

# Patient Journey in Hypertension

## The Patient Flow Through A Chronic Condition



**Hypertension (HTN), also known as high blood pressure (BP), is a chronic condition that affects the heart and blood vessels.** The patient journey is divided into three stages: Screening & Diagnosis, Treatment, and Adherence & Maintenance. The primary treatment options used for HTN are angiotensin-converting enzyme (ACE) inhibitor, calcium channel blockers, and thiazide diuretics. Side effects from these treatments lead to non-adherence. About 31% of US insured hypertensive adults do not follow their medication plan due to cost and complexity.

### PATIENT JOURNEY

The HTN patient journey is the process of a person being diagnosed with hypertension, managing their condition and living with it. It is very crucial for the patient to adhere to the treatment as non-adherence can lead to serious complications such as stroke or kidney diseases.

#### Screening & Diagnosis

##### Awareness of Disease

Most of the people with HTN do not feel any symptoms. However, in case of high BP, the symptoms experienced are:

- Severe headache
- Chest pain
- Abnormal heart rhythm
- Blurred vision



About **46%** of adults with hypertension are unaware that they have the condition.

##### Screening & Assessment

- The initial screening is done by checking blood pressure in a clinical setting using a sphygmomanometer.
- In case of high BP, the GP may recommend additional tests such as ECG, chest X-ray, kidney ultrasound, or a 24-hour urine test.



As per CDC, **~40 Mn** adults are screened for HTN in the US yearly.

##### Determination of Severity

- Elevated BP:** \*SBP-120-129mmHg \*DBP- less than 80mmHg
- Stage 1 HTN:** SBP-130 -139mmHg, DBP: 80-85 mmHg
- Stage 2 HTN:** SBP-140mmHg or higher, DBP: 90mmHg or higher
- Hypertensive crisis:** SBP-180mmHg or higher, DBP: 120mmHg or higher



Stage 2 HTN is most prevalent in the US, affecting **~48%** of adults.

#### Treatment

##### Hypertensive Crisis

The hypertensive crisis is a medical emergency and immediate treatment is required. Some of the medications used in this case are:

- Nitroglycerin
- Labetalol
- Nicardipine
- Clevidipine

##### Stage 1 & 2 HTN

Medication is usually required to treat Stage 1 & 2 of HTN and also in the case of the hypertensive crisis:

- **Monotherapy:** Patients with Stage 1 HTN who are selected for drug therapy initiate antihypertensive therapy with one agent. Drugs prescribed for monotherapy are:
  - ACE inhibitor
  - Angiotensin receptor blocker (ARB)
  - Calcium channel blocker
  - Thiazide diuretic
- **Combination Therapy:** Patients with Stage 2 HTN may be prescribed with a combination therapy of 2 drugs such as ACE inhibitor + diuretic, ARB + diuretic, calcium channel blocker + diuretic or beta blocker + diuretic.

##### Elevated BP

In the case of elevated blood pressure, non-pharmacological therapy is recommended by GP:

- Weight Loss
- Exercise
- Healthy diet
- Managing stress
- Quitting smoking
- Limiting alcohol intake
- Getting enough sleep

#### Adherence & Maintenance

Monitoring BP Regularly

Optimal BP ✓

Adherence ✓

Maintenance Therapy

Poor BP Control ✗

Adherence ✓

Intensify Treatment

- Adding a second drug (stepped care approach)
- Adding a third drug

In case of complication

Refer to a specialist (cardiologist, neurologist, nephrologist)

Poor BP Control ✗

Adherence ✗

Address Adherence Initially

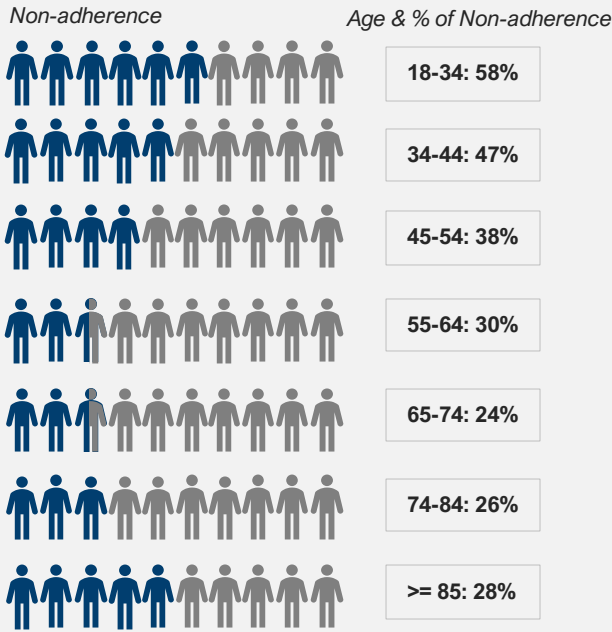


According to CDC, **~40%** of the people in the US do not have HTN under control.

\*SBP: Systolic Blood Pressure; DBP: Diastolic Blood Pressure

## TREATMENT ADHERENCE

An estimated 3 in 10 adults in the US are non-adherent to HTN medications.



### Factors affecting adherence in HTN:

- **Lack of understanding of the condition:** Many people with HTN do not fully understand the risks of the condition, and they may not be aware of the importance of controlling their blood pressure.
- **Cost of medication:** Medication for HTN can be expensive, and this can be a barrier to adherence for some people.
- **Side Effects:** HTN medication may cause adverse effects such as headache, nausea, and allergic reaction, which leads to non-adherence.
- **Unrealistic goals:** Patients may set unrealistic goals for themselves, such as wanting to lower their blood pressure to an unrealistic level. This can lead to frustration and discouragement, which can make it more difficult to adhere to the treatment plan.

*The patient journey of HTN is a complex and challenging one. However, by following the treatment plan and being aware of the condition, one can reduce the risk of serious health problems and live a long and healthy life.*

Right from understanding key issues to advising you through the right set of insights and recommendations, Aranca Research, consolidation, and insightful analysis to aid in-depth understanding of therapy and effective decision-making

### HOW CAN ARANCA HELP?

- 01 Patient Journey Mapping:** Pre- and post-diagnosis, field stories, and burdensome part of disease from patient and caregiver perspective
- 02 Disease Progression Modeling:** Parameters used in disease progression, disease and symptom progression
- 03 Patient Breakpoint Analysis:** Understanding key pain points in the patient journey from patient and caregiver perspective
- 04 Unmet Needs Mapping and QoL:** Disease progression, symptoms impacting QoL, daily activity impairment
- 05 Economic Burden and Unmet Need Analysis:** Impact of disease on patient's economic well-being and unmet needs analysis

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