

Management of Diabetes Mellitus in Primary Healthcare – Indicators for assessing quality of medical care¹

Aim – Prevention of early death through delivery of high quality patient centered care for patients with diabetes in PHC

List of indicators

General care indicators:

1. Availability of PHC organizations that currently provide preventive services
2. Availability of testing for diabetes management in primary care
3. Diabetes prevalence
4. Diabetes incidence
5. Diabetes coverage

Process indicators:

1. Screening of hypertension in adult patients with diabetes;
2. Screening for glycated hemoglobin (HbA1C) in adult patients with diabetes;
3. Screening of blood glucose in adult patients with diabetes;
4. Screening for diabetic retinopathy of adult patients with diabetes;
5. Screening for dislipidemia in adult patients with diabetes;
6. Screening for overweight/obesity in adult patients with diabetes;
7. Assessment of smoking status in adult patients with diabetes;
8. Assessment of CVD risk in adult patients with diabetes;
9. Medication treatment of CVD risk in adult patients with diabetes;
10. Medication treatment of Hypertension in adult patients with diabetes;
11. Medication treatment to achieve blood glucose control in adult patients with diabetes.
12. Support for Self-Management and education of diabetic patients

Outcome indicators:

13. Control of glycaemia in diabetic adult patients;
14. Control of hypertension in diabetic adult patients;
15. Control of dislipidemia in diabetic adult patients.

General structure indicators

Indicator 1		
Description/Definition	Name of indicator	Availability of PHC organizations that currently provide preventive services
	Description of Indicator	Percentage of primary health care (PHC) organizations that currently provide a range of PHC services
Data elements	Which elements of data needed?	PHC Center Survey, Health facility database
	Are data items collected/used currently?	No
Calculation	Nominator	Number of organizations in the denominator that report currently offering the following services: <ul style="list-style-type: none"> × Management of care for an emergent but minor health problem; × Non-urgent routine care;

		<ul style="list-style-type: none"> × Prevention and health promotion and/or education services; × Rehabilitation services; × Care for chronic conditions (Diabetes, CVD, Hypertension, Asthma, COPD) × Having Patients registers (general and for chronic conditions) <p>Inclusions</p> <ul style="list-style-type: none"> × Organization is in the denominator × Organization respondent reported currently providing follow-up for management of care for an emergent but minor health problem × Organization respondent reported currently providing follow-up for non-urgent routine care × Organization respondent reported currently providing follow-up for prevention and health promotion and/or education services × Organization respondent reported currently having rehabilitation services × Organization respondent reported currently having Care for chronic conditions (Diabetes, CVD, Hypertension, Asthma, COPD) × Organization respondent reported currently having Patients registers (general and for chronic conditions) × Organization respondent reported currently having guidelines and protocols for providing range of PHC services
	Denominator	<p>Number of PHC organization respondents.</p> <p>Inclusions</p> <ul style="list-style-type: none"> × PHC organization <p>Exclusions</p> <p>None</p>
Indicator 2		
Description/Definition	Name of indicator	Availability of testing for diabetes management in primary care
	Description of Indicator	Percentage of primary health care (PHC) organizations that currently provide tests for management of diabetes mellitus
Data elements	Which elements of data needed?	PHC Center Survey, Health facility database
	Are data items collected/used currently?	No
Calculation	Nominator	Number of facilities in the denominator that have available and functional the medical equipment on-site or the specimen can be collected at the facility and sent out by the staff:

		<ul style="list-style-type: none"> × blood glucose measurement × oral glucose tolerance test × HbA1c, diabetes testing × urine test glucose/sugar × urine test ketone bodies × total cholesterol measurement × urine strips for albumin assay
	Denominator	Number of PHC organization respondents. Inclusions <ul style="list-style-type: none"> × PHC organization Exclusions None

Indicator 3

Description/Definition	Name of indicator	Diabetes prevalence
	Description of Indicator	Percentage of population, age 18 and older, who have currently diabetes or raised blood glucose
Data elements	Which elements of data needed?	PHC Center Patients' data registry
	Are data items collected/used currently?	No
Calculation	Nominator	Number of individuals in the denominator in whom fasting plasma glucose concentrations ≥ 7.0 mmol/l (126 mg/dl) or history of diagnosis with diabetes or use of insulin or oral hypoglycaemic drugs
	Denominator	Patients aged 18 and older Inclusions <ul style="list-style-type: none"> × PHC client/patient × Age of individual is at least 18 years Exclusion None

Indicator 4

Description/Definition	Name of indicator	Diabetes incidence
	Description of Indicator	Percentage of population, age 18 and older with newly diagnosed diabetes mellitus
Data elements	Which elements of data needed?	PHC Center Patients' data registry
	Are data items collected/used currently?	No
Calculation	Nominator	Number of individuals in the denominator in whom fasting plasma glucose concentrations ≥ 7.0 mmol/l (126 mg/dl) or diabetes mellitus or use of insulin or oral hypoglycaemic drugs is diagnosed within past 12 months
	Denominator	Patients aged 18 and older Inclusions <ul style="list-style-type: none"> × PHC client/patient × Age of individual is at least 18 years Exclusion None

Indicator 5

Description/Definition	Name of indicator	Diabetes coverage
------------------------	-------------------	-------------------

	Description of Indicator	Percentage of population, age 18 and older with diabetes mellitus who were seen by their PHC provider
Data elements	Which elements of data needed?	PHC Center Patients' data registry, EMR, Reporting Forms, Outpatient and Home Visit Registration Journals, Specific Flowsheets
	Are data items collected/used currently?	No
Calculation	Nominator	Number of individuals in the denominator who were seen by their PHC provider within past 12 months
	Denominator	Patients aged 18 and older Inclusions × PHC client/patient × Age of individual is at least 18 years × Patient diagnosed with diabetes mellitus Exclusion None
Note	Definition of terms	× A PHC client/patient is an individual who has had contact with the provider at least once in the past year and has a record with the provider dating back at least two years.
Disaggregation	What levels of disaggregation (separation) are needed (if needed)?	By individual Family Doctor; Man/Women; Age: 18-39; 40-49; 50-59; 60-69; 70-79; 80+
Data source	Name of data source	Medical records, Reporting Forms, Outpatient and Home Visit Registration Journals, Specific Flowsheets, Health database surveys
	Format of data source	Paper based, or electronic medical record (EMR)
	Limitation of data source (e.g. could be used only after several years)	Use of EMR only after implementation of HMIS system locally
	Is data source used currently?	Medical records, outpatient and home visit registration journals are approved by the Ministry Order №01-41/n and are maintained uniformly by all outpatient service providers in accordance with this Order
Data quality	Limitations of data used (e.g. based on age, diagnosis etc.)	Patients aged 18 and older with diagnosis of diabetes mellitus
	Checking of data quality	By the Quality Improvement team of the medical facility
Monitoring	Date of creation	-
	Date of updating	-
Organizations/Departments/Staff involved	Organization who owns/creates the data	Name of Medical Organization
	Organization submitting indicator report	Quality Improvement team of the medical facility, Family doctors/Nurses/Managers

Process/outcome indicators

Indicator 1

Description/Definition	Name of indicator	Screening of adult diabetic patients for hypertension
		Description of Indicator
Data elements	Which elements of data needed?	Surveillance data of patients with diabetes mellitus
	Are data items collected/used currently?	No
Calculation	Nominator	Number of individuals in the denominator in whom blood pressure measurement documented at least twice within the past year
	Denominator	Patients aged 18 and older with diagnosis of diabetes mellitus Inclusions x PHC client/patient x Age of individual is at least 18 years x Individual is diagnosed with diabetes mellitus Exclusion None
Note	Definitions of terms x A PHC client/patient is an individual who has had contact with the provider at least once in the past year and has a record with the provider dating back at least two years.	
Disaggregation	What levels of disaggregation (separation) are needed (if needed)?	By individual Family Doctor; Man/Women; Age: 18-39; 40-49; 50-59; 60-69; 70-79; 80+
Data source	Name of data source	Medical records, Reporting Forms, Outpatient and Home Visit Registration Journals, Specific Flowsheets
	Format of data source	Paper based, or electronic medical record (EMR)
	Limitation of data source (e.g. could be used only after several years)	Use of EMR only after implementation of HMIS system locally
	Is data source used currently?	Medical records, outpatient and home visit registration journals are approved by the Ministry Order №01-41/n and are maintained uniformly by all outpatient service providers in accordance with this Order
Data quality	Limitations of data used (e.g. based on age, diagnosis etc.)	Patients aged 18 and older with diagnosis of diabetes mellitus
	Checking of data quality	By the Quality Improvement team of the medical facility
Monitoring	Date of creation	-
	Date of updating	-
Organizations/Departments/Staff involved	Organization who owns/creates the data	Name of Medical Organization
	Organization submitting indicator report	Quality Improvement team of the medical facility, Family doctors/Nurses/Managers

Indicator 2		
Description/Definition	Name of indicator	Screening of adult diabetic patients for glycosylated hemoglobin (HbA1C)
	Description of Indicator	% of patients age 18 years and older with diabetes mellitus with regular testing of HbA1C
Data elements	Which elements of data needed?	Surveillance data of patients with diabetes mellitus
	Are data items collected/used currently?	No
Calculation	Nominator	Number of patients in denominator where 2 measurements of HbA1C documented within past year
	Denominator	Patients aged 18 and older with diagnosis of diabetes mellitus Inclusions x PHC client/patient x Age of individual is at least 18 years x Individual is diagnosed with diabetes mellitus Exclusion None
Note	Definition of terms x A PHC client/patient is an individual who has had contact with the provider at least once in the past year and has a record with the provider dating back at least two years.	
Disaggregation	What levels of disaggregation (separation) are needed (if needed)?	By individual Family Doctor; Man/Women; Age: 18-39; 40-49; 50-59; 60-69; 70-79; 80+
Data source	Name of data source	Medical records, Reporting Forms, Outpatient and Home Visit Registration Journals, Specific Flowsheets
	Format of data source	Paper based, or electronic medical record (EMR)
	Limitation of data source (e.g. could be used only after several years)	Use of EMR only after implementation of HMIS system locally
	Is data source used currently?	Medical records, outpatient and home visit registration journals are approved by the Ministry Order №01-41/n and are maintained uniformly by all outpatient service providers in accordance with this Order
Data quality	Limitations of data used (e.g. based on age, diagnosis etc.)	Patients aged 18 and older with diagnosis of diabetes mellitus
	Checking of data quality	By the Quality Improvement team of the medical facility
Monitoring	Date of creation	-
	Date of updating	-
Organizations/Departments/Staff involved	Organization who owns/creates the data	Name of Medical Organization
	Organization submitting indicator report	Quality Improvement team of the medical facility, Family doctors/Nurses/Managers

Indicator 3

Indicator 3		
Description/Definition	Name of indicator	Screening of blood glucose in adult patients with diabetes
		Description of Indicator
Data elements	Which elements of data needed?	Surveillance data of patients with diabetes mellitus
	Are data items collected/used currently?	No
Calculation	Nominator	Number of patients in denominator where 2 measurement of blood glucose documented within past year
	Denominator	Patients aged 18 and older with diagnosis of diabetes mellitus Inclusions x PHC client/patient x Age of individual is at least 18 years x Individual is diagnosed with diabetes mellitus Exclusion None
Note	Definition of terms x A PHC client/patient is an individual who has had contact with the provider at least once in the past year and has a record with the provider dating back at least two years.	
Disaggregation	What levels of disaggregation (separation) are needed (if needed)?	By individual Family Doctor; Man/Women; Age: 18-39; 40-49; 50-59; 60-69; 70-79; 80+
Data source	Name of data source	Medical records, Reporting Forms, Outpatient and Home Visit Registration Journals, Specific Flowsheets
	Format of data source	Paper based, or electronic medical record (EMR)
	Limitation of data source (e.g. could be used only after several years)	Use of EMR only after implementation of HMIS system locally
	Is data source used currently?	Medical records, outpatient and home visit registration journals are approved by the Ministry Order №01-41/n and are maintained uniformly by all outpatient service providers in accordance with this Order
Data quality	Limitations of data used (e.g. based on age, diagnosis etc.)	Patients aged 18 and older with diagnosis of diabetes mellitus
	Checking of data quality	By the Quality Improvement team of the medical facility
Monitoring	Date of creation	-
	Date of updating	-
Organizations/Departments/Staff involved	Organization who owns/creates the data	Name of Medical Organization
	Organization submitting indicator report	Quality Improvement team of the medical facility, Family doctors/Nurses/Managers

Indicator 4		
Description/Definition	Name of indicator	Screening of adult patients with diabetes for diabetic retinopathy

	Description of Indicator	Percentage of diabetic patients aged 18 years and older who were screened for diabetic retinopathy
Data elements	Which elements of data needed?	Surveillance data of patients with diabetes mellitus
	Are data items collected/used currently?	No
Calculation	Nominator	Number of patients in denominator where eye investigation with dilated pupil/referral to ophthalmologist documented within past year
	Denominator	Patients aged 18 and older with diagnosis of diabetes mellitus Inclusions x PHC client/patient x Age of individual is at least 18 years x Individual is diagnosed with diabetes mellitus Exclusion Diabetes type 1 with duration less than 5 years
Note	Definition of terms x A PHC client/patient is an individual who has had contact with the provider at least once in the past year and has a record with the provider dating back at least two years.	
Disaggregation	What levels of disaggregation (separation) are needed (if needed)?	By individual Family Doctor; Man/Women; Age: 18-39; 40-49; 50-59; 60-69; 70-79; 80+
Data source	Name of data source	Medical records, Reporting Forms, Outpatient and Home Visit Registration Journals, Specific Flowsheets
	Format of data source	Paper based, or electronic medical record (EMR)
	Limitation of data source (e.g. could be used only after several years)	Use of EMR only after implementation of HMIS system locally
	Is data source used currently?	Medical records, outpatient and home visit registration journals are approved by the Ministry Order №01-41/n and are maintained uniformly by all outpatient service providers in accordance with this Order
Data quality	Limitations of data used (e.g. based on age, diagnosis etc.)	Patients aged 18 and older with diagnosis of diabetes mellitus
	Checking of data quality	By the Quality Improvement team of the medical facility
Monitoring	Date of creation	-
	Date of updating	-
Organizations/Departments/Staff involved	Organization who owns/creates the data	Name of Medical Organization
	Organization submitting indicator report	Quality Improvement team of the medical facility, Family doctors/Nurses/Managers

Indicator 5		
Description/Definition	Name of indicator	Screening of adult patients with diabetes for dyslipidemia

	Description of Indicator	Percentage of diabetic patients aged 18 years and older who were screened for dyslipidemia
Data elements	Which elements of data needed?	Surveillance data of patients with diabetes mellitus
	Are data items collected/used currently?	No
Calculation	Nominator	Number of patients in denominator where LDL-C/TC measurement documented within past year
	Denominator	Patients aged 18 and older with diagnosis of diabetes mellitus Inclusions x PHC client/patient x Age of individual is at least 18 years x Individual is diagnosed with diabetes mellitus Exclusion None
Note	Definition of terms x A PHC client/patient is an individual who has had contact with the provider at least once in the past year and has a record with the provider dating back at least two years.	
Disaggregation	What levels of disaggregation (separation) are needed (if needed)?	By individual Family Doctor; Man/Women; Age: 18-39; 40-49; 50-59; 60-69; 70-79; 80+
Data source	Name of data source	Medical records, Reporting Forms, Outpatient and Home Visit Registration Journals, Specific Flowsheets
	Format of data source	Paper based, or electronic medical record (EMR)
	Limitation of data source (e.g. could be used only after several years)	Use of EMR only after implementation of HMIS system locally
	Is data source used currently?	Medical records, outpatient and home visit registration journals are approved by the Ministry Order №01-41/n and are maintained uniformly by all outpatient service providers in accordance with this Order
Data quality	Limitations of data used (e.g. based on age, diagnosis etc.)	Patients aged 18 and older with diagnosis of diabetes mellitus
	Checking of data quality	By the Quality Improvement team of the medical facility
Monitoring	Date of creation	-
	Date of updating	-
Organizations/Departments/Staff involved	Organization who owns/creates the data	Name of Medical Organization
	Organization submitting indicator report	Quality Improvement team of the medical facility, Family doctors/Nurses/Managers

Indicator 6		
Description/Definition	Name of indicator	Screening of adult patients with diabetes for overweight/obesity

	Description of Indicator	Percentage of diabetic patients aged 18 years and older who were screened for overweight/obesity
Data elements	Which elements of data needed?	Surveillance data of patients with diabetes mellitus
	Are data items collected/used currently?	No
Calculation	Nominator	Number of patients in denominator where BMI/Waist circumference measured within past year
	Denominator	Patients aged 18 and older with diagnosis of diabetes mellitus Inclusions x PHC client/patient x Age of individual is at least 18 years x Individual is diagnosed with diabetes mellitus Exclusion None
Note	Definition of terms x A PHC client/patient is an individual who has had contact with the provider at least once in the past year and has a record with the provider dating back at least two years.	
Disaggregation	What levels of disaggregation (separation) are needed (if needed)?	By individual Family Doctor; Man/Women; Age: 18-39; 40-49; 50-59; 60-69; 70-79; 80+
Data source	Name of data source	Medical records, Reporting Forms, Outpatient and Home Visit Registration Journals, Specific Flowsheets
	Format of data source	Paper based, or electronic medical record (EMR)
	Limitation of data source (e.g. could be used only after several years)	Use of EMR only after implementation of HIMS system locally
	Is data source used currently?	Medical records, outpatient and home visit registration journals are approved by the Ministry Order №01-41/n and are maintained uniformly by all outpatient service providers in accordance with this Order
Data quality	Limitations of data used (e.g. based on age, diagnosis etc.)	Patients aged 18 and older with diagnosis of diabetes mellitus
	Checking of data quality	By the Quality Improvement team of the medical facility
Monitoring	Date of creation	-
	Date of updating	-
Organizations/Departments/Staff involved	Organization who owns/creates the data	Name of Medical Organization
	Organization submitting indicator report	Quality Improvement team of the medical facility, Family doctors/Nurses/Managers

Indicator 7		
Description/Definition	Name of indicator	Assessment of smoking status in adult patients with diabetes
	Description of Indicator	Percentage of diabetic patients aged 18 years and older who were assessed smoking status

Data elements	Which elements of data needed?	Surveillance data of patients with diabetes mellitus
	Are data items collected/used currently?	No
Calculation	Nominator	Number of patients in denominator where smoking status (smoker/non smoker/ex-smoker) documented within past hyear
	Denominator	Patients aged 18 and older with diagnosis of diabetes mellitus Inclusions x PHC client/patient x Age of individual is at least 18 years x Individual is diagnosed with diabetes mellitus Exclusion None
Note	Definition of terms x A PHC client/patient is an individual who has had contact with the provider at least once in the past year and has a record with the provider dating back at least two years.	
Disaggregation	What levels of disaggregation (separation) are needed (if needed)?	By individual Family Doctor; Man/Women; Age: 18-39; 40-49; 50-59; 60-69; 70-79; 80+
Data source	Name of data source	Medical records, Reporting Forms, Outpatient and Home Visit Registration Journals, Specific Flowsheets
	Format of data source	Paper based, or electronic medical record (EMR)
	Limitation of data source (e.g. could be used only after several years)	Use of EMR only after implementation of HMIS system locally
	Is data source used currently?	Medical records, outpatient and home visit registration journals are approved by the Ministry Order №01-41/n and are maintained uniformly by all outpatient service providers in accordance with this Order
Data quality	Limitations of data used (e.g. based on age, diagnosis etc.)	Patients aged 18 and older with diagnosis of diabetes mellitus
	Checking of data quality	By the Quality Improvement team of the medical facility
Monitoring	Date of creation	-
	Date of updating	-
Organizations/Departments/Staff involved	Organization who owns/creates the data	Name of Medical Organization
	Organization submitting indicator report	Quality Improvement team of the medical facility, Family doctors/Nurses/Managers

Indicator 8		
Description/Definition	Name of indicator	Assessment of CVD risk in adult patients with diabetes
	Description of Indicator	Percentage of diabetic patients aged 18 years and older who were assessed CVD risk
Data elements	Which elements of data needed?	Surveillance data of patients with diabetes mellitus
	Are data items collected/used currently?	No

Calculation	Nominator	Number of patients in denominator where CVD risk assessed and documented using internationally recognized risk assessment score (FINDRISK, WHO/ISH etc.)
	Denominator	Patients aged 18 and older with diagnosis of diabetes mellitus Inclusions x PHC client/patient x Age of individual is at least 18 years x Individual is diagnosed with diabetes mellitus Exclusion x Diabetes duration is more than 10 yeras x Individual diagnosed with established CVD
Note	Definition of terms x A PHC client/patient is an individual who has had contact with the provider at least once in the past year and has a record with the provider dating back at least two years.	
Disaggregation	What levels of disaggregation (separation) are needed (if needed)?	By individual Family Doctor; Man/Women; Age: 18-39; 40-49; 50-59; 60-69; 70-79; 80+
Data source	Name of data source	Medical records, Reporting Forms, Outpatient and Home Visit Registration Journals, Specific Flowsheets
	Format of data source	Paper based, or electronic medical record (EMR)
	Limitation of data source (e.g. could be used only after several years)	Use of EMR only after implementation of HMIS system locally
	Is data source used currently?	Medical records, outpatient and home visit registration journals are approved by the Ministry Order №01-41/n and are maintained uniformly by all outpatient service providers in accordance with this Order
Data quality	Limitations of data used (e.g. based on age, diagnosis etc.)	Patients aged 18 and older with diagnosis of diabetes mellitus
	Checking of data quality	By the Quality Improvement team of the medical facility
Monitoring	Date of creation	-
	Date of updating	-
Organizations/Departments/Staff involved	Organization who owns/creates the data	Name of Medical Organization
	Organization submitting indicator report	Quality Improvement team of the medical facility, Family doctors/Nurses/Managers

Indicator 9		
Description/Definition	Name of indicator	Medication treatment of CVD risk in adult patients with diabetes
	Description of Indicator	Percentage of diabetic patients aged 18 years and older who are prescribed medication treatment for CVD risk reduction
Data elements	Which elements of data needed?	Surveillance data of patients with diabetes mellitus
	Are data items collected/used currently?	No

Calculation	Nominator	Number of patients in denominator where aspirin and statin prescribed within past year
	Denominator	Number of patients aged 18 years and older with diagnosis of diabetes and dyslipidemia, established CVD or high risk of CVD based on risk calculation score Inclusion x PHC client/patient x Age of individual is at least 18 years x Individual is diagnosed with diabetes mellitus x Individual has dyslipidemia x Individual has high risk of CVD based on risk calculation score or established diagnosis of CVD Exclusion Patients who have contraindication to specific medication
Note	Definition of terms x A PHC client/patient is an individual who has had contact with the provider at least once in the past year and has a record with the provider dating back at least two years.	
Disaggregation	What levels of disaggregation (separation) are needed (if needed)?	By individual Family Doctor; Man/Women; Age: 18-39; 40-49; 50-59; 60-69; 70-79; 80+
Data source	Name of data source	Medical records, Reporting Forms, Outpatient and Home Visit Registration Journals, Specific Flowsheets
	Format of data source	Paper based, or electronic medical record (EMR)
	Limitation of data source (e.g. could be used only after several years)	Use of EMR only after implementation of HMIS system locally
	Is data source used currently?	Medical records, outpatient and home visit registration journals are approved by the Ministry Order №01-41/n and are maintained uniformly by all outpatient service providers in accordance with this Order
Data quality	Limitations of data used (e.g. based on age, diagnosis etc.)	Patients aged 18 and older with diagnosis of diabetes mellitus
	Checking of data quality	By the Quality Improvement team of the medical facility
Monitoring	Date of creation	-
	Date of updating	-
Organizations/Departments/Staff involved	Organization who owns/creates the data	Name of Medical Organization
	Organization submitting indicator report	Quality Improvement team of the medical facility, Family doctors/Nurses/Managers

Indicator 10		
Description/Definition	Name of indicator	Medication treatment of hypertension in patients with diabetes
	Description of Indicator	Percentage of diabetic patients aged 18 years and older who have co-morbid

		Hypertension and are treated with antihypertensive medications
Data elements	Which elements of data needed?	Surveillance data of patients with diabetes mellitus
	Are data items collected/used currently?	No
Calculation	Nominator	Number of patients in denominator where first choice antihypertensive medication treatment (ACE-I, ARB, Ca-antagonists, Thiazide diuretics, beta-blockers) prescribed within past year
	Denominator	Number of patients aged 18 years and older with diagnosis of diabetes and hypertension Inclusion x PHC client/patient x Age of individual is at least 18 years x Individual is diagnosed with diabetes mellitus x Individual has hypertension Exclusion Patients who have contraindication to specific medication
Note	Definition of terms x A PHC client/patient is an individual who has had contact with the provider at least once in the past year and has a record with the provider dating back at least two years.	
Disaggregation	What levels of disaggregation (separation) are needed (if needed)?	By individual Family Doctor; Man/Women; Age: 18-39; 40-49; 50-59; 60-69; 70-79; 80+
Data source	Name of data source	Medical records, Reporting Forms, Outpatient and Home Visit Registration Journals, Specific Flowsheets
	Format of data source	Paper based, or electronic medical record (EMR)
	Limitation of data source (e.g. could be used only after several years)	Use of EMR only after implementation of HMIS system locally
	Is data source used currently?	Medical records, outpatient and home visit registration journals are approved by the Ministry Order №01-41/n and are maintained uniformly by all outpatient service providers in accordance with this Order
Data quality	Limitations of data used (e.g. based on age, diagnosis etc.)	Patients aged 18 and older with diagnosis of diabetes mellitus
	Checking of data quality	By the Quality Improvement team of the medical facility
Monitoring	Date of creation	-
	Date of updating	-
Organizations/Departments/Staff involved	Organization who owns/creates the data	Name of Medical Organization
	Organization submitting indicator report	Quality Improvement team of the medical facility, Family doctors/Nurses/Managers

Indicator 11		
Description/Definition	Name of indicator	Antidiabetic drug treatment

	Description of Indicator	Percentage of type 2 diabetic patients aged 18 years and older who are prescribed first choice antidiabetic drug treatment (Metformin, SGLT-2 Inhibitors, DPP-4 Inhibitors, GLP-1 agonist, Sulphonilureas)
Data elements	Which elements of data needed?	Surveillance data of patients with diabetes mellitus
	Are data items collected/used currently?	No
Calculation	Nominator	Number of patients in denominator where first choice antidiabetic drug treatment (Metformin, SGLT-2 Inhibitors, DPP-4 Inhibitors, GLP-1 agonist, Sulphonilureas) prescribed within past year
	Denominator	Number of patients 18 years and older diagnosed with type 2 diabetes Inclusion x PHC client/patient x Age of individual is at least 18 years x Individual is diagnosed with type 2 diabetes x Glycemic control couldn't be achieved with diet and non-medication treatment measures Exclusion Patients who have contraindication to specific medication
Note	Definition of terms x A PHC client/patient is an individual who has had contact with the provider at least once in the past year and has a record with the provider dating back at least two years.	
Disaggregation	What levels of disaggregation (separation) are needed (if needed)?	By individual Family Doctor; Man/Women; Age: 18-39; 40-49; 50-59; 60-69; 70-79; 80+
Data source	Name of data source	Medical records, Reporting Forms, Outpatient and Home Visit Registration Journals, Specific Flowsheets
	Format of data source	Paper based, or electronic medical record (EMR)
	Limitation of data source (e.g. could be used only after several years)	Use of EMR only after implementation of HMIS system locally
	Is data source used currently?	Medical records, outpatient and home visit registration journals are approved by the Ministry Order №01-41/n and are maintained uniformly by all outpatient service providers in accordance with this Order
Data quality	Limitations of data used (e.g. based on age, diagnosis etc.)	Patients aged 18 and older with diagnosis of diabetes mellitus
	Checking of data quality	By the Quality Improvement team of the medical facility
Monitoring	Date of creation	-
	Date of updating	-
Organizations/Departments/Staff involved	Organization who owns/creates the data	Name of Medical Organization
	Organization submitting indicator report	Quality Improvement team of the medical facility, Family doctors/Nurses/Managers

Indicator 12		
Description/Definition	Name of indicator	Support for Self-Management and education of diabetic patients
	Description of Indicator	Percentage of patient population, age 18 and older, with diabetes who received at least one of the following types of self-management support from their primary health care (PHC) provider: <ul style="list-style-type: none"> × Provided with a treatment plan; × Encouraged to use self-help groups or diabetes education programs.
Data elements	Which elements of data needed?	Surveillance data of patients with diabetes mellitus, diabetic patients' survey
	Are data items collected/used currently?	No
Calculation	Nominator	Number of individuals in the denominator who reported receiving at least one of the following types of self-management support from their PHC provider over the past 12 months: <ul style="list-style-type: none"> × Provided with a treatment plan; and/or × Encouraged to use self-help groups or diabetes education programs. <p>Inclusions</p> <ul style="list-style-type: none"> × Individual is in the denominator × Individual reported at least one of the following over the past six months: <ul style="list-style-type: none"> ! Was helped in making a treatment plan ! Was encouraged to go to a specific group or class to help to cope with diabetes ! Was encouraged to attend programs in the community that could help him or her care for his or her chronic condition(s) <p>Exclusions</p> <p>None</p>
	Denominator	Number of patients aged 18 years and older with diagnosis of diabetes <p>Inclusions</p> <ul style="list-style-type: none"> x PHC client/patient x Age of individual is at least 18 years x Individual is diagnosed with diabetes mellitus <p>Exclusion</p> <ul style="list-style-type: none"> x None
Note	Definition of terms <ul style="list-style-type: none"> x A PHC client/patient is an individual who has had contact with the provider at least once in the past year and has a record with the provider dating back at least two years. 	

Disaggregation	What levels of disaggregation (separation) are needed (if needed)?	By individual Family Doctor; Man/Women; Age: 18-39; 40-49; 50-59; 60-69; 70-79; 80+
Data source	Name of data source	Medical records, Reporting Forms, Outpatient and Home Visit Registration Journals, Specific Flowsheets
	Format of data source	Paper based, or electronic medical record (EMR)
	Limitation of data source (e.g. could be used only after several years)	Use of EMR only after implementation of HMIS system locally
	Is data source used currently?	Medical records, outpatient and home visit registration journals are approved by the Ministry Order №01-41/n and are maintained uniformly by all outpatient service providers in accordance with this Order
Data quality	Limitations of data used (e.g. based on age, diagnosis etc.)	Patients aged 18 and older with diagnosis of diabetes mellitus
	Checking of data quality	By the Quality Improvement team of the medical facility
Monitoring	Date of creation	-
	Date of updating	-
Organizations/Departments/Staff involved	Organization who owns/creates the data	Name of Medical Organization
	Organization submitting indicator report	Quality Improvement team of the medical facility, Family doctors/Nurses/Managers

Indicator 13		
Description/Definition	Name of indicator	Control of blood glucose in patients with diabetes
	Description of Indicator	Percentage of type 2 diabetic patients aged 18 years and older whose glycated hemoglobin (HbA1C) <7%
Data elements	Which elements of data needed?	Surveillance data of patients with diabetes mellitus
	Are data items collected/used currently?	No
Calculation	Nominator	Number of patients in denominator where HbA1C<7% at the last visit
	Denominator	Number of patients aged 18 years and older with diagnosis of type 2 diabetes Inclusions x PHC client/patient x Age of individual is at least 18 years x Individual is diagnosed with diabetes mellitus Exclusion x None
Note	Definition of terms x A PHC client/patient is an individual who has had contact with the provider at least once in the past year and has a record with the provider dating back at least two years.	
Disaggregation	What levels of disaggregation (separation) are needed (if needed)?	By individual Family Doctor; Man/Women;

		Age: 18-39; 40-49; 50-59; 60-69; 70-79; 80+
Data source	Name of data source	Medical records, Reporting Forms, Outpatient and Home Visit Registration Journals, Specific Flowsheets
	Format of data source	Paper based, or electronic medical record (EMR)
	Limitation of data source (e.g. could be used only after several years)	Use of EMR only after implementation of HMIS system locally
	Is data source used currently?	Medical records, outpatient and home visit registration journals are approved by the Ministry Order №01-41/n and are maintained uniformly by all outpatient service providers in accordance with this Order
Data quality	Limitations of data used (e.g. based on age, diagnosis etc.)	Patients aged 18 and older with diagnosis of diabetes mellitus
	Checking of data quality	By the Quality Improvement team of the medical facility
Monitoring	Date of creation	-
	Date of updating	-
Organizations/Departments/Staff involved	Organization who owns/creates the data	Name of Medical Organization
	Organization submitting indicator report	Quality Improvement team of the medical facility, Family doctors/Nurses/Managers

Indicator 14		
Description/Definition	Name of indicator	Control of blood pressure in adult patients with diabetes mellitus
	Description of Indicator	Percentage of diabetic patients aged 18 years and older who have hypertension and their blood pressure is <130/80 mm Hg
Data elements	Which elements of data needed?	Surveillance data of patients with diabetes mellitus
	Are data items collected/used currently?	No
Calculation	Nominator	Number of patients in denominator where blood pressure is less than 130/80 mm Hg at the last visit
	Denominator	Number of patients aged 18 years and older with diagnosis of diabetes and hypertension Inclusions x PHC client/patient x Age of individual is at least 18 years x Individual is diagnosed with diabetes mellitus x Individual is diagnosed with hypertension Exclusion x None
Note	Definition of terms x A PHC client/patient is an individual who has had contact with the provider at least once in the past year and has a record with the provider dating back at least two years.	
Disaggregation	What levels of disaggregation (separation) are needed (if needed)?	By individual Family Doctor; Man/Women;

		Age: 18-39; 40-49; 50-59; 60-69; 70-79; 80+
Data source	Name of data source	Medical records, Reporting Forms, Outpatient and Home Visit Registration Journals, Specific Flowsheets
	Format of data source	Paper based, or electronic medical record (EMR)
	Limitation of data source (e.g. could be used only after several years)	Use of EMR only after implementation of HMIS system locally
	Is data source used currently?	Medical records, outpatient and home visit registration journals are approved by the Ministry Order №01-41/n and are maintained uniformly by all outpatient service providers in accordance with this Order
Data quality	Limitations of data used (e.g. based on age, diagnosis etc.)	Patients aged 18 and older with diagnosis of diabetes mellitus
	Checking of data quality	By the Quality Improvement team of the medical facility
Monitoring	Date of creation	-
	Date of updating	-
Organizations/Departments/Staff involved	Organization who owns/creates the data	Name of Medical Organization
	Organization submitting indicator report	Quality Improvement team of the medical facility, Family doctors/Nurses/Managers

Indicator 15		
Description/Definition	Name of indicator	Control of dislypidemia in adult patients with diabetes
	Description of Indicator	Percentage of diabetic patients aged 18 years and older whose lipids are controlled at target level
Data elements	Which elements of data needed?	Surveillance data of patients with diabetes mellitus
	Are data items collected/used currently?	No
Calculation	Nominator	Number of patients in denominator where LDL-C<2mmol/l and TC <5.2mmol/l at the last visit
	Denominator	Number of patients aged 18 years and older with diagnosis of diabetes Inclusions x PHC client/patient x Age of individual is at least 18 years x Individual is diagnosed with diabetes mellitus Exclusion x None
Note	Definition of terms x A PHC client/patient is an individual who has had contact with the provider at least once in the past year and has a record with the provider dating back at least two years.	
Disaggregation	What levels of disaggregation (separation) are needed (if needed)?	By individual Family Doctor; Man/Women; Age: 18-39; 40-49; 50-59; 60-69; 70-79; 80+

Data source	Name of data source	Medical records, Reporting Forms, Outpatient and Home Visit Registration Journals, Specific Flowsheets
	Format of data source	Paper based, or electronic medical record (EMR)
	Limitation of data source (e.g. could be used only after several years)	Use of EMR only after implementation of HMIS system locally
	Is data source used currently?	Medical records, outpatient and home visit registration journals are approved by the Ministry Order №01-41/n and are maintained uniformly by all outpatient service providers in accordance with this Order
Data quality	Limitations of data used (e.g. based on age, diagnosis etc.)	Patients aged 18 and older with diagnosis of diabetes mellitus
	Checking of data quality	By the Quality Improvement team of the medical facility
Monitoring	Date of creation	-
	Date of updating	-
Organizations/Departments/Staff involved	Organization who owns/creates the data	Name of Medical Organization
	Organization submitting indicator report	Quality Improvement team of the medical facility, Family doctors/Nurses/Managers

Evidence source:

¹ მოზრდილ პაციენტებში შაქრიანი დიაბეტის მართვა პირველად ჯანდაცვაში; კლინიკური მდგომარეობის მართვის სახელმწიფო სტანდარტი (პროტოკოლი), 2021:
<https://moh.gov.ge/uploads/guidelines/2021/09/01/88ef54648a239923d4b90996ec41f801.pdf>