

INTEGRATION OF DIABETES AND HYPERTENSION IN HEARTS: RATIONALE



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***HEARTS AND NCD SURVEILLANCE WORKSHOP
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Special report

Integrating hypertension and diabetes management in primary health care settings: HEARTS as a tool

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Integrated Management of Diabetes and Hypertension: Critical Role of HEARTS

Primary Pathophysiology



Prevention/Treatment

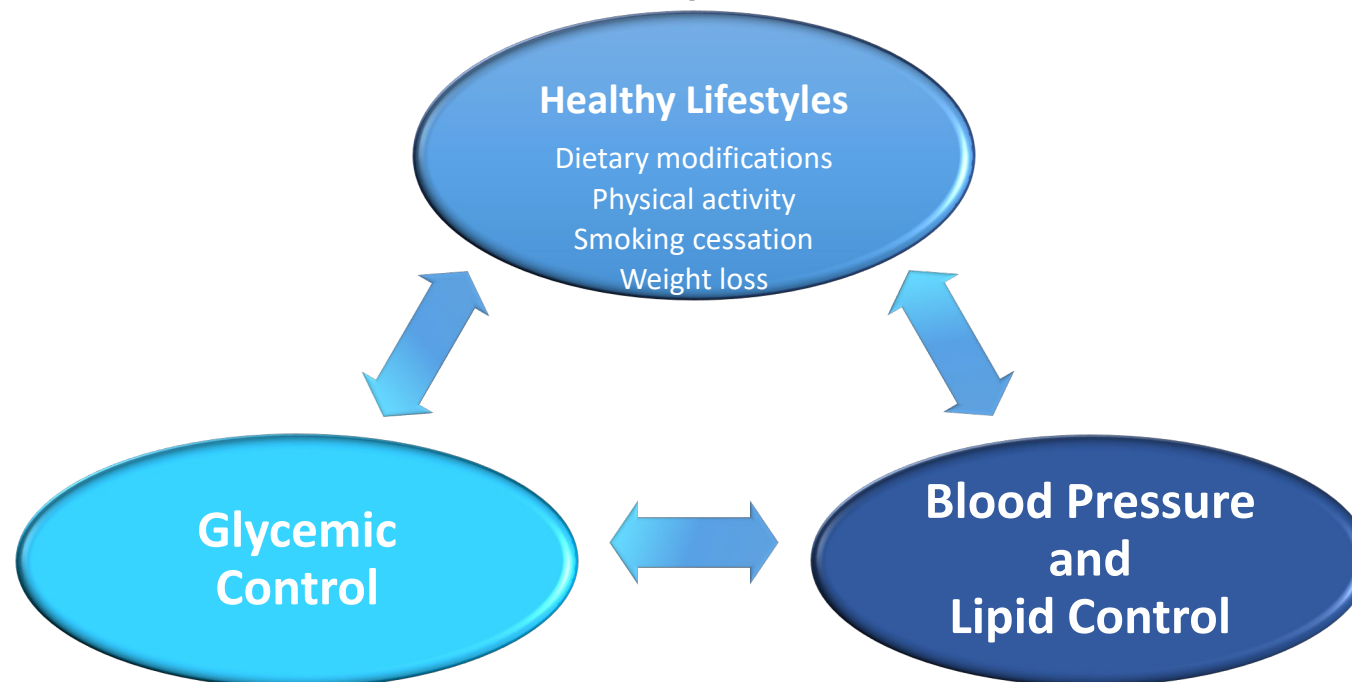


FIGURE 1. Overlapping risk factors and management of hypertension and diabetes

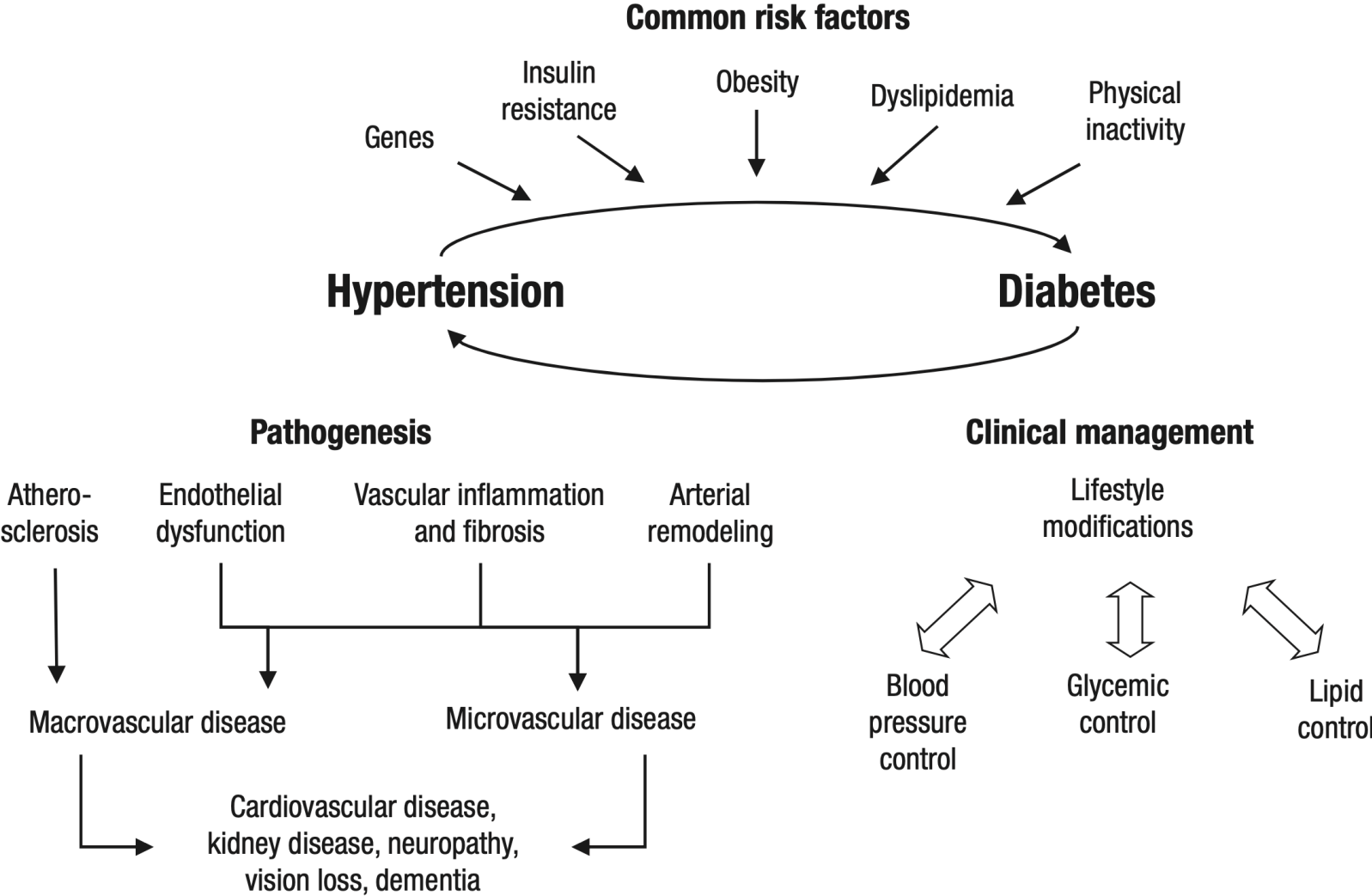


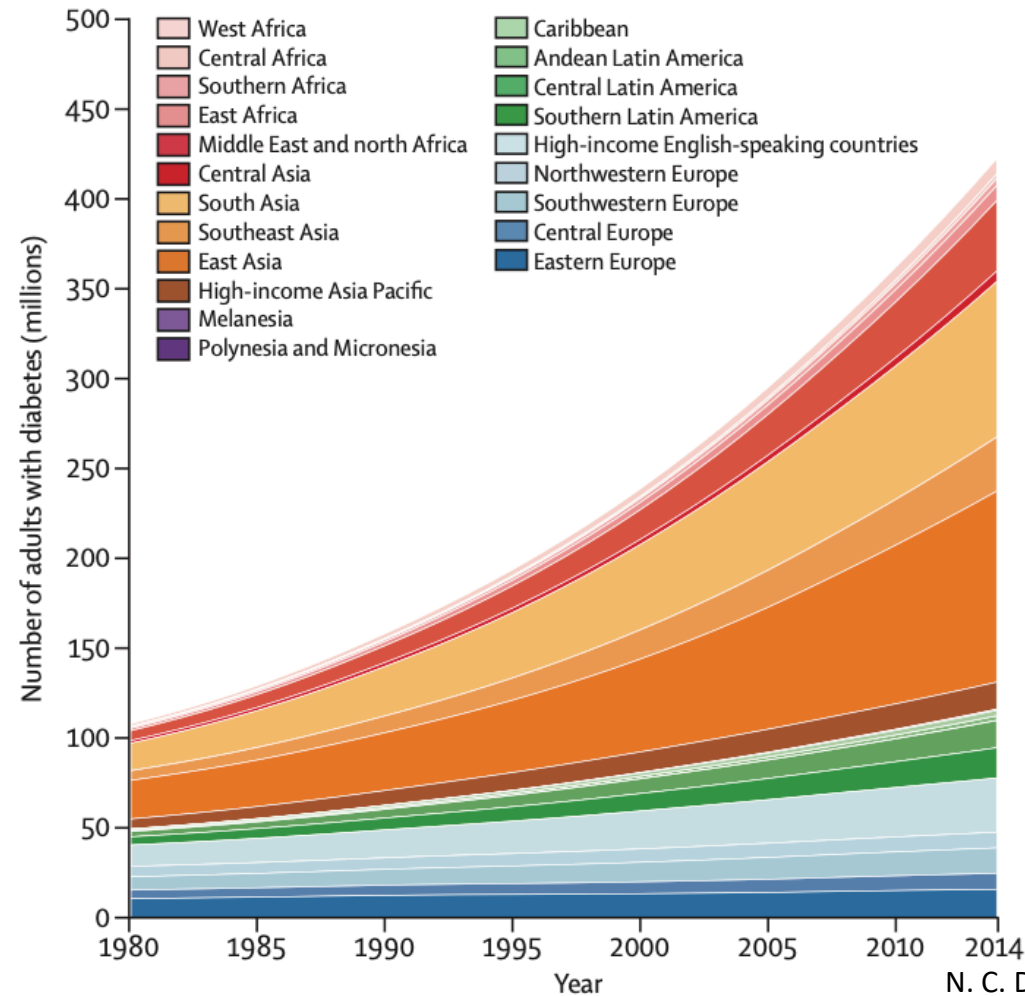
TABLE 1. Deaths attributable to modifiable risk factors in the Americas

Leading risks 1990		Percentage of deaths 1990	Leading risks 2019		Percentage of deaths 2019	Total deaths 2019 (thousands)
1	Tobacco	18.8	1	High systolic blood pressure	16.9	1 230
2	High systolic blood pressure	18.0	2	High fasting plasma glucose	14.7	1 064
3	Dietary risks	14.5	3	Tobacco	14.4	1 043
4	High LDL cholesterol	10.9	4	High body-mass index	13.0	940
5	High fasting plasma glucose	10.4	5	Dietary risks	12.6	916
6	High body-mass index	8.9	6	Kidney dysfunction	7.6	550
7	Child and maternal malnutrition	7.9	7	High LDL cholesterol	7.3	528
8	Air pollution	7.0	8	Alcohol use	5.1	370
9	Kidney dysfunction	5.2	9	Air pollution	4.1	298
10	Alcohol use	4.5	10	Non-optimal temperature	3.1	225

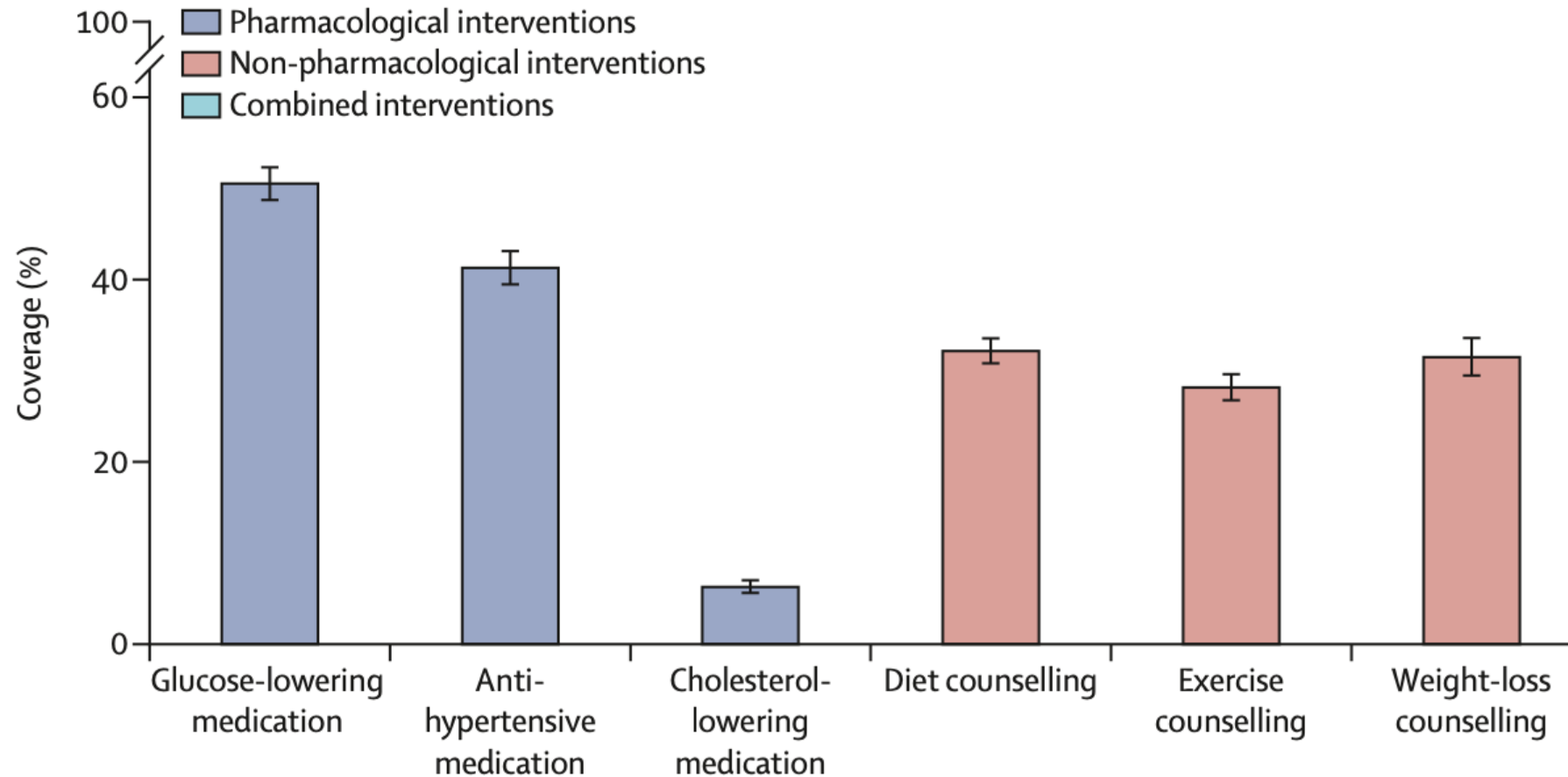
Source: Prepared by the authors using estimates from the Global Burden of Disease study (1).

Note: The arrows refer to changes in order ranking for high systolic blood pressure and high fasting plasma glucose from 1990 to 2019.

Number of adults with diabetes is increasing exponentially



Met need for diabetes treatment in 55 low- and middle-income countries



MODULES OF THE HEARTS TECHNICAL PACKAGE				
Module	What does it include?	Who are the target users?		
		National	Subnational	Primary care
H ealthy-lifestyle counselling	Information on the four behavioural risk factors for CVD is provided. Brief interventions are described as an approach to providing counselling on risk factors and encouraging people to have healthy lifestyles.		✓	✓
E vidence-based protocols	A collection of protocols to standardize a clinical approach to the management of hypertension and diabetes.	✓	✓	✓
A ccess to essential medicines and technology	Information on CVD medicine and technology procurement, quantification, distribution, management and handling of supplies at facility level.	✓	✓	✓
R isk-based CVD management	Information on a total risk approach to the assessment and management of CVD, including country-specific risk charts.		✓	✓
T eam-based care	Guidance and examples on team-based care and task shifting related to the care of CVD. Some training materials are also provided.		✓	✓
S ystems for monitoring	Information on how to monitor and report on the prevention and management of CVD. Contains standardized indicators and data-collection tools.	✓	✓	✓

Hypertension Clinical Pathway

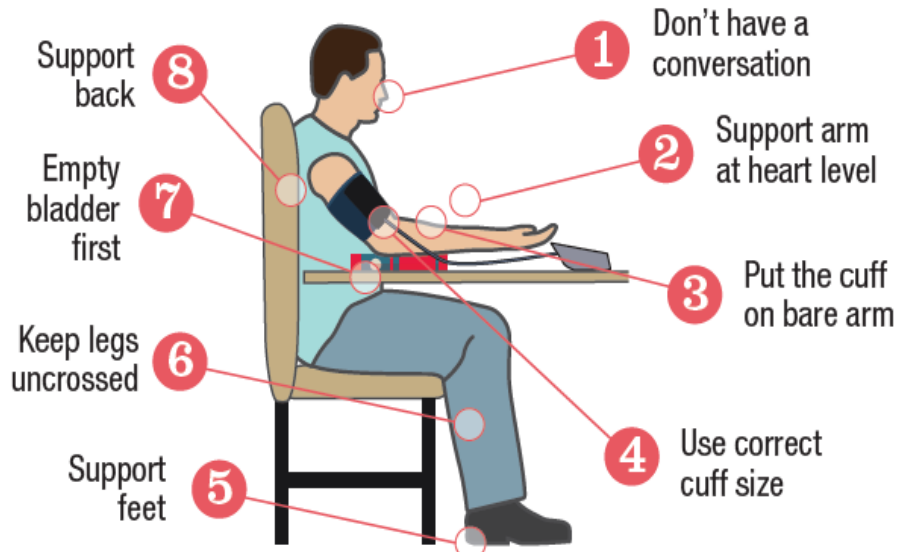
A

ACCURATE BLOOD PRESSURE MEASUREMENT

MEASURE BLOOD PRESSURE IN ALL ADULTS AND AT ALL VISITS



Whenever available, use validated automatic devices for the arm.



B

CARDIOVASCULAR RISK

KNOW YOUR RISK OF CARDIOVASCULAR DISEASE AND HOW TO MODIFY IT

CARDIOVASCULAR RISK CALCULATOR

Use the **HEARTS** App to assess your cardiovascular risk



Scan code to access the cardiovascular risk calculator



This App does not replace clinical judgment.

C

TREATMENT PROTOCOL

START TREATMENT IMMEDIATELY AFTER CONFIRMING HYPERTENSION

Blood Pressure $\geq 140/90$ mmHg in **all HYPERTENSIVES**.

Systolic Blood Pressure ≥ 130 mmHg in **HIGH-RISK HYPERTENSIVES**
(Established cardiovascular disease, Diabetes, Chronic Kidney Disease, Risk score $\geq 10\%$)

Cardiovascular risk

	All Hypertensives	HIGH-RISK Hypertensives	
		WITH established cardiovascular disease	WITHOUT established cardiovascular disease
Blood Pressure TARGET $<140/90$ mmHg	✓		
Systolic Blood Pressure TARGET <130 mmHg		✓	✓
ASPIRIN 100 mg/daily		✓	
High-dose statins: ATORVASTATIN 40 mg/daily		✓	
Moderate-dose statins: ATORVASTATIN 20 mg/daily			✓

Integration of Hypertension and Diabetes: Closing thoughts

HYPERTENSION AND DIABETES ARE:

- Major independent and interdependent cardiovascular risk factors
- Markedly increasing globally
- Poorly diagnosed, treated, and controlled
- Directly managed by the HEARTS Technical Package and Pillars



Thank You