

**IHCI** India  
Hypertension  
Control  
Initiative

**Guide for Nurses**



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# What is hypertension?

Hypertension, or high blood pressure (BP), is when either systolic BP (the top number) is '140 mmHg or more' or diastolic BP (the bottom number) is '90 mmHg or more'.

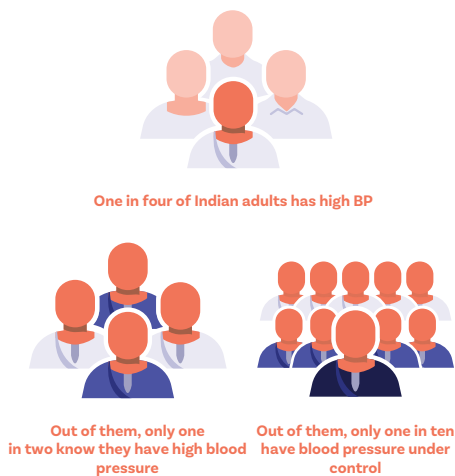
## Why is hypertension dangerous?

High BP harms the heart, brain, arteries, kidneys, and blood vessels, and can cause lifelong disability and death. If not controlled, high BP can cause heart attack, stroke, and kidney failure. Hypertension has no symptoms and can affect people of all ages.

## Government's efforts to control hypertension

The National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) aims to control these diseases through better care delivery in primary health care settings. The India Hypertension Control Initiative (IHCI) focuses on the strengthening of hypertension management and monitoring at the primary health care level.

## Hypertension burden in India



As a result, a large number of people develop heart attacks, strokes, and kidney failure while in the productive years of life

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# Role of Nurses

## SCREENING

- Measure BP of all adult patients visiting the health centre. Adults 30 years and above should be prioritised for screening
- Refer all individuals with BP  $\geq$  140/90 to medical officer for confirmation



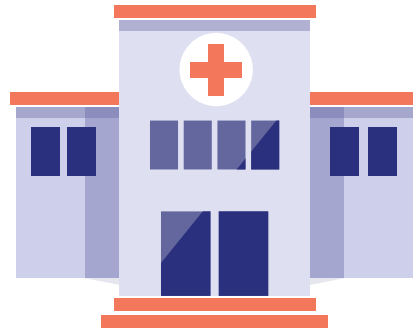
## PATIENT REGISTRATION AND FOLLOW-UP

- Register all patients with hypertension, initiate treatment card/enter in Simple app and issue BP passport
- For follow-up visits of patients on hypertension medications,
  - Measure BP, and if BP is  $<$ 140/90, give one-month drug refills as prescribed by the doctor
  - Reinforce treatment adherence and counsel on lifestyle management
  - Enter details of follow-up visits in treatment cards/Simple app or follow-up register



Give appointment for next follow-up visit

- Refer to medical officer if BP of patient is 140/90 or more, or if patient has other symptoms
- For patients with controlled BP, offer the follow up at their nearest subcentre/HWC. If patient is willing, coordinate with the responsible ANM for follow up



## DEFAULTER RETRIEVAL

- Call patients who missed their visit and request them to return for follow up
- Share the details of patients who missed visits with respective ANMs for retrieval through home visits

## RECORDING AND REPORTING

- Take ownership and manage IHCI hypertension treatment cards/update Simple app and register
  - Generate quarterly and annual reports for facility

## How to measure BP

Measure blood pressure of all adults  $\geq 30$  years

**No talking during and between measurements**

**Back supported**

**Cuff at heart level**

**Use correct cuff size and positioning**

Small

Medium

Large

1. Use the correct cuff size such that the bladder encircles 80%–100% of the upper arm.

2. Cuff bladder width should be at least 40% of upper arm circumference.

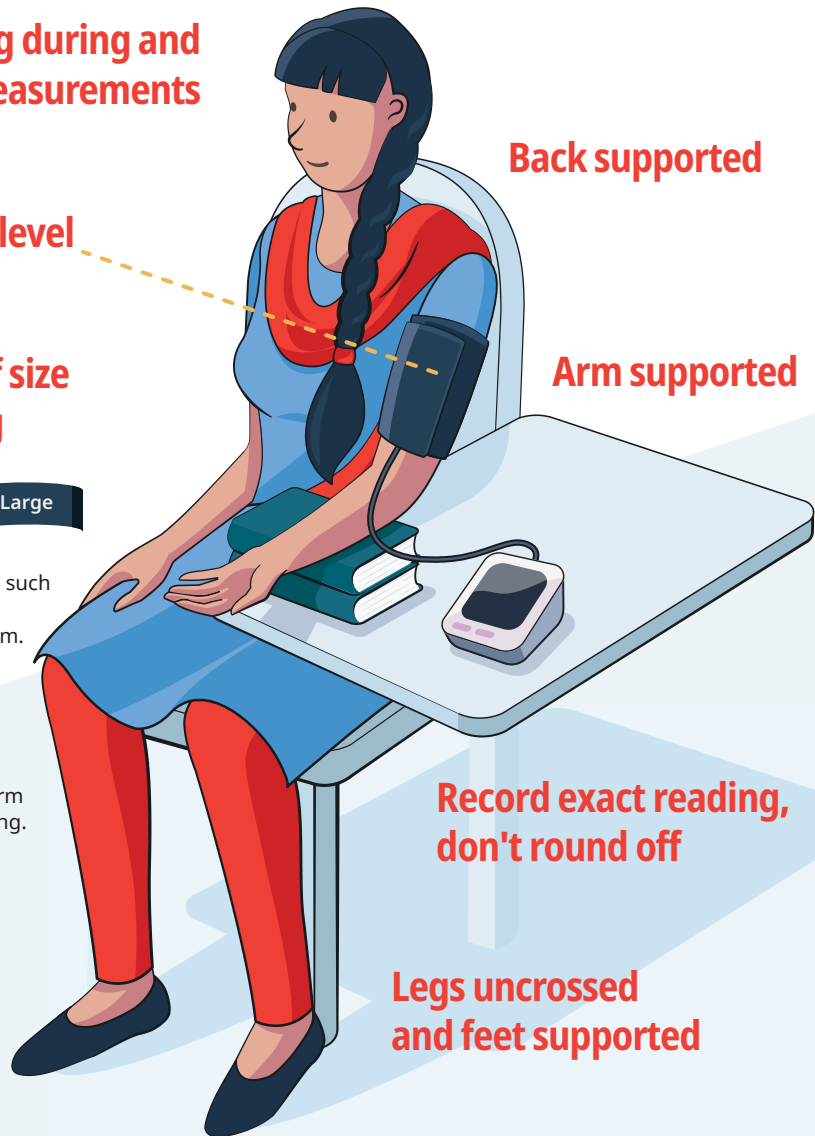
3. Ensure cuff is on bare arm or over thin layer of clothing. Avoid bunching of clothes under cuff.

**Arm supported**

**Record exact reading, don't round off**

**Legs uncrossed and feet supported**

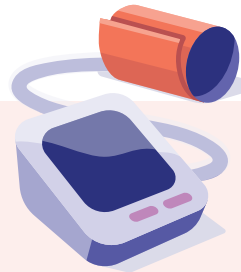
Ensure the person has not exercised, had tea/coffee, or used tobacco in the last 30 minutes  
Person should rest comfortably and quietly for 5 minutes before the reading



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## Diagnosis of Hypertension

High BP is known as a “silent killer” because most people with high BP have no symptoms and it is not possible to know if BP is high without measuring it. Hence, measuring BP of all patients coming to the health facility is important. Adults 30 years and above should be prioritised for BP measurement. The only way to know if BP is high is to measure it accurately. Any patient found having high BP should be referred to a Medical Officer.



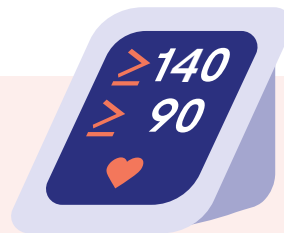
**Measure blood pressure of all adults  $\geq 30$  years coming to the OPD**

**Refer all individuals with BP  $\geq 140/90$  to the Medical Officer**

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## Hypertension Treatment

- Treatment of hypertension is simple, and medicines are available free from government health facilities.
- Treatment is initiated by the Medical Officer at the PHC and the patient is advised to come for monthly follow-ups.
- Once the BP is controlled, the patient is advised to follow-up at the HWC/sub-centre closer to their house for a monthly check-up of BP and for collecting medicines for a month.



**The treatment goal is Systolic BP  $< 140$  mmHg AND Diastolic BP  $< 90$  mmHg**

# Counselling on treatment adherence

## **COUNSELLING TO PATIENTS SHOULD STRESS THE FOLLOWING POINTS:**

Medications for BP control is lifelong and are necessary to keep the BP at a safe and healthy level. BP will increase again if the patient stops treatment. It is important to explain and counsel the patient the importance of taking regular medication.

- **Education** - Explain the following to patients
  - What is hypertension and the need for life-long medication;
  - Difference between medicines for long-term control (as in hypertension) and medicines for quick relief (such as for headaches);
  - The damage to target organs if blood pressure is uncontrolled (i.e. the possibility of stroke, heart attack, or kidney failure);
  - How to take medications at home. Show the patient the appropriate dose;
  - Medication should be consumed at the same time every day - when the patient can remember
  - The importance of
    - Keeping enough supply of medications at home till the next visit to the health facility;
    - Taking the medicines regularly as advised, even if there are no symptoms;
  - Potential adverse effects of the medications and how to deal with them

**Important: Check the patient's understanding before the patient leaves the health centre**

- **Reminders:**
  - Encourage patients to use medication reminders, such as alarms and smartphone applications;
  - Implement patient reminder systems (e.g., e-mail, phone calls, text messages), where possible, to ensure patients adhere to their medication regimen.
- **Motivation:** A nurse can help to increase a patient's compliance with treatment by:
  - Good patient-health care provider relationship;
  - Positive feedback: praise adherence through positive feedback and encouragement.



Health care staff should ensure there is no interruption in the supply of medications.

## Lifestyle management advice

Lifestyle changes are important, but **they are not enough to control high BP**. Some lifestyle changes can help patients with high BP when undertaken along with medication.



Avoid tobacco and alcohol



Reduce salt under 1 tsp/day



Eat 4-5 servings of fruits & vegetables

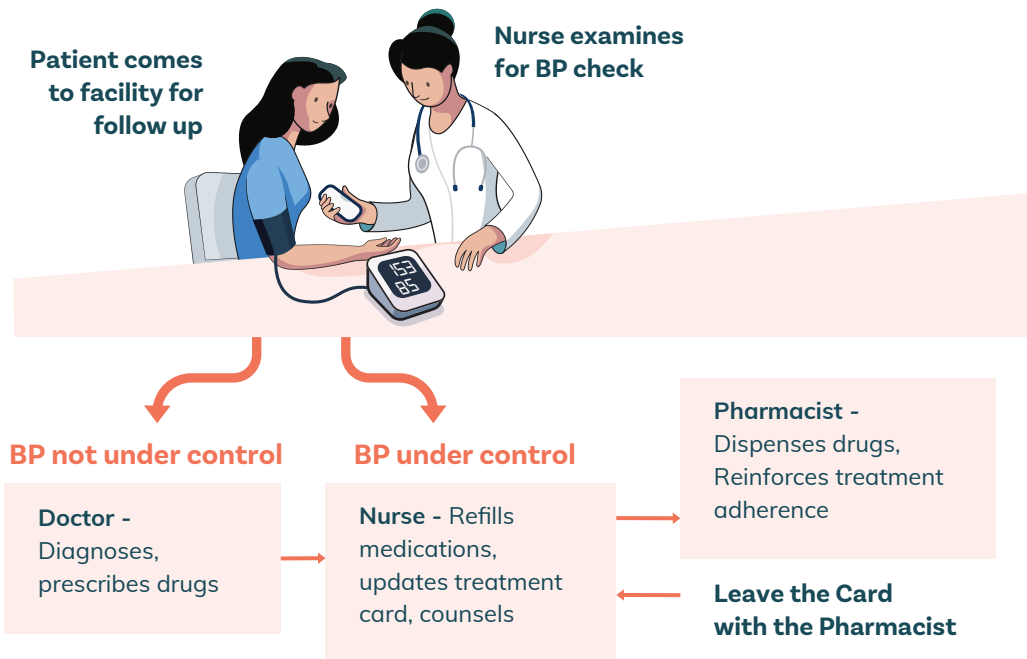
Exercise 2.5 hours every week





## Patient flow in the clinic

For patient's ease and effective hypertension treatment monitoring, it is important to streamline patient flow at the health facilities  
Suggested patient flow in the health facilities:



## Retrieval of patients who missed visits

Every month, the staff should check if all the patients had come for follow up visits either at PHC, HWC or sub-centre. If any patient did not come for follow up, a phone call should be made to check why. Additionally, share the details of the patients who missed visits with the respective ANM for home visit and retrieval.

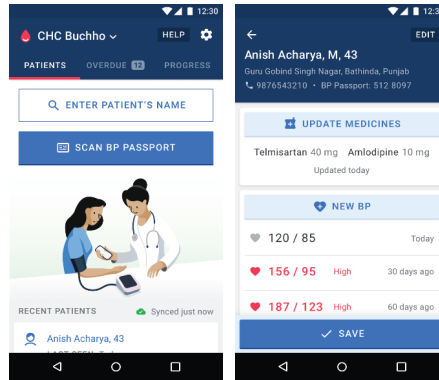


# Information Systems

## RECORDING AND REPORTING TOOLS

In facilities not using digital systems/Simple app, a **hypertension treatment card** is issued to all patients who are newly diagnosed with hypertension and starting treatment, or who are already on treatment for hypertension and wish to continue treatment at the health facility. Hypertension treatment card will initially be filled at the health facility. Medical Officers will write the initial medicines and subsequent changes in prescription. Nurses should update the card during follow-up visits.

health staff keep track of patients' BP measurements and medications.



**Hypertension and Diabetes Treatment Card**

One card for every patient, given or generated/modified for every hypertension or diabetes, regardless of region

Patient name: \_\_\_\_\_ Registration date: \_\_\_\_\_ Patient ID number: \_\_\_\_\_

Age: \_\_\_\_\_ Gender:  Male  Female  Transgender

Health facility: \_\_\_\_\_ District: \_\_\_\_\_

Full address: \_\_\_\_\_

Nearest subcenter: \_\_\_\_\_

Phone number: \_\_\_\_\_ Other phone no.: \_\_\_\_\_ Other ID number: \_\_\_\_\_

Already on medication for hypertension?  Yes  No

Already on medication for diabetes?  Yes  No

Past history of heart attack?  Yes  No

Past history of stroke?  Yes  No

Past history of kidney disease?  Yes  No

**Important:** When BP is  $\geq 140$  or  $\geq 160$ , escalate treatment as per ICI protocol

At registration:

**Treatment date** (DD/MM/YY)

**Blood pressure**

**Blood sugar**

**Treatment doses** Please write dose

Amlodipine \_\_\_\_\_

Telmisartan \_\_\_\_\_

Chlorthalidone \_\_\_\_\_

Hydrochlorothiazide \_\_\_\_\_

Enalapril \_\_\_\_\_

Losartan \_\_\_\_\_

Aspirin \_\_\_\_\_

Statins \_\_\_\_\_

Metformin \_\_\_\_\_

**If a patient misses a visit, please contact promptly to return to care**

Date contact attempted	Date contact attempted	Date contact attempted	Date contact attempted	Date contact attempted
<input type="radio"/> No response	<input type="radio"/> No response	<input type="radio"/> No response	<input type="radio"/> No response	<input type="radio"/> No response
<input type="radio"/> House not found	<input type="radio"/> House not found	<input type="radio"/> House not found	<input type="radio"/> House not found	<input type="radio"/> House not found
<input type="radio"/> Agreed to return	<input type="radio"/> Agreed to return	<input type="radio"/> Agreed to return	<input type="radio"/> Agreed to return	<input type="radio"/> Agreed to return

Upon registry for treatment, each patient is issued a **Patient BP passport**. The health care worker records basic patient details on the BP Passport, and advises the patient to bring the BP Passport during follow up visits.



During a follow-up visit, the health care worker who attends the patient notes the date of the patient's next visit on Page 1 of the BP passport, and the patient's BP value and drugs prescribed during the follow up on Page 2.

The BP passport helps in the retrieval of hypertension treatment card/ patient information from Simple app using a unique patient ID number/ QR code.

The **Facility hypertension register** has a line listing of all patients on treatment and is maintained at the health facility by the data assistant/dedicated NCD staff nurse/health worker designated for this task. In facilities using paper systems, the data from the register can be used to obtain the proportion of patients who are on regular treatment and have BP under control. This helps in assessing the quality of services and the impact of the IHCI.

The register is:

- Updated with new patients registered at the time of issuing the treatment card or entering in the Simple app
- Updated for BP control status and other outcomes of registered patients in facilities not using the Simple app
  - every quarter, and
  - at the end of the year



## MONITORING

There are two core monitoring indicators under IHCI:

### QUARTERLY INDICATOR:

Percentage of patients starting treatment during a quarter (cohort) who achieve BP control (<140/90) 3-6 months after the start of treatment

**Number of patients with controlled BP (<140/90) during the last clinical visit who started hypertension treatment 3-6 months earlier (A2) x 100**

**Total number of patients who started hypertension treatment 3-6 months earlier (A1)**

See Annex 1 for a ready reckoner on the patient cohorts for the quarterly report

### ANNUAL INDICATOR:

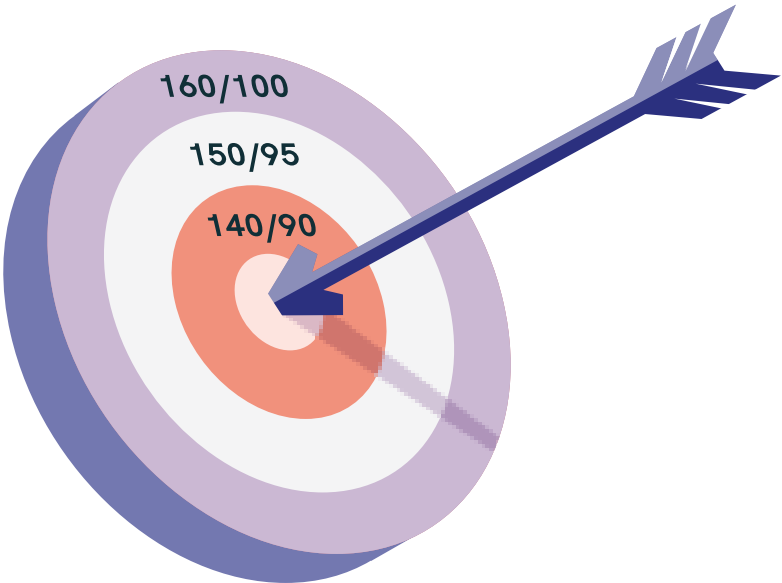
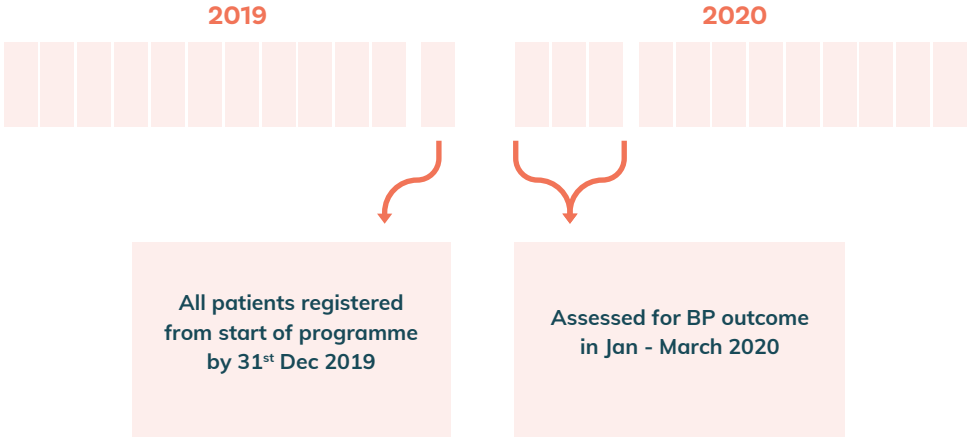
Percentage of estimated patients with hypertension who have controlled BP in defined geographical area (reported annually)

**Number of patients with controlled BP (<140/90) during quarter 1 of the next year (if the patient made more than one visit in the quarter, use most recent reading) x 100**

**Estimated number of people with hypertension in the catchment population/geographical area (district/state level)**

The numerator will include all patients with blood pressure under control during the recent visit between January 1<sup>st</sup> and March 31<sup>st</sup> irrespective of the year of registration. It will also include patients who got registered in previous years.

**DATE OF REPORTING - 15TH APRIL OF EVERY YEAR**



## Annexure A: Understanding the patient cohorts for the quarterly report

- A cohort is defined by the quarter of registration
- BP control of each cohort is assessed 3-6 months after the start of medication

Ready reckoner to determine the quarter for which the quarterly report is to be prepared

Month in which quarterly report prepared	Quarter for assessing if BP is under control (Yes/No) (A2)	Quarter in which patients registered for HTN Treatment (A1)
July, 2019	April - June, 2019	January - March, 2019
October, 2019	July - September, 2019	April - June, 2019
January, 2020	October - December, 2019	July - September, 2019
April, 2020	January - March, 2020	October - December, 2019
July, 2020	April - June, 2020	January - March, 2020
October, 2020	July - September, 2020	April - June, 2020
January, 2021	October - December, 2020	July - September, 2020
April, 2021	January - March, 2021	October - December, 2020
July, 2021	April - June, 2021	January - March, 2021
October, 2021	July - September, 2021	April - June, 2021
January, 2022	October - December, 2021	July - September, 2021
April, 2022	January - March, 2022	October - December, 2021
July, 2022	April - June, 2022	January - March, 2022
October, 2022	July - September, 2022	April - June, 2022
January, 2023	October - December, 2022	July - September, 2022

