

CVD prevention in General population and patients with hypertension^{1,2}

List of indicators

General care indicators:

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

Process indicators:

1. Screening of adult patients for hypertension;
2. Screening for Modifiable Risk Factors in general population;
3. Screening for Modifiable Risk Factors in Adults With Hypertension;
4. Screening of adult patients with hypertension for dislipidemia;
5. Assessment of CVD risk in adult patients with hypertension;
6. Medication treatment of hypertension in adult patients;
7. Medication treatment of CVD risk in adult patients with hypertension;
8. Support for Self-Management and education of patients with hypertension

Outcome indicators:

9. Control of blood pressure in adult patients with hypertension.

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	<p>Number of organizations in the denominator that report currently offering the following services:</p> <ul style="list-style-type: none"> × Management of care for an emergent but minor health problem; × Non-urgent routine care; × 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

		<ul style="list-style-type: none"> × 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 hypertension management in primary care
	Description of Indicator	Percentage of primary health care (PHC) organizations that currently provide tests for management of hypertension
Data elements	Which elements of data needed?	PHC Center Survey, Health facility database
	Are data items collected/used currently?	No
Calculation	Nominator	<p>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:</p> <ul style="list-style-type: none"> × Blood pressure measurement × Blood glucose measurement × Blood creatinine measurement × Blood electrolytes measurement × HbA1c, diabetes testing × Lipid profile measurement × urine strips for albumin assay × ECG testing × CVD risk assessment tools

	Denominator	Number of PHC organization respondents. Inclusions × PHC organization Exclusions None
Indicator 3		
Description/Definition	Name of indicator	Hypertension prevalence
	Description of Indicator	Percentage of population, age 18 and older, who have currently hypertension or raised blood pressure
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 blood pressure $\geq 140/90$ mmHg or history of diagnosis with hypertension or use of antihypertensive drugs
	Denominator	Patients aged 18 and older Inclusions × PHC client/patient × Age of individual is at least 18 years Exclusion None
Indicator 4		
Description/Definition	Name of indicator	Hypertension incidence
	Description of Indicator	Percentage of population, age 18 and older with newly diagnosed hypertension
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 blood pressure $\geq 140/90$ mmHg or history of diagnosis with hypertension or use of antihypertensive drugs is diagnosed within past 12 months
	Denominator	Patients aged 18 and older Inclusions × PHC client/patient × Age of individual is at least 18 years Exclusion None
Indicator 5		
Description/Definition	Name of indicator	Hypertension coverage
	Description of Indicator	Percentage of population, age 18 and older with hypertension 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 x PHC client/patient x Age of individual is at least 18 years x Patient diagnosed with hypertension 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, 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 hypertension, having high blood pressure ($\geq 140/90$ mmHg) or on antihypertensive medications
	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 1		
Description/Definition	Name of indicator	Screening of adult patients for hypertension
	Description of Indicator	Percentage of patients aged 18 and older who have had their blood pressure measured by their primary health care (PHC) provider.
Data elements	Which elements of data needed?	PHC Center patient register
	Are data items collected/used currently?	No
Calculation	Nominator	Number of individuals in the denominator who had their blood pressure measured by their PHC provider in the past 15 months. Inclusions x Individual is in the denominator

		<ul style="list-style-type: none"> × Individual had a blood pressure measurement taken by his or her PHC provider within the past 15 months <p>Exclusions None</p>
	Denominator	<p>Number of PHC clients/patients, age 18 and older.</p> <p>Inclusions</p> <ul style="list-style-type: none"> × PHC client/patient × Age of individual is at least 18 years <p>Exclusion None</p>

Indicator 2

Description/Definition	Name of indicator	Screening for Modifiable Risk Factors in general population
	Description of Indicator	<p>Percentage of patient population, age 18 and older, who received testing for:</p> <ul style="list-style-type: none"> × Obesity/overweight screening and × Smoking status assessment
Data elements	Which elements of data needed?	PHC Center patients' data register
	Are data items collected/used currently?	No
Calculation	Nominator	<p>Number of individuals in the denominator who received testing, within the past 12 months, for:</p> <ul style="list-style-type: none"> × Obesity/overweight screening and × Smoking status assessment <p>Inclusions</p> <ul style="list-style-type: none"> × Individual is in the denominator; × Individual had at least one of the following: <ul style="list-style-type: none"> ! Weight measured by their PHC provider within the past 12 months; ! Waist circumference measured by their PHC provider within the past 12 months. × Individual has been assessed smoking status (smoker/non smoker/ex-smoker) by their PHC provider within the past 12 months. <p>Exclusions None</p>
	Denominator	<p>Number of PHC clients/patients, age 18 and older</p> <p>Inclusions</p> <ul style="list-style-type: none"> × PHC client/patient × Age of individual is at least 18 years <p>Exclusions None</p>

Indicator 3

Description/Definition	Name of indicator	Screening for Modifiable Risk Factors in Adults With Hypertension
	Description of Indicator	Percentage of patient population, age 18 and older, with hypertension who received testing for all of the following:

		<ul style="list-style-type: none"> × Fasting blood sugar; × Blood pressure measurement; × Obesity/overweight screening and × Smoking status assessment
Data elements	Which elements of data needed?	Surveillance data of patients with diagnosis of hypertension
	Are data items collected/used currently?	No
Calculation	Nominator	<p>Number of individuals in the denominator who received testing, within the past 12 months, for all of the following:</p> <ul style="list-style-type: none"> × Fasting blood sugar; × Blood pressure measurement; × Obesity/overweight screening and × Smoking status assessment <p>Inclusions</p> <ul style="list-style-type: none"> × Individual is in the denominator; × Individual had a blood pressure measurement taken by their primary health care (PHC) provider within the past 12 months; × Individual had at least one of the following: <ul style="list-style-type: none"> ! Weight measured by their PHC provider within the past 12 months; ! Waist circumference measured by their PHC provider within the past 12 months. × Individual had blood sugar test within the past 12 months; × Individual has been assessed smoking status (smoker/non smoker/ex-smoker) by their PHC provider within the past 12 months. <p>Exclusions None</p>
	Denominator	<p>Number of PHC clients/patients, age 18 and older with hypertension</p> <p>Inclusions</p> <ul style="list-style-type: none"> × PHC client/patient × Age of individual is at least 18 years × Individual has a diagnosis of hypertension <p>Exclusions None</p>

Indicator 4

Description/Definition	Name of indicator	Screening of adult patients with hypertension for dislipidemia
	Description of Indicator	Percentage of hypertensive patients aged 18 years and older who were screened for dislipidemia
Data elements	Which elements of data needed?	Surveillance data of patients with hypertension
	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 years and older with diagnosis of hypertension Inclusions x PHC client/patient x Age of individual is at least 18 years x Individual is diagnosed with hypertension Exclusion None
Indicator 5		
Description/Definition	Name of indicator	Assessment of CVD risk in adult patients with hypertension
	Description of Indicator	Percentage of hypertensive patients aged 18 years and older who were assessed CVD risk
Data elements	Which elements of data needed?	Surveillance data of patients with hypertension
	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 (SCORE, Framingham, WHO/ISH etc.)
	Denominator	Patients aged 18 years and older with diagnosis of hypertension Inclusions x PHC client/patient x Age of individual is at least 18 years x Individual is diagnosed with hypertension Exclusion x Individual has Diabetes with duration more than 10 yeras x Individual diagnosed with established CVD
Indicator 6		
Description/Definition	Name of indicator	Medication treatment of hypertension in adult patients
	Description of Indicator	Percentage of hypertensive patients aged 18 years and older who are treated with antihypertensive medications
Data elements	Which elements of data needed?	Surveillance data of patients with hypertension
	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 hypertension Inclusion x PHC client/patient x Age of individual is at least 18 years x Individual has hypertension Exclusion Patients who have contraindication to specific medication

Indicator 7		
Description/Definition	Name of indicator	Medication treatment of CVD risk in adult patients with hypertension
	Description of Indicator	Percentage of hypertensive 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 hypertension
	Are data items collected/used currently?	No
Calculation	Nominator	Number of patients in denominator where aspirin and statin prescribed within past year
	Denominator	<p>Number of patients aged 18 years and older with diagnosis of hypertension, established CVD or high risk of CVD based on risk calculation score</p> <p>Inclusion</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 hypertension x Individual has dislipidemia x Individual has high risk of CVD based on risk calculation score or established diagnosis of CVD <p>Exclusion</p> <p>Patients who have contraindication to specific medication</p>
Indicator 8		
Description/Definition	Name of indicator	Support for Self-Management and education of patients with hypertension
	Description of Indicator	Percentage of patient population, age 18 and older, with hypertension 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"> x Provided with a treatment plan; x Encouraged to use self-help groups or hypertension education programs.
Data elements	Which elements of data needed?	Surveillance data of patients with hypertension, hypertensive patients' survey
	Are data items collected/used currently?	No
Calculation	Nominator	<p>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:</p> <ul style="list-style-type: none"> x Provided with a treatment plan; and/or x Encouraged to use self-help groups or hypertension education programs. <p>Inclusions</p> <ul style="list-style-type: none"> x Individual is in the denominator x Individual reported at least one of the following over the past 12 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 hypertension ! Was encouraged to attend programs in the community that could help him or her care for his or her chronic condition(s) <p>Exclusions None</p>
	Denominator	<p>Number of patients aged 18 years and older with diagnosis of hypertension</p> <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 hypertension <p>Exclusion</p> <ul style="list-style-type: none"> x None

Indicator 9

Description/Definition	Name of indicator	Control of blood pressure in adult patients with hypertension
	Description of Indicator	Percentage of hypertensive patients aged 18 years and older whose blood pressure is <140/80 mm Hg
Data elements	Which elements of data needed?	Surveillance data of patients with hypertension
	Are data items collected/used currently?	No
Calculation	Nominator	Number of patients in denominator where blood pressure is less than 140/80 mm Hg at the last visit
	Denominator	<p>Number of patients aged 18 years and older with diagnosis of hypertension</p> <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 hypertension <p>Exclusion</p> <ul style="list-style-type: none"> x Patients with comorbid diabetes mellitus
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)
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Evidence source:

¹ დისლიპიდემიის გამოვლენა, შეფასება და მართვა პირველად ჯანდაცვაში, კლინიკური მდგომარეობის მართვის სახელმწიფო სტანდარტი (პროტოკოლი), 2021
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² ესენციური ჰიპერტენზიის მართვა მოზრდილებში პირველადი ჯანდაცვის დონეზე; კლინიკური მდგომარეობის მართვის სახელმწიფო სტანდარტი (პროტოკოლი), 2021
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