/9789240033986-eng.pdf

O4

Assessment for chronic kidney disease among people newly diagnosed with hyperten

Purpose	To measure compliance with guidelines
Definition	Proportion of people newly diagnosed with hypertension who were assessed for CKD[2] through: • Albumin/ creatinine in spot urine sample and/or • Estimated glomerular filtration rate (eGFR) using serum creatinine
Numerator	Number of people newly diagnosed with hypertension at the facility who were assessed for CKD in their first year of diagnosis in the reporting period
Denominator	Total number of people newly diagnosed with hypertension at the facility in the reporting period
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Hypertension diagnosis, CKD assessment, date of diagnosis, data of CKD assessment
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the proportion of people with hypertension at their facility being assessed for CKD District-level managers to assess the overall quality of hypertension treatment services, and to identify poorly performing facilities and rectify problems at an early stage
Limitations/ comments	No age-standardization is required
Related links	Guideline for the pharmacological treatment of hypertension in adults https://apps.who.int/iris/bitstream/handle/10665/344424/9789240033986-eng.pdf

2. The WHO Guideline for the pharmacological treatment of hypertension in adults suggests obtaining tests to screen for morbidities and secondary hypertension when starting pharmacological therapy for hypertension, but only when testing does not delay or impede starting treatment

O5

Blood pressure control among people with hypertension (follow-up)

Purpose	To measure the effectiveness of clinical services among newly diagnosed patients treated for hypertension
Definition	Proportion of people newly diagnosed with hypertension with controlled BP at three- or six-months after treatment initiation Based on WHO guidelines, BP is considered controlled when: • SBP <140 mmHg and DBP <90 mmHg • SBP <130 mmHg among people with history of CVD • SBP <130 mmHg among high-risk people with hypertension, i.e., those with high CVD risk, diabetes mellitus, CKD BP control criteria may be based on national guidelines
Numerator	Number of people newly diagnosed with hypertension with controlled BP at three- or six-months after treatment initiation
Denominator	Total number of people newly diagnosed with hypertension registered for treatment in the quarter that ended three or six months previously
Method of calculation	Numerator ÷ denominator × 100
Aggregation	Health facility
Disaggregation	Where possible and applicable, stratify by patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Hypertension diagnosis, visit date, SBP, DBP
Frequency of reporting	Quarterly, biannually
Users of data	Clinicians and health facility managers to assess clinical care processes if proportion of people with controlled BP is low
Limitations/ comments	People with unknown status of BP control (missed appointment/dropped out) and patients referred to higher-level care facility will be counted in the denominator and their BP control status will be counted as not controlled Patients known to have transferred to another facility before three months after treatment will be counted in the denominator and their last known status prior to transfer will be used If the patient has been registered previously in another facility for hypertension services, the facility will include the patient in the three-month cohort that started when the patient received care from the facility For comparison with other healthcare facilities the indicator needs to be age-standardized
Related links	Guideline for the pharmacological treatment of hypertension in adults https://apps.who.int/iris/bitstream/handle/10665/344424/9789240033986-eng.pdf HEARTS technical package for cardiovascular disease management in primary health care: systems for monitoring http://apps.who.int/iris/bitstream/handle/10665/260423/WHO-NMH-NVI-18.5-eng.pdf;jsessionid=0ACE98717506BDB055D33488EC106A40?sequence=1

O6

Availability of trained staff who are providing services for hypertension management

Purpose	To ensure high quality of services and thereby improve BP control
Definition	Proportion of health facilities in which staff have been trained in the latest WHO or national guidelines on hypertension clinical management
Numerator	Number of health facilities in which all related staff have been trained in WHO or national guidelines on hypertension clinical management Related staff refers to physicians or nationally authorized health professionals for hypertension management
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility report, health workforce information system or survey
Key data elements	Number of facilities reporting even one untrained staff
Frequency of reporting	Annually
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities reporting untrained staff, hold training programmes, and strengthen health systems to ensure high quality of services
Limitations/ comments	Frequency of training depends on the date of the last version of WHO or national guidelines as well as the staff turnover at the healthcare facility
Related links	HEARTS technical package for cardiovascular disease management in primary health care: team-based care https://www.who.int/publications/i/item/WHO-NMH-NVI-18-4 WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care Harmonized health facility assessment (HHFA): core questions https://www.who.int/publications/i/item/harmonized-health-facility-assessment-(hhfa) Service availability and readiness assessment (SARA): an annual monitoring system for service delivery : reference manual, Version 2.2, Revised July 2015 https://apps.who.int/iris/handle/10665/149025

07

Completeness and timeliness of reporting by health facilities

Purpose	To assess compliance of facilities in reporting
Definition	Proportion of health facilities that submitted complete and timely reports Health facility reports containing mandatory data that were reported to higher level within the prescribed submission period by the national programme are considered complete and timely reports
Numerator	Number of health facilities that submitted complete and timely reports on hypertension indicators
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Routine health information system
Key data elements	Completeness status of report, timeliness status of report
Frequency of reporting	Quarterly
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities with incomplete and late report submission
Limitations/ comments	Countries must identify mandatory facility-based indicators to be reported within a specified deadline
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care 2018 Global reference list of 100 core health indicators (plus health-related SDGs) (page 131) https://score.tools.who.int/fileadmin/uploads/score/Documents/Enable_data_use_for_policy_and_action/100_Core_Health_Indicators_2018.pdf

O8

Facilities receiving supervisory visit

Purpose	To ensure continuous quality improvement of clinical care and data
Definition	Proportion of health facilities receiving a supervisory visit in the last reporting period
Numerator	Number of health facilities receiving a supervisory visit in the last reporting period
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility report
Key data elements	Number of facilities receiving supervisory visit
Frequency of reporting	Quarterly
Users of data	District-, province-, state-, and national-level managers to check if continuous quality improvement processes are in place
Limitations/ comments	None
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

O9

Loss to follow-up

Purpose	To assess the quality of hypertension management
Definition	Proportion of people with hypertension who were lost to follow-up (unknown status for one year)
Numerator	Number of people with hypertension who were lost to follow-up
Denominator	Total number of people with hypertension registered in the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Unknown status for one year from last visit
Frequency of reporting	Annually
Users of data	Facility-level managers to review clinical care processes and recommend actions to reduce losses to follow-up District-, province-, state-, and national-level managers to evaluate the gaps from diagnosis to control
Limitations/ comments	For comparison with other healthcare facilities the indicator needs to be age-standardized
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

Diabetes

Core indicators and their metadata

C1 Availability of diabetes core medicines

C2 Availability of plasma glucose testing

C3 Availability of HbA1c testing

C4 Glycaemic control among people with diabetes

C1
Availability of diabetes core medicines

Purpose	To ensure uninterrupted supply of essential medicines and thereby improve patient treatment adherence
Definition	Proportion of health facilities that have diabetes core medicines based on WHO or national treatment guidelines Diabetes core medicines include: • Insulin • Metformin • Sulfonylurea
Numerator	Number of health facilities reporting “no stock-out” of diabetes core medicines in the reporting period
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility medicine stock register, health facility reports, regional logistics information system or survey
Key data elements	Number of facilities reporting “no medicine stock-out”, count of total facilities
Frequency of reporting	Quarterly
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities reporting medicine stock-outs, prevent medicine stock-out situations, and strengthen health systems to ensure uninterrupted medicine supply
Limitations/ comments	In some settings health facilities do not dispense medicines so the reporting units may be community medicine dispensaries/pharmacies The preferred data source among the sources listed for this indicator depends on the data source quality in the local context
Related links	HEARTS-D: diagnosis and management of type 2 diabetes https://www.who.int/publications/i/item/who-ucn-ncd-20.1 World Health Organization model list of essential medicines https://apps.who.int/iris/bitstream/handle/10665/325771/WHO-MVP-EMP-IAU-2019.06-eng.pdf

C2
Availability of plasma glucose testing

Purpose	To ensure uninterrupted services to diagnose diabetes and assess glycemic control among patients with diabetes
Definition	Proportion of health facilities that have capability of laboratory or point of care plasma glucose (PG) testing
Numerator	Number of health facilities reporting capability of performing either laboratory or point of care PG tests in the reporting period
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural), PG testing site (point-of-care or laboratory)
Sources of data	Health facility reports, regional logistics information system or survey
Key data elements	Number of facilities reporting “test capability”
Frequency of reporting	Quarterly
Users of data	District-, province- and state-level managers to focus supervision on health facilities reporting no lab capability, making facilities capable and strengthening health systems to ensure uninterrupted laboratory services
Limitations/ comments	In some settings the health facilities do not provide laboratory services so the reporting units will need to come from other laboratory service providers
Related links	Harmonized health facility assessment (HHFA): core questions https://www.who.int/publications/i/item/harmonized-health-facility-assessment-(hhfa) Service availability and readiness assessment (SARA): an annual monitoring system for service delivery : reference manual, Version 2.2, Revised July 2015 https://apps.who.int/iris/handle/10665/149025

C3
Availability of hemoglobin A1c testing

Purpose	To ensure uninterrupted services to assess glycaemic control among patients with diabetes
Definition	Proportion of health facilities that have capability of hemoglobin A1c (HbA1C) testing
Numerator	Number of health facilities reporting capability of performing either laboratory or point of care HbA1c tests in the reporting period
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural), HbA1c testing site (point-of-care or laboratory)
Sources of data	Health facility reports, regional logistics information system or survey
Key data elements	Number of facilities reporting “test capability”
Frequency of reporting	Quarterly
Users of data	District-, province- and state-level managers to focus supervision on health facilities reporting no lab capability, making facilities capable and strengthening health systems to ensure uninterrupted laboratory services
Limitations/ comments	In some settings the health facilities do not provide laboratory services so the reporting units will need to come from other laboratory service providers
Related links	Harmonized health facility assessment (HHFA): core questions https://www.who.int/publications/i/item/harmonized-health-facility-assessment-(hhfa) Service availability and readiness assessment (SARA): an annual monitoring system for service delivery : reference manual, Version 2.2, Revised July 2015 https://apps.who.int/iris/handle/10665/149025

C4
Glycaemic control among people with diabetes

Purpose	To measure the effectiveness of clinical services for people with diabetes
Definition	Proportion of people with diabetes with good glycaemic control based on the global target of HbA1c <8% (64mmol/mol) in the last clinical visit
Numerator	Number of people with diabetes registered in the facility with HbA1c <8% (64mmol/mol) at the last clinical visit in the reporting period, excluding those who were newly diagnosed with less than three months of treatment
Denominator	Total number of people with diabetes registered in the facility, excluding those who were newly diagnosed with less than three months of treatment
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	HbA1c, visit date, diabetes diagnosis, diagnosis date
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the proportion of people with diabetes at their facility achieving the PG goal District-, province-, state-, and national-level managers to assess the overall quality of diabetes treatment services, to identify poorly performing facilities, and to rectify problems at an early stage
Limitations/ comments	People with unknown status of glycaemic control (missed appointment/dropped out) and patients referred to higher-level care facilities during the reporting quarter will be counted in the denominator and their glycaemic control status will be counted as not controlled Patients known to have transferred to another facility during the reporting quarter will be counted in the denominator and their last known status prior to transfer will be used For comparison with other healthcare facilities the indicator needs to be age-standardized
Related links	WHO discussion paper (version dated 9 August 2021): draft recommendations to strengthen and monitor diabetes responses within national noncommunicable disease programmes including potential targets https://cdn.who.int/media/docs/default-source/searo/eb150---annex-2-(diabetes).pdf?sfvrsn=b01fa62_12&download=true Improving health outcomes of people with diabetes mellitus: target setting to reduce the global burden of diabetes mellitus by 2030 https://cdn.who.int/media/docs/default-source/searo/india/health-topic-pdf/noncommunicable-diseases/eb150---annex-2-(diabetes-targets)---final-(for-web).pdf?sfvrsn=c2fa5e2c_3&download=true HEARTS-D: diagnosis and management of type 2 diabetes https://www.who.int/publications/i/item/who-ucn-ncd-20.1

Optional indicators and their metadata

01 Pharmacological treatment among people with diabetes

02 Statin therapy among people with diabetes

03 Pharmacological treatment for chronic kidney disease among people with diabetes

04 Pharmacological treatment for hypertension among people with diabetes

05 Assessment for diabetic chronic kidney disease among people with diabetes

06 Assessment for diabetic foot among people with diabetes

07 Referral for retinopathy screening among people with diabetes

08 Glycaemic control among people with diabetes (follow-up)

09 Chronic kidney disease among people with diabetes

10 Lower-limb amputation among people with diabetes

11 Blindness among people with diabetes

12 Availability of trained staff who are providing services for diabetes management

13 Completeness and timeliness of reporting by health facilities

14 Facilities receiving supervisory visit

15 Loss to follow-up

O1

Pharmacological treatment among people with diabetes

Purpose	To measure the compliance with guidelines
Definition	Proportion of people with diabetes who are receiving hypoglycaemic agent for diabetes treatment in the reporting period
Numerator	Number of people with diabetes registered in the facility who are receiving hypoglycaemic agent for diabetes treatment in the reporting period
Denominator	Total number of people with diabetes registered in the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Diabetes diagnosis, diagnosis date, diabetes treatment
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the proportion of patients being treated based on guidelines District-, province-, state-, and national-level managers to assess the overall quality of diabetes treatment services, to identify poorly performing facilities, and rectify problems at an early stage
Limitations/ comments	None
Related links	HEARTS-D: diagnosis and management of type 2 diabetes https://www.who.int/publications/i/item/who-ucn-ncd-20.1

O2

Statin therapy among people with diabetes

Purpose	To measure compliance with guidelines
Definition	Proportion of people with diabetes (≥40 years old) who are receiving statin therapy based on WHO or national treatment guidelines
Numerator	Number of people with diabetes registered in the facility who are receiving statin therapy based on WHO or national treatment guidelines
Denominator	Total number of people with diabetes registered in the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Diabetes diagnosis, age ≥40 years, taking statin
Frequency of reporting	Quarterly
Users of data	Facility-level managers to assess the proportion of people with diabetes (≥40 years old) at their facility being treated based on guidelines District-level managers to assess the overall quality of diabetes treatment services, and to identify poorly performing facilities and rectify problems at an early stage
Limitations/ comments	People with unknown status of taking statin (missed appointment/dropped out) will still be counted in the denominator and their status will be considered uncontrolled No age-standardization is required
Related links	HEARTS-D: diagnosis and management of type 2 diabetes https://www.who.int/publications/i/item/who-ucn-ncd-20.1

O3

Pharmacological treatment for chronic kidney disease among people with diabetes

Purpose	To measure compliance with guidelines
Definition	Proportion of people with diabetes and CKD who are receiving treatment for CKD based on WHO or national treatment guidelines
Numerator	Number of people with diabetes and CKD registered in the facility who are receiving treatment for CKD in the reporting period
Denominator	Total number of people with diabetes and CKD registered in the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Diabetes diagnosis, CKD diagnosis, treatment for CKD
Frequency of reporting	Quarterly
Users of data	Facility-level managers to assess the proportion of people with diabetes and CKD at their facility being treated based on guidelines District-, province-, state-, and national-level managers to assess the overall quality of diabetes treatment services, and to identify poorly performing facilities and rectify problems at an early stage
Limitations/ comments	None
Related links	HEARTS-D: diagnosis and management of type 2 diabetes https://www.who.int/publications/i/item/who-ucn-ncd-20.1 WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

O4

Pharamacological treatment for hypertension among people with diabetes

Purpose	To measure compliance with guidelines
Definition	Proportion of people with diabetes and hypertension who are receiving treatment for hypertension Hypertension treatment for people with diabetes may follow WHO or national treatment guidelines Hypertension treatment is indicated in people with diabetes when: • SBP ≥130 mmHg or • DBP ≥80 mmHg based on WHO guidelines
Numerator	Number of people with diabetes and hypertension registered in the facility who are receiving treatment for hypertension in the reporting period
Denominator	Total number of people with diabetes and hypertension registered in the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Diabetes diagnosis, elevated BP status, treatment for elevated BP
Frequency of reporting	Quarterly
Users of data	Facility-level managers to assess the proportion of people with diabetes and elevated BP at their facility being treated based on guidelines District-, province-, state-, and national-level managers to assess the overall quality of diabetes treatment services, and to identify poorly performing facilities and rectify problems at an early stage
Limitations/ comments	None
Related links	HEARTS-D: diagnosis and management of type 2 diabetes https://www.who.int/publications/i/item/who-ucn-ncd-20.1 WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

O5

Assessment for diabetic chronic kidney disease among people with diabetes

Purpose	To measure compliance with guidelines
Definition	Proportion of patients who were assessed for diabetic kidney disease through: • Albumin/ creatinine in spot urine sample and/or • eGFR using serum creatinine
Numerator	Number of people with diabetes registered in the facility who were assessed for diabetic CKD
Denominator	Total number of people with diabetes registered in the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Diabetes diagnosis, diabetic kidney disease assessment, assessment date
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the proportion of people with diabetes at their facility being assessed for diabetic kidney disease District-, province-, state-, and national-level managers to assess the overall quality of diabetes treatment services, to identify poorly performing facilities, and to rectify problems at an early stage
Limitations/ comments	None
Related links	HEARTS-D: diagnosis and management of type 2 diabetes https://www.who.int/publications/i/item/who-ucn-ncd-20.1 WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

O6

Assessment for diabetic foot among people with diabetes

Purpose	To measure compliance with guidelines
Definition	Proportion of people with diabetes who were clinically assessed for diabetic foot using foot assessment methods found in WHO or national guidelines
Numerator	Number of people with diabetes registered in the facility who were clinically assessed for diabetic foot in the last visit
Denominator	Total number of people with diabetes registered in the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Diabetes diagnosis, diabetes foot assessment
Frequency of reporting	Annually
Users of data	Facility-level managers to assess proportion of people with diabetes at their facility being assessed for diabetic foot District-, province-, state-, and national-level managers to assess the overall quality of diabetes treatment services, and to identify poorly performing facilities and rectify problems at an early stage
Limitations/ comments	None
Related links	HEARTS-D: diagnosis and management of type 2 diabetes https://www.who.int/publications/i/item/who-ucn-ncd-20.1 WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care `

07

Referral for retinopathy screening among people with diabetes

Purpose	To measure compliance with guidelines
Definition	Proportion of people with diabetes who were referred for screening for diabetic retinopathy involving: • Visual acuity • Direct/indirect ophthalmoscopy (dilated pupils) or retinal fundus photography)
Numerator	Number of people with diabetes registered in the facility due for biennial screening for diabetic retinopathy that were referred for diabetic retinopathy
Denominator	Total number of people with diabetes registered in the facility who were due for biennial screening for diabetic retinopathy
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Diabetes diagnosis, past diabetic retinopathy assessment date, referral
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the proportion of people with diabetes at their facility being screened for diabetic retinopathy District-, province-, state-, and national-level managers to assess the overall quality of diabetes treatment services, and to identify poorly performing facilities and rectify problems at an early stage
Limitations/ comments	None
Related links	HEARTS-D: diagnosis and management of type 2 diabetes https://www.who.int/publications/i/item/who-ucn-ncd-20.1 WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

O8

Glycaemic control among people with diabetes (follow-up)

Purpose	To measure the effectiveness of clinical services among people with diabetes
Definition	Proportion of people with diabetes with good glycaemic control every three- to six-month follow-up in the facility Glycaemic control is achieved when: • HbA1c <7% (53mmol/mol) [or fasting plasma glucose (FPG) <7.0 mmol/l or <126 mg/dl] • HbA1c <8% in people with frequent severe hypoglycemia, severe complications and low life-expectancy
Numerator	Number of people with diabetes registered in the facility with good glycaemic control at three- or six-month follow-up visit, excluding those newly diagnosed with less than three or six months of treatment
Denominator	Total number of people with diabetes registered in the facility excluding those newly diagnosed with less than three or six months of treatment
Method of calculation	Numerator ÷ denominator × 100
Aggregation	Health facility
Disaggregation	Where possible and applicable, stratify by patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	HbA1c [or FPG for settings that have no availability to HbA1C at all] visit date, diabetes diagnosis
Frequency of reporting	Quarterly, biannually
Users of data	Clinicians and health facility managers to assess clinical care processes if proportion of people with controlled diabetes is low
Limitations/ comments	HbA1c is the gold standard for assessment of glycaemic control, however, in facilities without capacity for HbA1c testing, FPG may be used as an alternative People with unknown status of glycaemic control (missed appointment/ dropped out, no HbA1c measurement) and patients referred to higher-level care facility will be counted in the denominator and their glycaemic control status will be counted as not controlled Patients known to have transferred to another facility before three to six months after diagnosis will be counted in the denominator and their last known status prior to transfer will be used If the patient has been registered previously in another facility for diabetes services, the facility will include the patient in the three-month cohort that started when the patient received care from the facility For comparison with other healthcare facilities the indicator needs to be age-standardized
Related links	HEARTS-D: diagnosis and management of type 2 diabetes https://www.who.int/publications/i/item/who-ucn-ncd-20.1

O9

Chronic kidney disease among people with diabetes

Purpose	To assess impact of diabetes management
Definition	Proportion of people with diabetes who were newly diagnosed with CKD based on WHO or national guidelines
Numerator	Number of people with diabetes registered in the facility who were newly diagnosed with CKD in the last year
Denominator	Total number of people with diabetes registered in the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Diabetes diagnosis, CKD diagnosis, date of diagnosis
Frequency of reporting	Annually
Users of data	District-, province- and state-level programme managers to assess the gap in diabetes management in facilities
Limitations/ comments	For comparison with other healthcare facilities the indicator needs to be age-standardized
Related links	HEARTS-D: diagnosis and management of type 2 diabetes https://www.who.int/publications/i/item/who-ucn-ncd-20.1 ICD 11 mortality and morbidity statistics https://icd.who.int/browse11/l-m/en#/http://id.who.int/icd/entity/412389819/mms/specified?data=%7B%22dataType%22%3A%22pc%22%2C%22postcoordinationCodeSet%22%3A%7B%22stemId%22%3A%22http%3A%2F%2Fid.who.int%2Ficd%2Fentity%2F412389819%2Fmms%2Funspecified%22%2C%22axisToValueIds%22%3A%7B%22associatedWith%22%3A%5B%7B%22stemId%22%3A%22http%3A%2F%2Fid.who.int%2Ficd%2Fentity%2F119724091%22%7D%5D%7D%7D%7D

O10

Lower-limb amputation among people with diabetes

Purpose	To assess impact of diabetes management
Definition	Proportion of people with diabetes who newly experienced lower-limb amputation
Numerator	Number of people with diabetes registered in the facility who newly experienced lower-limb amputation due to diabetic foot in the last year
Denominator	Total number of people with diabetes registered in the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Diabetes diagnosis, newly experienced lower-limb amputation, date of incidence
Frequency of reporting	Annually
Users of data	District-, province- and state-level programme managers to assess the gap in diabetes management in facilities
Limitations/ comments	For comparison with other healthcare facilities the indicator needs to be age-standardized
Related links	HEARTS-D: diagnosis and management of type 2 diabetes https://www.who.int/publications/i/item/who-ucn-ncd-20.1 WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care ICD 11 for mortality and morbidity statistics https://icd.who.int/browse11/l-m/en

O11

Blindness among people with diabetes

Purpose	To assess impact of diabetes management
Definition	Proportion of people with diabetes who newly experienced blindness in the last year based on WHO or national guidelines
Numerator	Number of people with diabetes registered in the facility who newly experienced blindness in the last year
Denominator	Total number of people with diabetes registered in the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Diabetes diagnosis, newly experienced blindness, date of diagnosis/incidence
Frequency of reporting	Annually
Users of data	District-, province- and state-level programme managers to assess the gap in diabetes management in facilities
Limitations/ comments	For comparison with other healthcare facilities the indicator needs to be age-standardized
Related links	HEARTS-D: diagnosis and management of type 2 diabetes https://www.who.int/publications/i/item/who-ucn-ncd-20.1 WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care ICD 11 for mortality and morbidity statistics https://icd.who.int/browse11/l-m/en#/http%3a%2f%2fid.who.int%2ficd%2fentity%2f1103667651

O12

Availability of trained staff who are providing services for diabetes management

Purpose	To ensure high quality of services and thereby improve diabetes management
Definition	Proportion of health facilities in which staff have been trained in the latest WHO or national guidelines on diabetes clinical management
Numerator	Number of health facilities in which staff have been trained in WHO or national guidelines on diabetes clinical management Staff refers to physicians or nationally authorized health professionals for diabetes management
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility report, health workforce information system or survey
Key data elements	Number of facilities reporting even one untrained staff
Frequency of reporting	Annually
Users of data	District-, province-, state, and national-level managers to focus supervision on health facilities reporting untrained staff, hold training programmes and strengthen health systems to ensure high quality of services
Limitations/ comments	Frequency of training depends on the date of the last version of WHO or national guidelines as well as the staff turnover at the healthcare facility
Related links	HEARTS-D: diagnosis and management of type 2 diabetes https://www.who.int/publications/i/item/who-ucn-ncd-20.1 WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care Harmonized health facility assessment (HHFA): core questions https://www.who.int/publications/i/item/harmonized-health-facility-assessment-(hhfa) Service availability and readiness assessment (SARA): an annual monitoring system for service delivery : reference manual, Version 2.2, Revised July 2015 https://apps.who.int/iris/handle/10665/149025

O13

Completeness and timeliness of reporting by health facilities

Purpose	To assess compliance of facilities in reporting
Definition	Proportion of health facilities that submitted complete and timely reports Health facility reports containing mandatory data that were reported to higher level within the prescribed submission period by the national programme are considered complete and timely reportss
Numerator	Number of health facilities that submitted complete and timely reports
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Routine health information system
Key data elements	Completeness status of report, timeliness status of report
Frequency of reporting	Quarterly
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities with incomplete and late report submission
Limitations/ comments	Countries must identify mandatory facility-based indicators to be reported within a specified deadline
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care 2018 Global reference list of 100 core health indicators (plus health-related SDGs) (page 131) https://score.tools.who.int/fileadmin/uploads/score/Documents/Enable_data_use_for_policy_and_action/100_Core_Health_Indicators_2018.pdf

O14

Facilities receiving supervisory visit

Purpose	To ensure continuous quality improvement of clinical care and data
Definition	Proportion of health facilities receiving a supervisory visit in the last reporting period
Numerator	Number of health facilities receiving a supervisory visit in the last reporting period
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility report
Key data elements	Number of facilities receiving supervisory visit
Frequency of reporting	Quarterly
Users of data	District-, province-, state-, and national-level managers to check if continuous quality improvement processes are in place
Limitations/ comments	None
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

O15

Loss to follow-up

Purpose	To assess the quality of diabetes management
Definition	Proportion of people with diabetes who were lost to follow-up
Numerator	Number of people with diabetes who were lost to follow-up (unknown status for one year)
Denominator	Total number of people with diabetes registered in the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Unknown status for one year from last visit
Frequency of reporting	Annually
Users of data	Facility-level managers to review clinical care processes and recommend actions to reduce losses to follow-up District-, province-, state-, and national-level managers to evaluate the gaps from diagnosis to control
Limitations/ comments	For comparison with other healthcare facilities the indicator needs to be age-standardized
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

Chronic respiratory diseases

Core indicators and their metadata

C1 Availability of asthma core medicines

C2 Availability of chronic obstructive pulmonary disease core medicines

C3 Asthma control

C4 Chronic obstructive pulmonary disease control

C1
Availability of asthma core medicines

Purpose	To ensure uninterrupted supply of essential medicines and thereby improve patient treatment adherence
Definition	Proportion of health facilities that have asthma core medicines based on WHO or national treatment guidelines Asthma core medicines may include: • Oxygen • Salbutamol – nebulized/inhaler • Prednisolone – oral • Steroid inhaler (beclomethasone, budesonide) • Spacer to use with inhaler
Numerator	Number of health facilities reporting "no stock-out" of asthma core medicines in the reporting period
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health-facility medicine stock register; health facility reports, regional logistics information system or health facility survey
Key data elements	Number of facilities reporting ''no stock-out''
Frequency of reporting	Quarterly
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities reporting medicine stock-outs, prevent medicine stock-out situations and strengthen health systems to ensure uninterrupted medicine supply
Limitations/ comments	In some settings health facilities do not dispense medicines so the reporting units may be community medicine dispensaries/pharmacies The preferred data source among the sources listed for this indicator depends on the data source quality in the local context
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care World Health Organization model list of essential medicines https://apps.who.int/iris/bitstream/handle/10665/325771/WHO-MVP-EMP-IAU-2019.06-eng.pdf

C2
Availability of chronic obstructive pulmonary disease core medicines

Purpose	To ensure uninterrupted supply of essential medicines and thereby improve patient treatment adherence
Definition	Proportion of health facilities that have COPD core medicines based on WHO or national treatment guidelines COPD core medicines may include: • Oxygen • Salbutamol – nebulized/inhaler • Prednisolone – oral • Spacer to use with inhaler
Numerator	Number of health facilities reporting "no stock-out" of COPD core medicines in the reporting period
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health-facility medicine stock register, health facility reports, regional logistics information systems or survey
Key data elements	Number of facilities reporting "no medicine stock-out"
Frequency of reporting	Quarterly
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities reporting medicine stock-outs, prevent medicine stock-out situations, and strengthen health systems to ensure uninterrupted medicine supply
Limitations/ comments	In some settings health facilities do not dispense medicines so the reporting units may be community medicine dispensaries/pharmacies The preferred data source among the sources listed for this indicator depends on the data source quality in the local context
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care World Health Organization model list of essential medicines https://apps.who.int/iris/bitstream/handle/10665/325771/WHO-MVP-EMP-IAU-2019.06-eng.pdf

C3
Asthma control

Purpose	To measure the effectiveness of clinical services to control asthma among patients
Definition	Proportion of people registered for treatment of asthma with controlled asthma Asthma is controlled when none of the following are reported: • Asthma-related events in the past six months, such as hospital admission, unplanned healthcare visit, missed school/work • Asthma symptoms in the past four weeks such as daytime symptoms present more than twice per week, use of short-acting β2 agonist (SABA) more than twice per week, limitation of activities or night waking
Numerator	Number of people registered for treatment of asthma with controlled asthma at the last clinical visit in the reporting period, excluding those who were newly diagnosed with less than six months of treatment
Denominator	Total number of people registered for treatment of asthma, excluding those who were newly diagnosed with less than six months of treatment
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Date of registration, self-report of hospital admission, unplanned healthcare visit, missed school/work, daytime symptoms >2x/week, use of SABA >2x/week, limitation of activities, night waking
Frequency of reporting	Biannually
Users of data	Facility-level managers to assess the proportion of people with controlled asthma District-, province-, state-, and national-level managers to assess the overall quality of asthma treatment services, and to identify poorly performing facilities and initiate corrective actions at an early stage as needed
Limitations/ comments	Feasibility of collecting this indicator may vary across settings due to maturity of routine information systems with patient tracking People with unknown status of asthma control (missed appointment/dropped out) and patients referred to higher-level care facilities will be counted in the denominator and their asthma control status will be counted as not controlled Patients known to have transferred to another facility before completing six months of treatment will be counted in the denominator and their last known status prior to transfer will be used If the patient has been registered previously in another facility for asthma services, the facility will include the patient in the six-month follow-up that started when the patient received care from the facility For comparison with other healthcare facilities the indicator needs to be age-standardized
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

C4
Chronic obstructive pulmonary disease control

Purpose	To measure the effectiveness of clinical services to control COPD among patients
Definition	Proportion of people registered for treatment of COPD with controlled COPD in the last visit COPD is controlled when none of the following COPD-related events are reported in the last six months: • Hospital admission • Unplanned healthcare visit • Missed school/work
Numerator	Number of people registered for treatment of COPD with controlled COPD at the last clinical visit in the reporting period, excluding those who were newly diagnosed with less than six months of treatment
Denominator	Total number of people registered for treatment of COPD, excluding those who were newly diagnosed with less than six months of treatment
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Date of registration, self-report of hospital admission, unplanned healthcare visit, missed school/work
Frequency of reporting	Biannually
Users of data	Facility-level managers to assess the proportion of people with controlled COPD District-, province-, state- and national-level managers to assess the overall quality of COPD treatment services, and to identify poorly performing facilities and initiate corrective actions at an early stage as needed
Limitations/ comments	Feasibility of collecting this indicator may vary across settings due to maturity of routine information systems with patient tracking People with unknown status of COPD control (missed appointment/dropped out) and patients referred to higher-level care facility will be counted in the denominator and their COPD control status will be counted as not controlled Patients known to have transferred to another facility before completing six months of treatment will be counted in the denominator and their last known status prior to transfer will be used If the patient has been registered previously in another facility for COPD services, the facility will include the patient in the six-month follow-up that started when the patient received care from the facility For comparison with other healthcare facilities the indicator needs to be age-standardized
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

Optional indicators and their metadata

01 Availability of peak flow meter and mouthpiece

02 Asthma diagnosis using peak flow measurement

03 Chronic obstructive pulmonary disease diagnosis using peak flow measurement

04 Treatment among people with asthma

05 Treatment among people with chronic obstructive pulmonary disease

06 Emergency visit among people with asthma

07 Emergency visit among people with chronic obstructive pulmonary disease

08 Availability of trained staff who are providing services for asthma/chronic obstructive pulmonary disease management

09 Completeness and timeliness of reporting by health facilities

10 Facilities receiving supervisory visit

11 Loss to follow-up

O1

Availability of peak flow meter and mouth piece

Purpose	To ensure uninterrupted services
Definition	Proportion of health facilities that have a peak flow meter and mouth piece
Numerator	Number of health facilities reporting availability of peak flow meter and mouth piece
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility reports, regional logistics information system or survey
Key data elements	Number of facilities reporting availability of peak flow meter in the last year
Frequency of reporting	Annually
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities reporting no test capability, making facilities capable and strengthening health systems to ensure uninterrupted diagnostic services
Limitations/ comments	None
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care Harmonized health facility assessment (HHFA): core questions https://www.who.int/publications/i/item/harmonized-health-facility-assessment-(hhfa) Service availability and readiness assessment (SARA): an annual monitoring system for service delivery : reference manual, Version 2.2, Revised July 2015 https://apps.who.int/iris/handle/10665/149025

O2

Asthma diagnosis using peak flow measurement

Purpose	To determine the level of confirmatory testing
Definition	Proportion of people newly diagnosed with asthma who reported asthma-related symptoms and tested for asthma using peak flow measurement as a confirmatory test in the reporting period Asthma-related symptoms include cough, wheeze, difficulty breathing, and chest tightness, which may vary over time and may be worse during night or early morning, and triggered by viral infections, exercise, smoke, and/or dust
Numerator	Number of people newly diagnosed with asthma who reported asthma-related symptoms and were tested for asthma using peak flow measurement as a confirmatory test in the reporting period
Denominator	Total number of people newly diagnosed with asthma in the reporting period
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Date of last visit, asthma diagnosis, patient peak flow measurement
Frequency of reporting	Annually
Users of data	Facility-, district-, province-, state-, and national-level managers to check if health workers/facilities are following protocol to diagnose people with asthma
Limitations/ comments	This indicator measures the use of a medical device to aid in diagnosis in primary care facilities If the facility has spirometry instead of peak flow meter, this will be equivalent to having a peak flow meter For comparison with other health facilities, the indicator needs to be age-standardized
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

O3

Chronic obstructive pulmonary disease diagnosis using peak flow measurement

Purpose	To determine the level of confirmatory testing
Definition	Proportion of people newly diagnosed with COPD who reported COPD-related symptoms and tested for COPD using peak flow measurement as a confirmatory test in the reporting period COPD-related symptoms include: • Cough with or without sputum • Difficulty breathing • Wheezing • Chest tightness These symptoms may develop over time and be caused by smoking, exposure to smoke at home, or dust/fumes at work
Numerator	Number of people newly diagnosed with COPD who reported COPD-related symptoms and were tested for COPD using peak flow measurement as a confirmatory test in the reporting period
Denominator	Total number of people newly diagnosed with COPD in the reporting period
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Date of last visit, COPD diagnosis, patient peak flow measurement
Frequency of reporting	Quarterly
Users of data	Facility-, district-, province-, state-, and national-level managers to check if health workers/facilities are following protocol to diagnose people with COPD
Limitations/ comments	This indicator measures the use of a medical device to aid in diagnosis in primary care facilities If the facility has spirometry instead of peak flow meter, this will be equivalent to having a peak flow meter Spirometry is recommended for the diagnosis of COPD, however, in the primary care setting, peak flow measurement can be used as part of the clinical assessment to suggest a diagnosis of COPD For comparison with other health facilities, the indicator needs to be age-standardized
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

O4

Treatment among people with asthma

Purpose	To measure compliance with guidelines
Definition	Proportion of people with asthma who are on long-term treatment for asthma Long-term treatment means prescription of an inhaled short-acting bronchodilator with or without inhaled corticosteroids to use at home
Numerator	Number of people with asthma registered in the facility who are on long-term treatment in the last year
Denominator	Total number of people with asthma registered in the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), prescribed treatment and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Date of last visit, treatment, diagnosis
Frequency of reporting	Quarterly
Users of data	Facility-level managers to assess the proportion of people with asthma who are on long-term treatment District-, province-, and state-level programme managers to monitor increases in programme level of asthma services within a geographical area National-level programme managers to monitor progress of the programme
Limitations/ comments	Treatment level may be underestimated in areas where a proportion of health facilities, such as private clinics, provide asthma treatment but do not report on the numerator Prescribed treatment types include: • Inhaled short-acting bronchodilator (e.g. salbutamol) • Inhaled corticosteroid (e.g. budesonide, beclomethasone) • Combination inhaler (bronchodilator and steroid e.g. budesonide/formoterol)
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

O5

Treatment among people with chronic obstructive pulmonary disease

Purpose	To measure compliance with guidelines
Definition	Proportion of people with COPD who are on long-term treatment for COPD Long-term treatment means prescription of an inhaled medication to use at home
Numerator	Number of people with COPD registered in the facility who are on long-term treatment in the last year
Denominator	Total number of people with COPD registered in the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Date of last visit, treatment, diagnosis
Frequency of reporting	Quarterly
Users of data	Facility-level managers to assess the proportion of people with COPD who are on long-term treatment District-, province-, and state-level programme managers to monitor increases in programme level of COPD services within a geographical area National-level programme managers to monitor progress of the programme
Limitations/ comments	Treatment level may be underestimated in areas where a proportion of health facilities, such as private clinics, provide COPD treatment but do not report on the numerator
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

O6

Emergency visit among people with asthma

Purpose	To measure level of control among patients diagnosed with asthma
Definition	Proportion of people with asthma who visited health facility due to acute asthma symptoms Acute asthma symptoms include: • Cough • Wheeze • Difficulty breathing • Chest tightness
Numerator	Number of people with asthma registered in the facility who visited the health facility due to acute asthma symptoms in the last six months
Denominator	Total number of people with asthma registered in the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Asthma diagnosis, unplanned visits due to asthma respiratory symptoms
Frequency of reporting	Biannually
Users of data	Facility-level managers to assess proportion of people with asthma who experienced uncontrolled symptoms District-, province-, state-, and national-level managers to assess the overall quality of asthma treatment services, and to identify poorly performing facilities and rectify problems
Limitations/ comments	For comparison with other health facilities, the indicator needs to be age-standardized
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

O7

Emergency visit among people with chronic obstructive pulmonary disease

Purpose	To measure level of control among patients diagnosed with COPD
Definition	Proportion of people with COPD who visited health facility due to acute COPD symptoms Acute COPD symptoms include: • Cough • Wheeze • Difficulty breathing • Chest tightness • Sputum
Numerator	Number of people with COPD registered in the facility who visited the health facility due to acute COPD symptoms in the last six months
Denominator	Total number of people with COPD registered in the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	COPD diagnosis, unplanned visits due to COPD respiratory symptoms
Frequency of reporting	Biannually
Users of data	Facility-level managers to assess the proportion of people with COPD who experienced uncontrolled symptoms District-, province-, state-, and national-level managers to assess the overall quality of COPD treatment services, and to identify poorly performing facilities and rectify problems
Limitations/ comments	For comparison with other health facilities, the indicator needs to be age-standardized
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

O8

Availability of trained staff who are providing services for asthma/chronic obstructive pulmonary disease management

Purpose	To ensure high quality of services and thereby improve asthma/COPD management
Definition	Proportion of health facilities in which staff have been trained in the latest WHO or national guidelines on asthma/COPD clinical management
Numerator	Number of health facilities in which staff have been trained in WHO or national guidelines on asthma/COPD clinical management Staff refers to physicians or nationally authorized health professionals for asthma/COPD management
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility report, health workforce information system or survey
Key data elements	Number of facilities reporting even one untrained staff
Frequency of reporting	Annually
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities reporting untrained staff, hold training programs, and strengthen health systems to ensure high quality of services
Limitations/ comments	Frequency of training depends on the date of the last version of WHO or national guidelines as well as staff turnover at the healthcare facility
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care Harmonized health facility assessment (HHFA): core questions https://www.who.int/publications/i/item/harmonized-health-facility-assessment-(hhfa) Service availability and readiness assessment (SARA): an annual monitoring system for service delivery : reference manual, Version 2.2, Revised July 2015 https://apps.who.int/iris/handle/10665/149025

O9

Completeness and timeliness of reporting by health facilities

Purpose	To assess compliance of facilities in reporting
Definition	Proportion of health facilities that submitted complete and timely reports Health facility reports containing mandatory data that were reported to higher level within the prescribed submission period by the national programme are considered complete and timely reports
Numerator	Number of health facilities that submitted complete and timely reports on asthma/chronic COPD indicators
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Routine health information system
Key data elements	Completeness status of report, timeliness status of report
Frequency of reporting	Quarterly
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities with incomplete and late report submission
Limitations/ comments	Countries must identify mandatory facility-based indicators to be reported within a specified deadline
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://score.tools.who.int/fileadmin/uploads/score/Documents/Enable_data_use_for_policy_and_action/100_Core_Health_Indicators_2018.pdf 2018 Global reference list of 100 core health indicators (plus health-related SDGs) (page 131) https://score.tools.who.int/fileadmin/uploads/score/Documents/Enable_data_use_for_policy_and_action/100_Core_Health_Indicators_2018.pdf

O10

Facilities receiving supervisory visit

Purpose	To ensure continuous quality improvement of clinical care and data
Definition	Proportion of health facilities receiving a supervisory visit in the last reporting period
Numerator	Number of health facilities receiving a supervisory visit in the last reporting period
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility report
Key data elements	Number of facilities receiving supervisory visit
Frequency of reporting	Quarterly
Users of data	District-, province-, state-, and national-level managers to check if continuous quality improvement processes are in place
Limitations/ comments	None
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

O11

Loss to follow-up

Purpose	To assess the quality of asthma/COPD management
Definition	Proportion of people with asthma/COPD who were lost to follow-up
Numerator	Number of people with asthma/COPD who were lost to follow-up (unknown status for one year)
Denominator	Total number of people with asthma/COPD
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Unknown status for one year from last visit
Frequency of reporting	Annually
Users of data	Facility-level managers to review clinical care processes and recommend actions to reduce losses to follow-up District-, province-, state-, and national-level managers to evaluate the gaps from diagnosis to control
Limitations/ comments	For comparison with other healthcare facilities the indicator needs to be age-standardized
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

Cancers

Breast cancer

Core indicators and their metadata

C1	Clinical breast evaluation for early diagnosis of breast cancer among women aged 30–49 years with signs and/or symptoms associated with breast cancer
C2	Timeliness of referral for breast cancer diagnosis among women aged 30–49 years with associated signs and /or symptoms of breast cancer who had suspicious findings from clinical breast evaluation

C1

Clinical breast evaluation for early diagnosis of breast cancer among women aged 30–49 years with signs and/or symptoms associated with breast cancer

Indicator name	Clinical breast evaluation for early diagnosis of breast cancer among women aged 30–49 years with signs and/or symptoms associated with breast cancer
Purpose	To measure level of breast health services
Definition	Proportion of women aged 30–49 years with signs and/or symptoms associated with breast cancer who underwent an appropriate clinical breast evaluation for early diagnosis of signs and symptoms associated with breast cancer based on WHO or national guidelines Clinical breast evaluation consists of: • Taking a health history including a breast health history, and • Performing a physical examination including a clinical breast examination to identify persons with signs and/or symptoms of breast cancer Common signs and symptoms of breast cancer include: • A breast lump or thickening confirmed on clinical breast examination • Newly developed whole breast asymmetry • Skin retraction, increasing nipple retraction • Spontaneous clear or bloody nipple discharge Early breast cancer symptoms include: • The women's sense of a discrete lump • Thickening or localized non-migratory pain in the breast Advanced breast cancers may exhibit skin changes with redness that over time evolves into ulceration
Numerator	Number of women aged 30–49 years with signs and/or symptoms associated with breast cancer who underwent a clinical breast evaluation for breast cancer early diagnosis in the last year
Denominator	Total number of women aged 30–49 years with signs and/or symptoms associated with breast cancer who attended the facility in the last year
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Sex, age, presence of breast cancer signs and/or symptoms, clinical breast evaluation status
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the proportion of women in the target age group who have been evaluated for breast abnormalities District-, province-, state-, and national-level managers to assess the overall quality of breast cancer diagnostic and screening services, and to identify poorly performing facilities and rectify problems at an early stage

C1

Clinical breast evaluation for early diagnosis of breast cancer among women aged 30–49 years with signs and/or symptoms associated with breast cancer

Limitations/ comments

Early diagnosis is defined as the early identification of cancer in patients who have symptoms of the disease, in contrast to cancer screening, which seeks to identify unrecognized (pre-clinical) cancer or pre-cancerous lesions in an apparently healthy target population

- Breast awareness education provides women knowledge about:
- The value of early cancer detection and treatment
- The signs and/or symptoms of breast cancer and

Encourages women to come in for diagnostic screenings when they notice changes in their breast

All women in the target age group should undergo at least one baseline clinical breast evaluation as a component of awareness education

For clinical breast examination-based screening, the examination should be repeated at 3-year intervals in the absence of abnormal breast symptoms

Signs and symptoms can also be indications of non-malignant breast processes such as:

- Infections
- Simple cysts
- Benign masses

Diagnostic evaluation is warranted in the majority of women to distinguish cancers from benign processes when findings are persistent and/or progressive

Ease of generating denominator depends on maturity of routine health information systems and can be challenging for healthcare settings without electronic health record systems in place

Related links

WHO package of essential noncommunicable (PEN) disease interventions for primary health care
https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

Guide to cancer early diagnosis
https://apps.who.int/iris/bitstream/handle/10665/254500/9789241511940-eng.pdf

C2

Timeliness of referral for breast cancer diagnosis among women aged 30–49 years with associated signs and/or symptoms of breast cancer who had suspicious findings from clinical breast evaluation

Purpose	To assess the process of breast cancer management in facilities
Definition	Proportion of women aged 30–49 years with signs and/or symptoms associated with breast cancer who had suspicious findings from clinical breast evaluation conducted at the facility and were referred to a facility with capacity for diagnosis of cancer within one month after clinical breast evaluation
Numerator	Number of women aged 30–49 years with associated signs and/or symptoms of breast cancer who had suspicious findings from clinical breast evaluation conducted at the facility and were referred to a facility with capacity for diagnosis of cancer within one month after clinical breast evaluation
Denominator	Total number of women aged 30–49 years with associated signs and/or symptoms of breast cancer who had suspicious findings from clinical breast evaluation conducted at the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Sex, age, suspicious findings from clinical breast evaluation, date of clinical breast evaluation, date of referral for breast cancer diagnosis
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the proportion of women in the target age group with signs and symptoms who had suspicious findings and were referred for breast cancer diagnosis District-, province-, state-, and national-level managers to assess the gap in breast cancer management in facilities
Limitations/ comments	None
Related links	Guide to cancer early diagnosis https://apps.who.int/iris/bitstream/handle/10665/254500/9789241511940-eng.pdf

Optional indicators and their metadata

01 Referral for mammography screening among women aged 50–69 years

02 Timeliness of breast cancer confirmatory diagnosis among women aged 30–49 years with suspicious findings from clinical breast evaluation

03 Timeliness of breast cancer treatment among women aged 30–49 years with suspicious findings from clinical breast evaluation

04 Availability of trained staff who are providing clinical breast evaluation services

05 Completeness and timeliness of reporting by health facilities

06 Facilities receiving supervisory visit

07 Loss to follow-up

O1

Referral for mammography screening among women aged 50–69 years

Purpose	To assess the process of breast cancer management in facilities
Definition	Proportion of women aged 50–69 years without a breast cancer screening in the last two years who attended the facility and were referred for mammography to facilities with capacity for mammography screening in the last year
Numerator	Number of women aged 50–69 years without a breast cancer screening in the last two years who attended the facility and were referred for mammography screening to facilities with capacity for mammography screening in the last year
Denominator	Total number of women aged 50–69 years without a breast cancer screening in the last two years who attended the facility in the last year
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Sex, age, history of breast cancer screening in the last 2 years, referral status for breast cancer screening
Frequency of reporting	Annually
Users of data	District-, province-, state-, and national-level managers to assess the gap in breast cancer management in facilities
Limitations/ comments	Mammographic screening is defined as the repeated, sequential application of whole breast mammography among women in a defined target risk group to test for the presence of breast cancer among women who are otherwise asymptomatic for breast cancer Women found to have abnormal screening mammograms must undergo subsequent diagnostic work-up including possible biopsy to determine if the finding is or is not cancer
Related links	WHO position paper on mammography screening https://www.who.int/publications/i/item/who-position-paper-on-mammography-screening

O2

Timeliness of breast cancer confirmatory diagnosis among women aged 30–49 years with suspicious findings from clinical breast evaluation

Purpose	To assess the timeliness of diagnosis among women with breast cancer
Definition	Proportion of women aged 30–49 years with signs and/or symptoms associated with breast cancer who had suspicious findings from clinical breast evaluation conducted at the primary care facility and who received confirmatory diagnosis of breast cancer within two months after clinical breast evaluation at the facility with capacity for diagnosis
Numerator	Number of women aged 30–49 years with signs and/or symptoms associated with breast cancer who had suspicious findings from clinical breast evaluation conducted at the primary care facility and who received confirmatory diagnosis of breast cancer within two months after clinical breast evaluation at the facility with capacity for diagnosis
Denominator	Total number of women aged 30–49 years with signs and/or symptoms associated with breast cancer who had suspicious findings from clinical breast evaluation conducted at the primary care facility and who received confirmatory diagnosis of breast cancer at the facility with capacity for diagnosis
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Sex, age, date of clinical breast evaluation, date of breast cancer diagnosis
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the facility performance in referral function District-level managers to assess the effectiveness of the referral and patient navigation to their facility
Limitations/ comments	Collection of this indicator is feasible in settings with effective referral systems or shared digital individual health records Countries are encouraged to establish good referral systems
Related links	Guide to cancer early diagnosis https://apps.who.int/iris/bitstream/handle/10665/254500/9789241511940-eng.pdf

O3

Timeliness of breast cancer treatment among women aged 30–49 years with suspicious findings from clinical breast evaluation

Purpose	To assess the timeliness of treatment among women with breast cancer
Definition	Proportion of women aged 30–49 years with signs and/or symptoms associated with breast cancer who had suspicious findings from clinical breast evaluation conducted at the primary care facility and who received treatment for breast cancer at the facility with capacity for treatment within three months after clinical breast evaluation
Numerator	Number of women aged 30–49 years with signs and/or symptoms associated with breast cancer who had suspicious findings from clinical breast evaluation conducted at the primary care facility and who received treatment for breast cancer at the facility with capacity for treatment within three months after clinical breast evaluation
Denominator	Total number of women aged 30–49 years with signs and/or symptoms associated with breast cancer who had suspicious findings from clinical breast evaluation conducted at the primary care facility and who received confirmatory diagnosis of breast cancer
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Sex, age, date of clinical breast evaluation, date of breast cancer treatment
Frequency of reporting	Annually
Users of data	Facility-, and district-level managers to assess the effectiveness of the referral and patient navigation from their facility District-, province-, state-, and national-level managers to assess the gap in breast cancer management in facilities
Limitations/ comments	Collection of this indicator is feasible in settings with effective referral systems or shared digital individual health records Countries are encouraged to establish good referral systems
Related links	Guide to cancer early diagnosis https://apps.who.int/iris/bitstream/handle/10665/254500/9789241511940-eng.pdf

O4

Availability of trained staff who are providing clinical breast evaluation services

Purpose	To ensure high quality of clinical breast evaluation services
Definition	Proportion of health facilities in which staff have been trained in the latest WHO or national guidelines on clinical evaluation of breast abnormalities including the use of clinical breast examination
Numerator	Number of health facilities in which staff have been trained in the latest WHO or national guidelines on clinical evaluation of breast abnormalities including the use of clinical breast examination Staff refers to physicians or nationally authorized health professionals for clinical breast evaluation services
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility report, health workforce information system or survey
Key data elements	Number of facilities reporting even one untrained staff
Frequency of reporting	Annually
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities reporting untrained staff, hold training programmes, and strengthen health systems to ensure high quality of services
Limitations/ comments	Frequency of training depends on the date of the last version of WHO or national guidelines as well as the staff turnover at the healthcare facility
Related links	Guide to cancer early diagnosis https://apps.who.int/iris/bitstream/handle/10665/254500/9789241511940-eng.pdf WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

O5

Completeness and timeliness of reporting by health facilities

Purpose	To assess compliance of facilities in reporting
Definition	Proportion of health facilities that submitted complete and timely reports Health facility reports containing mandatory data that were reported to higher level within the prescribed submission period by the national programme are considered complete and timely reports
Numerator	Number of health facilities that submitted complete and timely reports on breast cancer indicators
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Routine health information system
Key data elements	Completeness status of report, timeliness status of report
Frequency of reporting	Quarterly
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities with incomplete and late report submission
Limitations/ comments	Countries must identify mandatory facility-based indicators to be reported within a specified deadline
Related links	2018 Global reference list of 100 core health indicators (plus health-related SDGs) (page 131) https://score.tools.who.int/fileadmin/uploads/score/Documents/Enable_data_use_for_policy_and_action/100_Core_Health_Indicators_2018.pdf

O6

Facilities receiving supervisory visit

Purpose	To ensure continuous quality improvement of clinical care and data
Definition	Proportion of health facilities receiving a supervisory visit in the last reporting period
Numerator	Number of health facilities receiving a supervisory visit in the last reporting period
Denominator	Number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility report
Key data elements	Number of facilities receiving supervisory visit
Frequency of reporting	Quarterly
Users of data	District-, province-, state-, and national-level managers to check if continuous quality improvement processes are in place
Limitations/ comments	None
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

07

Loss to follow-up

Purpose	To assess the quality of breast health services
Definition	Proportion of women with a known breast cancer diagnosis who were receiving survivorship care who were lost to follow-up (unknown status for one year)
Numerator	Number of women with a known breast cancer diagnosis who were receiving survivorship care at the facility who were lost to follow-up
Denominator	Total number of women with a known breast cancer diagnosis who were receiving survivorship care at the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Unknown status for one year from last visit
Frequency of reporting	Annually
Users of data	Facility-level managers to review clinical care processes and recommend actions to reduce losses to follow-up District-, province-, state-, and national-level managers to evaluate the gaps from diagnosis to control
Limitations/ comments	For comparison with other healthcare facilities the indicator needs to be age-standardized
Related links	Guide to cancer early diagnosis https://apps.who.int/iris/bitstream/handle/10665/254500/9789241511940-eng.pdf WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

Cervical cancer

Core indicators and their metadata

C1 Availability of human papillomavirus testing

C2 Cervical cancer screening with high-performance test among women aged 30–49 years

C3 Cervical cancer screening among women aged 30–49 years

C4 Cervical cancer screening test positivity among women aged 30–49 years

C1
Availability of human papillomavirus testing

Purpose	To ensure uninterrupted services for cervical cancer screening
Definition	Proportion of health facilities that have availability of human papillomavirus (HPV) testing among facilities designated to provide a screening test or sampling kit Availability is defined as the sampling kit is present in clinic for either provider-based testing or counseling for home self-sampling
Numerator	Number of health facilities reporting availability of HPV testing among facilities designated to provide screening test or sampling kit
Denominator	Total number of health facilities designated to provide screening test or sampling kit
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility reports, regional logistics information system or survey
Key data elements	Number of facilities reporting “test capability”
Frequency of reporting	Quarterly
Users of data	District-, province- and state-level managers to focus supervision on health facilities reporting no laboratory capability, making facilities capable and strengthen health systems to ensure uninterrupted laboratory services
Limitations/ comments	None
Related links	WHO guideline for screening and treatment of cervical pre-cancer lesions for cervical cancer prevention https://www.who.int/publications/i/item/9789240030824 Improving data for decision-making: a toolkit for cervical cancer prevention and control programmes https://apps.who.int/iris/handle/10665/279420

C2
Cervical cancer screening with high performance test among women aged 30–49 years

Purpose	To measure compliance to guidelines and participation of women in cervical cancer screening
Definition	Proportion of women aged 30–49 years who were screened for cervical cancer with a high-performance test (a test which would have performance characteristics similar to or better than a HPV DNA test) For women with HIV, the target age group for screening is 25–49 years
Numerator	Number of women aged 30–49 years who attended the health facility in the last year and had no history of cervical cancer screening with HPV test in the last 10 years and received HPV test or submitted a sample for HPV test Number of women with HIV aged 25–49 years who attended the health facility in the last year and had no history of cervical cancer screening with HPV test in the last 5 years and received HPV test or submitted a sample for HPV test
Denominator	Total number of women aged 30–49 years who attended the health facility in the last year and had no history of cervical cancer screening with HPV test in last 10 years Total number of women with HIV aged 25–49 years who attended the health facility in the last year and had no history of cervical cancer screening with HPV test in last 5 years
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, HIV status, other high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Age/date of birth, visit date, HIV status, HPV test date
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the proportion of women at the target age who have been screened for cervical cancer District-, province-, state-, and national-level managers to assess the overall quality of cervical cancer screening services, and to identify poorly performing facilities and rectify problems at an early stage
Limitations/ comments	None
Related links	WHO guideline for screening and treatment of cervical pre-cancer lesions for cervical cancer prevention https://www.who.int/publications/i/item/9789240030824 Improving data for decision-making: a toolkit for cervical cancer prevention and control programmes https://apps.who.int/iris/handle/10665/279420

C3
Cervical cancer screening among women aged 30–49 years

Purpose	To measure compliance with guidelines
Definition	Proportion of women aged 30–49 years who were screened for cervical cancer using any cervical cancer screening test For women with HIV, the target age group for screening is 25–49 years
Numerator	Number of women aged 30–49 years who attended the health facility in the last year, had no history of cervical cancer screening in the last 10 years and were screened for cervical cancer Number of women with HIV aged 25–49 years who attended the health facility in the last year, had no history of cervical cancer screening in the last 5 years and were screened for cervical cancer
Denominator	Total number of women aged 30–49 years who attended the health facility in the last year and had no history of cervical cancer screening in the last 10 years Total number of women with HIV aged 25–49 years who attended the health facility in the last year and had no history of cervical cancer screening in the last 5 years
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, HIV status, other high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Age/date of birth, visit date, HIV status, cervical cancer screening test date
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the proportion of women with the target age who have been screened for cervical cancer District-, province-, state-, and national-level managers to assess the overall quality of cervical cancer screening services, and to identify poorly performing facilities and rectify problems at an early stage
Limitations/ comments	None
Related links	Improving data for decision-making: a toolkit for cervical cancer prevention and control programmes https://apps.who.int/iris/handle/10665/279420

C4
Cervical cancer screening test positivity among women aged 30–49 years

Purpose	To determine efficiency of screening
Definition	Proportion of screened women aged 30–49 years with a positive screening result in the previous 12-month period using any of these methods: • Visual inspection with acetic acid/vinegar (VIA) • Pap smear • HPV test For women with HIV, the target age group for screening is 25–49 years
Numerator	Number of screened women aged 30–49 years with a positive cervical cancer screening result in the last year
Denominator	Total number of screened women aged 30–49 years screened for cervical cancer in the last year
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, HIV status, other high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Age/date of birth, visit date, screening test date, screening test result
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the proportion of screened women detected with cervical disease (tested positive) District-, province- and state-level programme managers to assess efficiency of cervical cancer screening based on national protocol
Limitations/ comments	None
Related links	WHO guideline for screening and treatment of cervical pre-cancer lesions for cervical cancer prevention https://www.who.int/publications/i/item/9789240030824 Improving data for decision-making: a toolkit for cervical cancer prevention and control programmes https://apps.who.int/iris/handle/10665/279420

Optional indicators and their metadata

01 Availability of Pap smear testing

02 Availability of visual inspection with acetic acid testing

03 Cervical cancer rescreening among women aged 30–49 years

04 Pre-invasive cervical disease treatment among women aged 30–49 years

05 Timeliness of referral for cervical cancer diagnosis among women aged 30–49 years with suspicious findings from cervical cancer screening

06 Availability of trained staff who are providing cervical cancer screening services

07 Completeness and timeliness of reporting by health facilities

08 Facilities receiving supervisory visit

09 Loss to follow-up

O1

Availability of Pap smear testing

Purpose	To ensure uninterrupted services for cervical cancer screening
Definition	Proportion of health facilities that have capability of Pap smear testing A facility is considered to have capability of Pap smear testing if collection of sample for Pap smear testing can be done at the facility
Numerator	Number of health facilities reporting capability of performing Pap smear testing
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility reports, regional logistics information system or survey
Key data elements	Number of facilities reporting “test capability”
Frequency of reporting	Quarterly
Users of data	District-, province-, and state-level managers to focus supervision on health facilities reporting no laboratory capability, to make facilities capable and strengthen health systems to ensure uninterrupted laboratory services
Limitations/ comments	None
Related links	WHO guideline for screening and treatment of cervical pre-cancer lesions for cervical cancer prevention https://www.who.int/publications/i/item/9789240030824 Improving data for decision-making: a toolkit for cervical cancer prevention and control programmes https://apps.who.int/iris/handle/10665/279420

O2

Availability of visual inspection with acetic acid testing

Purpose	To ensure uninterrupted services for cervical cancer screening
Definition	Proportion of health facilities that have capability of VIA testing
Numerator	Number of health facilities reporting capability of performing VIA testing
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility reports, regional logistics information system or survey
Key data elements	Number of facilities reporting “test capability”
Frequency of reporting	Quarterly
Users of data	District-, province- and state-level managers to focus supervision on health facilities reporting no laboratory capability, making facilities capable and to strengthen health systems to ensure uninterrupted laboratory services
Limitations/ comments	None
Related links	WHO guideline for screening and treatment of cervical pre-cancer lesions for cervical cancer prevention https://www.who.int/publications/i/item/9789240030824 Improving data for decision-making: a toolkit for cervical cancer prevention and control programmes https://apps.who.int/iris/handle/10665/279420

O3

Cervical cancer rescreening among women aged 30–49 years

Purpose	To measure compliance with guidelines
Definition	Proportion of women aged 30–49 years who were rescreened for cervical cancer, five years after their last screening For women with HIV, the target age group is 25–49 years and rescreening should be done after 3 years
Numerator	Number of women aged 30–49 years who attended the health facility in the last year who were rescreened for cervical cancer, five years after their last screening Number of women with HIV aged 25–49 years who attended the health facility in the last year who were rescreened for cervical cancer, three years after their last screening
Denominator	Total number of women aged 30–49 years who attended the health facility in the last year and had their last screening more than five years ago Total number of women with HIV aged 25–49 years who attended the health facility in the last year and had their last screening more than three years ago
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, HIV status, other high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Age/date of birth, visit date, HIV status, cervical cancer screening test date
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the proportion of women at the target age who have been screened for cervical cancer District-, province-, state-, and national-level managers to assess the overall quality of cervical cancer screening services, and to identify poorly performing facilities and rectify problems at an early stage
Limitations/ comments	In women who test negative on VIA or cytology (Pap smear), the interval for repeat screening should be every three to five years In women who test negative on an HPV test, rescreening should be done after a minimum interval of five years In women who are of HIV-positive status or of unknown HIV status in areas with high endemic HIV infection, if the screening test is negative, the screening interval for repeat screening should be within three years
Related links	WHO guideline for screening and treatment of cervical pre-cancer lesions for cervical cancer prevention https://www.who.int/publications/i/item/9789240030824 Improving data for decision-making: a toolkit for cervical cancer prevention and control programmes https://apps.who.int/iris/handle/10665/279420

O4

Pre-invasive cervical disease treatment among women aged 30–49 years

Purpose	To measure pre-invasive cervical disease treatment level among patients who have been diagnosed with pre-invasive cervical disease at the facility level
Definition	Proportion of women aged 30–49 years with positive HPV test, eligible for treatment of pre-invasive cervical disease who were treated in the facility in the last year Treatment options include thermal ablation, cryotherapy, and excision treatment including large loop excision of the transformation zone therapy For women with HIV, the target age group for screening is 25–49 years
Numerator	Number of women aged 30–49 years with positive HPV test eligible for treatment of pre-invasive cervical disease who were treated in the facility in the last year
Denominator	Total number of women aged 30–49 years with positive HPV test eligible for treatment of pre-invasive cervical disease in the facility in the last year
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, HIV status, other high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Cervical cancer screening test date, treatment date
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the proportion of people with cervical disease at their facility treated based on guidelines District-, province-, state-, and national-level managers to assess the overall quality of treatment services, and to identify poorly performing facilities and rectify problems at an early stage
Limitations/ comments	None
Related links	WHO guideline for screening and treatment of cervical pre-cancer lesions for cervical cancer prevention https://www.who.int/publications/i/item/9789240030824 Improving data for decision-making: a toolkit for cervical cancer prevention and control programmes https://apps.who.int/iris/handle/10665/279420

O5

Timeliness of referral for cervical cancer diagnosis among women aged 30–49 years with suspicious findings from cervical cancer screening

Purpose	To assess the process of cervical cancer management in facilities
Definition	Proportion of women aged 30–49 years with suspicious findings from cervical cancer screening conducted at the facility who were referred to a center with capacity for diagnosis and management of cancer within one month of screening For women with HIV, the target age group for screening is 25–49 years
Numerator	Number of women aged 30–49 years with suspicious findings from cervical cancer screening conducted at the facility who were referred to a center with capacity for diagnosis and management of cancer within one month of screening
Denominator	Total number of women aged 30–49 years with suspicious findings from cervical cancer screening conducted at the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, HIV status, other high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Sex, age, suspicious cervical cancer screening test result, date of cervical cancer screening test result, date of referral for cervical cancer diagnosis
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the proportion of women with suspicious findings from cervical cancer screening referred for diagnosis District-, province-, state-, and national-level managers to assess the gap in cervical cancer management in facilities
Limitations/ comments	None
Related links	WHO guideline for screening and treatment of cervical pre-cancer lesions for cervical cancer prevention https://www.who.int/publications/i/item/9789240030824 Improving data for decision-making: a toolkit for cervical cancer prevention and control programmes https://apps.who.int/iris/handle/10665/279420

O6

Availability of trained staff who are providing cervical cancer screening services

Purpose	To ensure high quality of cervical cancer screening services
Definition	Proportion of health facilities in which staff have been trained in the latest WHO *Guideline for screening and treatment of cervical pre-cancer lesions for cervical cancer prevention* or national guidelines on cervical cancer screening
Numerator	Number of health facilities in which staff have been trained in the latest WHO *Guideline for screening and treatment of cervical pre-cancer lesions for cervical cancer prevention* or national guidelines on cervical cancer screening Staff refers to physicians or nationally authorized health professionals for cervical cancer screening services
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility report, health workforce information system or survey
Key data elements	Number of facilities reporting even one untrained staff
Frequency of reporting	Annually
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities reporting untrained staff, hold training programs, and strengthen health systems to ensure high quality of services
Limitations/ comments	Frequency of training depends on the date of the last version of WHO *Guideline for screening and treatment of cervical pre-cancer lesions for cervical cancer prevention* or national guidelines as well as the staff turnover at the healthcare facility
Related links	WHO guideline for screening and treatment of cervical pre-cancer lesions for cervical cancer prevention https://www.who.int/publications/i/item/9789240030824 Improving data for decision-making: a toolkit for cervical cancer prevention and control programmes https://apps.who.int/iris/handle/10665/279420 Harmonized health facility assessment (HHFA): core questions https://www.who.int/publications/i/item/harmonized-health-facility-assessment-(hhfa) Service availability and readiness assessment (SARA): an annual monitoring system for service delivery : reference manual, Version 2.2, Revised July 2015 https://apps.who.int/iris/handle/10665/149025

07

Completeness and timeliness of reporting by health facilities

Purpose	To assess compliance of facilities in reporting
Definition	Proportion of health facilities that submitted complete and timely reports Health facility reports containing mandatory data that were reported to higher level within the prescribed submission period by the national programme are considered complete and timely reports
Numerator	Number of health facilities that submitted complete and timely reports on cervical cancer indicators
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Routine health information system
Key data elements	Completeness status of report, timeliness status of report
Frequency of reporting	Quarterly
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities with incomplete and late report submission
Limitations/ comments	Countries must identify mandatory facility-based indicators to be reported within a specified deadline
Related links	Improving data for decision-making: a toolkit for cervical cancer prevention and control programmes https://apps.who.int/iris/handle/10665/279420 2018 Global reference list of 100 core health indicators (plus health-related SDGs) (page 131) https://score.tools.who.int/fileadmin/uploads/score/Documents/Enable_data_use_for_policy_and_action/100_Core_Health_Indicators_2018.pdf

O8

Facilities receiving supervisory visit

Purpose	To ensure continuous quality improvement of clinical care and data
Definition	Proportion of health facilities receiving a supervisory visit in the last reporting period
Numerator	Number of health facilities receiving a supervisory visit in the last reporting period
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility report
Key data elements	Number of facilities receiving supervisory visit
Frequency of reporting	Quarterly
Users of data	District-, province-, state-, and national-level managers to check if continuous quality improvement processes are in place
Limitations/ comments	None
Related links	Improving data for decision-making: a toolkit for cervical cancer prevention and control programmes https://apps.who.int/iris/handle/10665/279420 WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

O9

Loss to follow-up

Purpose	To assess the quality of cervical cancer screening
Definition	Proportion of women who tested positive for cervical cancer screening or with a known cervical cancer diagnosis who were receiving survivorship care, who were lost to follow-up (unknown status for one year)
Numerator	Number of women who tested positive for cervical cancer screening or with a known cervical cancer diagnosis who were receiving survivorship care at the facility who were lost to follow-up
Denominator	Total number of women who tested positive for cervical cancer screening or with a known cervical cancer diagnosis who were receiving survivorship care at the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, comorbidity status, HIV status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Unknown status for one year from last visit
Frequency of reporting	Annually
Users of data	Facility-level managers to review clinical care processes and recommend actions to reduce losses to follow-up District-, province-, state-, and national-level managers to evaluate the gaps from diagnosis to control
Limitations/ comments	For comparison with other healthcare facilities the indicator needs to be age-standardized
Related links	Improving data for decision-making: a toolkit for cervical cancer prevention and control programmes https://apps.who.int/iris/handle/10665/279420 Guide to cancer early diagnosis https://apps.who.int/iris/bitstream/handle/10665/254500/9789241511940-eng.pdf WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

Childhood cancer

Core indicators and their metadata

C1 Clinical evaluation for early diagnosis of childhood cancer among children with signs and/or symptoms associated with childhood cancer

C2 Timeliness of referral for childhood cancer diagnosis among children with associated signs and/or symptoms of childhood cancer who had suspicious findings from clinical evaluation

C1

Clinical evaluation for early diagnosis of childhood cancer among children with signs and/or symptoms associated with childhood cancer

Purpose	To measure the level of childhood cancer early diagnosis at the primary care level
Definition	Proportion of children who attended the facility with signs and/or symptoms associated with childhood cancer and underwent appropriate clinical evaluation for early diagnosis based on WHO or national guidelines Common signs and symptoms of childhood cancer: • Brain tumors: persistent morning headaches and vomiting, ataxia and impaired vision • Burkitt lymphoma, neuroblastoma or Wilms' tumor: abdominal mass associated with fever and/or weight loss • Hodgkin lymphoma: abdominal mass associated with fever and/or weight loss, lymph node swelling associated with fever • Leukemia: bleeding and fever, low blood count, lymph node swelling associated with fever • Osteosarcoma or soft tissue sarcomas: bone pain, swelling of a limb without trauma • Retinoblastoma: leukocoria (white pupil)
Numerator	Number of children who attended the facility with signs and/or symptoms associated with childhood cancer and underwent appropriate clinical evaluation for early diagnosis
Denominator	Total number of children who attended the facility and had signs and/or symptoms associated with childhood cancer
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Sex, age, presence of signs and/or symptoms associated with childhood cancer, clinical evaluation status
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the proportion of children with signs and symptoms evaluated for cancer District-, province-, state-, and national-level managers to assess the overall quality of childhood cancer diagnostics, and to identify poorly performing facilities and rectify problems at an early stage
Limitations/ comments	Early diagnosis is defined as the early identification of cancer in patients who have symptoms of the disease, in contrast with cancer screening that seeks to identify unrecognized (pre-clinical) cancer or pre-cancerous lesions in an apparently healthy target population
Related links	Early diagnosis of childhood cancer https://iris.paho.org/bitstream/handle/10665.2/34850/9789275118467-eng.pdf?sequence=1&isAllowed=y CureAll framework: WHO global initiative for childhood cancer https://apps.who.int/iris/bitstream/handle/10665/347370/9789240025271-eng.pdf?sequence=1&isAllowed=y Guide to early cancer diagnosis https://apps.who.int/iris/bitstream/handle/10665/254500/9789241511940-eng.pdf

C2

Timeliness of referral for childhood cancer diagnosis among children with associated signs and/or symptoms of childhood cancer who had suspicious findings from clinical evaluation

Purpose	To assess the process of childhood cancer management in facilities
Definition	Proportion of children with signs and/or symptoms associated with childhood cancer who had suspicious findings from clinical evaluation conducted at the facility and were referred to a center with capacity for diagnosis of cancer within one month after clinical evaluation
Numerator	Number of children with signs and/or symptoms associated with cancer who had suspicious findings from clinical evaluation conducted at the facility and were referred to a center with capacity for diagnosis of cancer within one month after clinical evaluation
Denominator	Total number of children with signs and/or symptoms associated with childhood cancer who had suspicious findings from clinical evaluation conducted at the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Age, suspicious findings from clinical evaluation, date of clinical evaluation, date of referral for cancer diagnosis
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the proportion of children with signs and symptoms who had suspicious findings and were referred for childhood cancer diagnosis District-, province-, state-, and national-level managers to assess the gap in childhood cancer management in facilities
Limitations/ comments	None
Related links	Early diagnosis of childhood cancer https://iris.paho.org/bitstream/handle/10665.2/34850/9789275118467-eng.pdf?sequence=1&isAllowed=y CureAll framework: WHO global initiative for childhood cancer https://apps.who.int/iris/bitstream/handle/10665/347370/9789240025271-eng.pdf?sequence=1&isAllowed=y Guide to early cancer diagnosis https://apps.who.int/iris/bitstream/handle/10665/254500/9789241511940-eng.pdf

Optional indicators and their metadata

01 Availability of trained staff who are providing services for early diagnosis of childhood cancer

02 Completeness and timeliness of reporting by health facilities

03 Facilities receiving supervisory visit

04 Loss to follow-up

O1

Availability of trained staff who are providing services for early diagnosis of childhood cancer

Purpose	To ensure high quality of clinical services for early diagnosis of childhood cancer
Definition	Proportion of health facilities in which staff have been trained in the latest WHO or national guidelines on early diagnosis of childhood cancer
Numerator	Number of health facilities in which staff have been trained in the latest WHO or national guidelines on early diagnosis of childhood cancer Staff refers to physicians or nationally authorized health professionals for early diagnosis of childhood cancer
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility report, health workforce information system or survey
Key data elements	Number of facilities reporting even one untrained staff
Frequency of reporting	Annually
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities reporting untrained staff, hold training programmes, and strengthen health systems to ensure high quality of services
Limitations/ comments	Frequency of training depends on the date of the last version of WHO or national guidelines as well as the staff turnover at the healthcare facility
Related links	Early diagnosis of childhood cancer https://iris.paho.org/bitstream/handle/10665.2/34850/9789275118467-eng.pdf?sequence=1&isAllowed=y CureAll framework: WHO global initiative for childhood cancer https://apps.who.int/iris/bitstream/handle/10665/347370/9789240025271-eng.pdf?sequence=1&isAllowed=y Guide to cancer early diagnosis https://apps.who.int/iris/bitstream/handle/10665/254500/9789241511940-eng.pdf

O2

Completeness and timeliness of reporting by health facilities

Purpose	To assess compliance of facilities in reporting
Definition	Proportion of health facilities that submitted complete and timely reports Health facility reports containing mandatory data that were reported to higher level within the prescribed submission period by the national programme are considered complete and timely reports
Numerator	Number of health facilities that submitted complete and timely reports on childhood cancer indicators
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Routine health information system
Key data elements	Completeness status of report, timeliness status of report
Frequency of reporting	Quarterly
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities with incomplete and late report submission
Limitations/ comments	Countries must identify mandatory facility-based indicators to be reported within a specified deadline
Related links	2018 Global reference list of 100 core health indicators (plus health-related SDGs) (page 131) https://score.tools.who.int/fileadmin/uploads/score/Documents/Enable_data_use_for_policy_and_action/100_Core_Health_Indicators_2018.pdf

O3

Facilities receiving supervisory visit

Purpose	To ensure continuous quality improvement of clinical care and data
Definition	Proportion of health facilities receiving a supervisory visit in the last reporting period
Numerator	Number of health facilities receiving a supervisory visit in the last reporting period
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility report
Key data elements	Number of facilities receiving supervisory visit
Frequency of reporting	Quarterly
Users of data	District-, province-, state-, and national-level managers to check if continuous quality improvement processes are in place
Limitations/ comments	None
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

O4

Loss to follow-up

Purpose	To assess the quality of cancer clinical management
Definition	Proportion of children with a known diagnosis of cancer who were receiving follow-up care who were lost to follow-up (unknown status for one year)
Numerator	Number of children with a known diagnosis of cancer who were receiving follow-up care at the facility who were lost to follow-up
Denominator	Total number of children with a known diagnosis of cancer who were receiving follow-up care at the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), and health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Unknown status for one year from last visit
Frequency of reporting	Annually
Users of data	Facility-level managers to review clinical care processes and recommend actions to reduce losses to follow-up District-, province-, state-, and national-level managers to evaluate the gaps from diagnosis to control
Limitations/ comments	For comparison with other healthcare facilities the indicator needs to be age-standardized
Related links	CureAll framework: WHO global initiative for childhood cancer https://apps.who.int/iris/bitstream/handle/10665/347370/9789240025271-eng.pdf?sequence=1&isAllowed=y Guide to cancer early diagnosis https://apps.who.int/iris/bitstream/handle/10665/254500/9789241511940-eng.pdf WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

General cancer

Core indicators and their metadata

C1 Clinical evaluation for early diagnosis of cancer among people with signs and/or symptoms associated with cancer

C2 Timeliness of referral for cancer diagnosis among people with associated signs and/or symptoms of cancer who had suspicious findings from clinical evaluation

C1
Clinical evaluation for early diagnosis of cancer among people with signs and/or symptoms associated with cancer

Purpose	To measure the level of early cancer diagnosis at the primary care level
Definition	Proportion of people who attended the facility with common signs and/or symptoms associated with cancers and underwent appropriate clinical evaluation for early diagnosis based on WHO or national guidelines Common signs and symptoms of some cancers: • Colon and rectum: change in bowl habits, unexplained weight loss, anaemia, blood in the stool (rectal cancer) • Larynx: persistent hoarseness of voice • Naso-pharynx: nosebleed, permanent blocked nose, deafness, nodes in upper part of the neck • Oral cavity: white lesions (leukoplakia) or red lesions (erythroplakia), growth or ulceration in the mouth • Prostate: difficulty (long-time) in urination, frequent nocturnal urination • Skin melanoma: brown lesions with growing irregular borders or areas of patchy coloration that may itch or bleed • Other skin cancers: lesion or sore on skin that does not heal • Stomach: upper abdominal pain, recent onset of indigestion, weight loss • Retinoblastoma: white spot in the pupil, convergent strabismus (in a child) • Testis: swelling of one testicle (asymmetry) • Urinary bladder: pain, frequent and uneasy urination, blood in urine
Numerator	Number of people who attended the facility with common signs and/or symptoms associated with cancers and underwent appropriate clinical evaluation for early diagnosis
Denominator	Total number of people who attended the facility and had signs and/or symptoms associated with cancers
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, country
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Sex, age, presence of signs and/or symptoms associated with general cancers, clinical breast evaluation status
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the proportion of children who have been evaluated for cancer signs and symptoms District-, province-, state-, and national-level managers to assess the overall quality of cancer diagnostics, to identify poorly performing facilities and to rectify problems at an early stage

C1

Clinical evaluation for early diagnosis of cancer among people with signs and/or symptoms associated with cancer

Limitations/ comments

Early diagnosis is defined as the early identification of cancer in patients who have symptoms of the disease, in contrast with cancer screening that seeks to identify unrecognized (pre-clinical) cancer or pre-cancerous lesions in an apparently healthy target population

Countries are encouraged to adopt early cancer diagnosis programmes for breast cancer, cervical cancer, childhood cancer and four additional cancers that contribute the highest burden in their population, considering available resources

Related links

Guide to early cancer diagnosis
https://apps.who.int/iris/bitstream/handle/10665/254500/9789241511940-eng.pdf

WHO package of essential noncommunicable (PEN) disease interventions for primary health care
https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

C2

Timeliness of referral for cancer diagnosis among people with associated signs and/or symptoms of cancer who had suspicious findings from clinical evaluation

Purpose	To assess the process of cancer management in facilities
Definition	Proportion of people with signs and/or symptoms associated with cancer who had suspicious findings from clinical evaluation conducted at the facility and were referred to a center with capacity for diagnosis of cancer within one month after clinical evaluation
Numerator	Number of people with signs and/or symptoms associated with cancer who had suspicious findings from clinical evaluation conducted at the facility and were referred to a center with capacity for diagnosis of cancer within one month after clinical evaluation
Denominator	Total number of people with signs and/or symptoms associated with cancer who had suspicious findings from clinical evaluation conducted at the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, race/ethnicity, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Age, suspicious findings from clinical evaluation, date of clinical evaluation, date of referral for cancer diagnosis
Frequency of reporting	Annually
Users of data	Facility-level managers to assess the proportion of people with signs and symptoms who had suspicious findings and were referred for cancer diagnosis District-, province-, state-, and national-level managers to assess the gap in cancer management in facilities
Limitations/ comments	Countries are encouraged to adopt early cancer diagnosis programmes for breast cancer, cervical cancer, childhood cancer and four additional cancers that contribute the highest burden in their population, considering available resources
Related links	Guide to early cancer diagnosis https://apps.who.int/iris/bitstream/handle/10665/254500/9789241511940-eng.pdf

Optional indicators and their metadata

01 Availability of trained staff who are providing services for early diagnosis of cancers

02 Completeness and timeliness of reporting by health facilities

03 Facilities receiving supervisory visit

04 Loss to follow-up

O1

Availability of trained staff who are providing services for early diagnosis of cancers

Purpose	To ensure high quality of clinical services for early diagnosis of cancers
Definition	Proportion of health facilities in which staff have been trained in the latest WHO or national guidelines on early diagnosis of cancers
Numerator	Number of health facilities in which staff have been trained in the latest WHO or national guidelines on early diagnosis of cancers Staff refers to physicians or nationally authorized health professionals for early diagnosis of cancers
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility report, health workforce information system or survey
Key data elements	Number of facilities reporting even one untrained staff
Frequency of reporting	Annually
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities reporting untrained staff, hold training programmes, and strengthen health systems to ensure high quality of services
Limitations/ comments	Frequency of training depends on the date of the last version of WHO or national guidelines as well as the staff turnover at the healthcare facility
Related links	Guide to cancer early diagnosis https://apps.who.int/iris/bitstream/handle/10665/254500/9789241511940-eng.pdf WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

O2

Completeness and timeliness of reporting by health facilities

Purpose	To assess compliance of facilities in reporting
Definition	Proportion of health facilities that submitted complete and timely reports Health facility reports containing mandatory data that were reported to higher level within the prescribed submission period by the national programme are considered complete and timely reports
Numerator	Number of health facilities that submitted complete and timely reports on cancer indicators
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Routine health information system
Key data elements	Completeness status of report, timeliness status of report
Frequency of reporting	Quarterly
Users of data	District-, province-, state-, and national-level managers to focus supervision on health facilities with incomplete and late report submissions
Limitations/ comments	Countries must identify mandatory facility-based indicators to be reported within a specified deadline
Related links	2018 Global reference list of 100 core health indicators (plus health-related SDGs) (page 131) https://score.tools.who.int/fileadmin/uploads/score/Documents/Enable_data_use_for_policy_and_action/100_Core_Health_Indicators_2018.pdf

O3

Facilities receiving supervisory visit

Purpose	To ensure continuous quality improvement of clinical care and data
Definition	Proportion of health facilities receiving a supervisory visit in the last reporting period
Numerator	Number of health facilities receiving a supervisory visit in the last reporting period
Denominator	Total number of health facilities
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Health facility, provider ownership type (public/private), facility location type (urban/rural)
Sources of data	Health facility report
Key data elements	Number of facilities receiving supervisory visit
Frequency of reporting	Quarterly
Users of data	District-, province-, state-, and national-level managers to check if continuous quality improvement processes are in place
Limitations/ comments	None
Related links	WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

O4

Loss to follow-up

Purpose	To assess the quality of cancer clinical management
Definition	Proportion of people with a known cancer diagnosis who were receiving survivorship care, who were lost to follow-up
Numerator	Number of people with a known cancer diagnosis who were receiving survivorship care at the facility who were lost to follow-up (unknown status for one year)
Denominator	Total number of people with a known cancer diagnosis who were receiving survivorship care at the facility
Method of calculation	Numerator ÷ denominator × 100
Aggregation	District, province, state, national
Disaggregation	Where possible and applicable, stratify by health facility, provider ownership type (public/private), and patient characteristics such as age, sex, comorbidity status, high-risk groups, socio-economic status, residence type (urban/rural), health insurance type
Sources of data	Health facility patient registers, patient records
Key data elements	Unknown status for one year from last visit
Frequency of reporting	Annually
Users of data	Facility-level managers to review clinical care processes and recommend actions to reduce losses to follow-up District-, province-, state-, and national-level managers to evaluate the gaps from diagnosis to control
Limitations/ comments	For comparison with other healthcare facilities the indicator needs to be age-standardized
Related links	Guide to cancer early diagnosis https://apps.who.int/iris/bitstream/handle/10665/254500/9789241511940-eng.pdf WHO package of essential noncommunicable (PEN) disease interventions for primary health care https://www.who.int/publications/i/item/who-package-of-essential-noncommunicable-(pen)-disease-interventions-for-primary-health-care

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