



DEDER GENERAL HOSPITAL
OUTPATIENT DEPARTMENT CHRONIC CARE FOLLOW-UP CLINIC



**CLINICAL AUDIT To IMPROVE THE QUALITY OF CLINICAL
CARE FOR HYPERTENSIVE PATIENTS WHO ARE ON
CHRONIC FOLLOW-UP CARE**

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HQU TEAM

*Deder, Oromia
December 2017 E.C*

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Implementation Status of the Previous Audit Action Plan

The previous audit action plan aimed to improve the quality of hypertension follow-up care by addressing identified gaps in patient evaluation, investigation, treatment, and counseling. Key achievements included:

- Improved labeling of patient charts, with 100% compliance in identifying hypertensive patients.
- Enhanced documentation of patient identification information such as name, age, sex, and date of visit.

However, challenges remain in areas such as:

- Regular assessment of patients' adherence to lifestyle modifications and medication.
- Ensuring comprehensive physical examinations, including retinal screening and cardiovascular assessments.
- Improving follow-up laboratory investigations and addressing unmet targets in blood pressure control.

INTRODUCTION

Hypertension is a major public health concern and a leading risk factor for cardiovascular diseases. Effective management of hypertension involves regular follow-up to ensure appropriate evaluation, investigation, treatment, and counseling. This audit was conducted to assess the quality of care provided to hypertensive patients on follow-up for more than one year at **Deder General Hospital** adhering to the National NCD Management Protocol 2021.

Aim

- To improve quality of clinical care provided to HTN patients

Specific objectives

- To ensure hypertensive patients on follow-up care are appropriately evaluated
- To ensure hypertensive patients on follow-up care are appropriately investigated
- To ensure hypertensive patients on follow-up care are appropriately treated
- To ensure proper counseling is provided for hypertensive patients on follow-up care

Methodology

Audit Period: from September 21, 2017E.C To December 20, 2017E.C

Inclusion Criteria: Patients who have been on follow-up for more than one year.

Exclusion Criteria: Patients with less than one year of follow-up, those with secondary hypertension, and pediatric patients.

Data Sources: Patient charts, follow-up forms, and investigation records.

Assessment Tool: A checklist was used to evaluate compliance with defined standards across categories such as documentation, physical examination, laboratory investigations, treatment, and counseling.

Performance Targets: Compliance rates were set at 100% for most criteria, with an 85% target for follow-up laboratory investigations.

Table 1: Criteria/standard

	STANDARD
1.	Identification information is recorded for a known HTN patient during follow up
2.	Appropriate follow up history is taken for a known HTN patients during follow up
3.	Appropriate physical examination is performed for a known HTN patients during follow
4.	Relevant follow up laboratory investigation are done for a known HTN patients during follow up
5.	Appropriate diagnosis and disease classification
6.	Appropriate treatment and care is provided for a known HTN patients during follow up
7.	Proper counseling is provided regarding hypertension control for a known hypertensive patient during follow-up as per protocol
8.	Appropriate monitoring is made for a known hypertensive patient during follow-up
9.	Identification of provider is recorded for a known hypertensive patient during follow-up as per protocol
10.	Target blood pressure is met after nine month of follow-up as per protocol
	TOTAL SCORE%

RESULT

The clinical audit revealed several gaps in the care of hypertensive patients at Deder General Hospital. While some targets, such as patient identification, achieved 100% compliance, significant deficiencies were noted in areas such as physical examinations (59%), follow-up laboratory investigations (54%), and counseling (66%). The lack of retinal screening (5%), self-monitoring of blood pressure (0%), and 12-lead ECG performance (0%) are critical areas of concern (**Table 1**).

Table 2: ACTUAL PERFORMANCE ANDV PERFORMANCE AGAINST TARGET

Sno	Variables	Target	Actual Performance
1.	Identification information is recorded for a known HTN patient during follow up	100	100
2.	Appropriate follow up history is taken for a known HTN patients during follow up	100	55
3.	Appropriate physical examination is performed for a known HTN patients during follow	100	59
4.	Relevant follow up laboratory investigation are done for a known HTN patients during follow up	100	54
5.	Appropriate diagnosis and disease classification	100	68.3
6.	Appropriate treatment and care is provided for a known HTN patients during follow up	100	54
7.	Proper counseling is provided regarding hypertension control for a known hypertensive patient during follow-up as per protocol	100	66
8.	Appropriate monitoring is made for a known hypertensive patient during follow-up	100	55
9.	Identification of provider is recorded for a known hypertensive patient during follow-up asper protocol	80	79
10.	Target blood pressure is met after nine month of follow-up asper protocol	100	70
	Total Percentage (%)	100	660.3/980=67.4

Overall HTN Clinical Audit performance

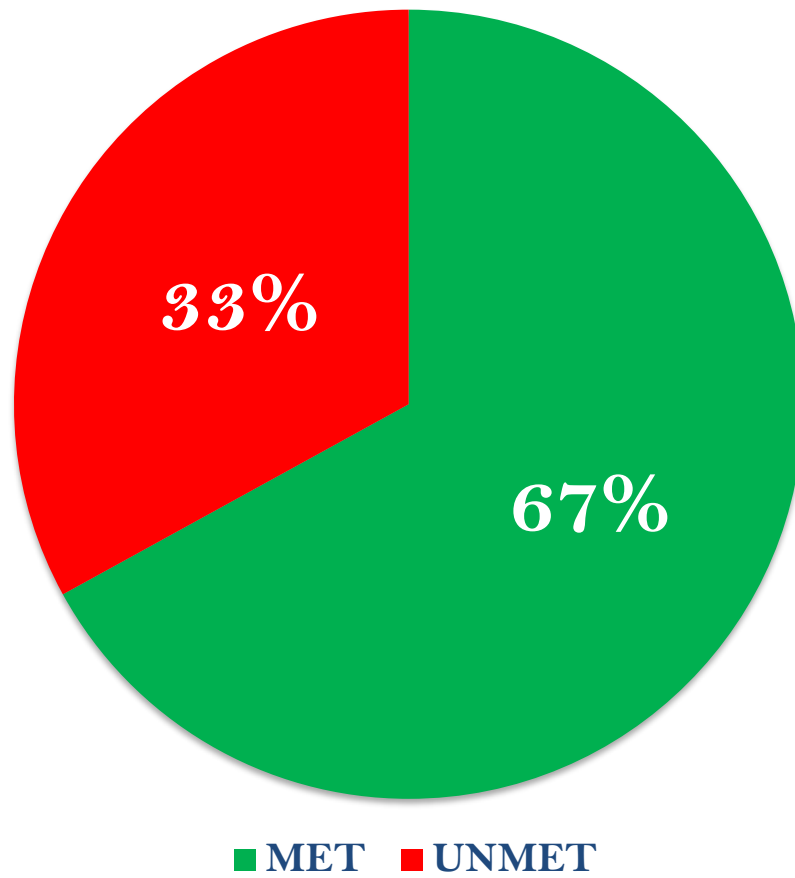


Figure 1: Overall HTN Clinical Audit performance

Graph showing score for each criterion/standard for Peri-operative care (patients underwent surgery), April 2016

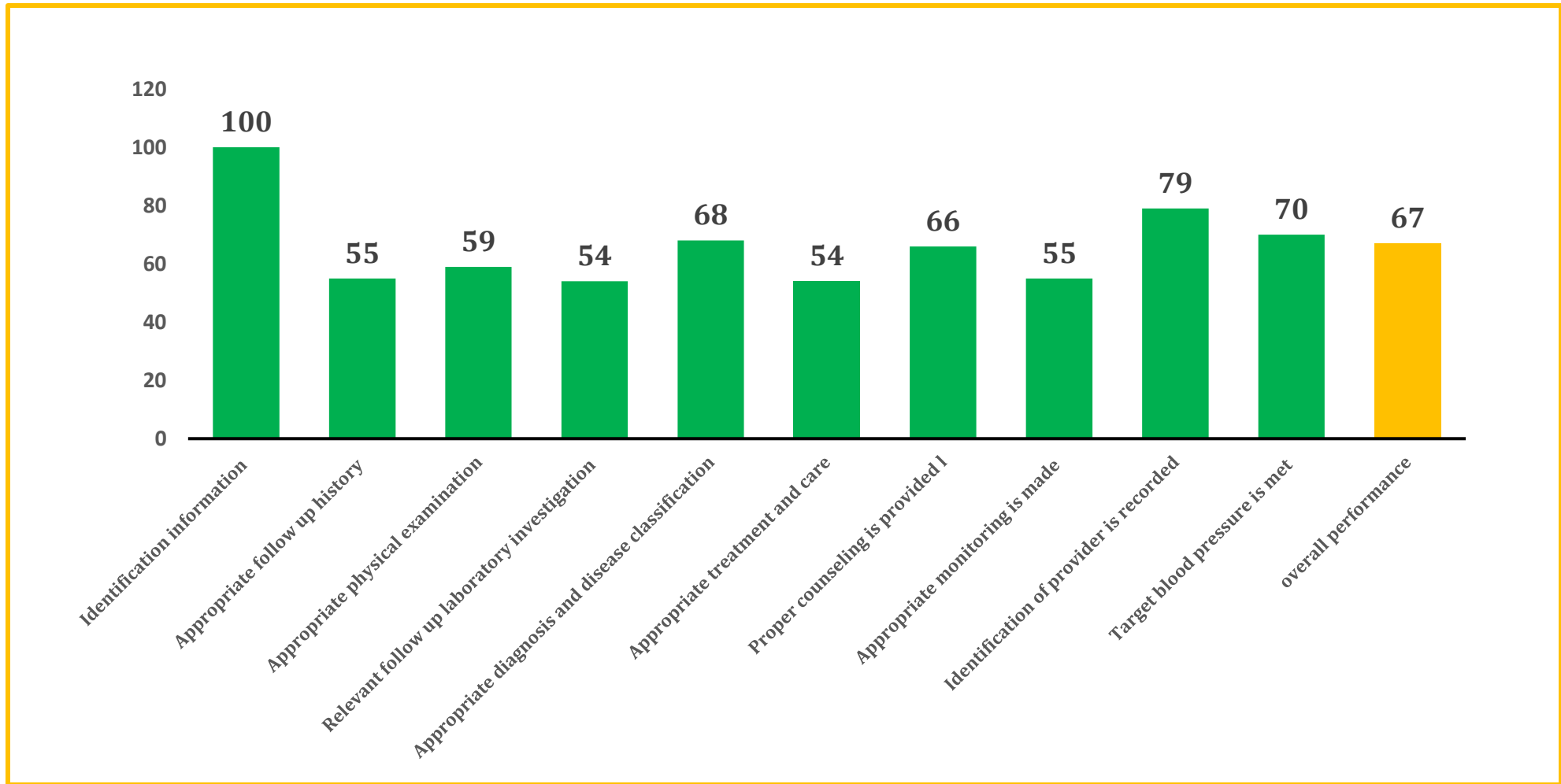


Figure 2: Score for each criterion/standard for HTN follow-up patients, Dec 2017E.C

Graph showing score for patient identification

The audit revealed that the patient identification was documented **100%** (Figure 2).

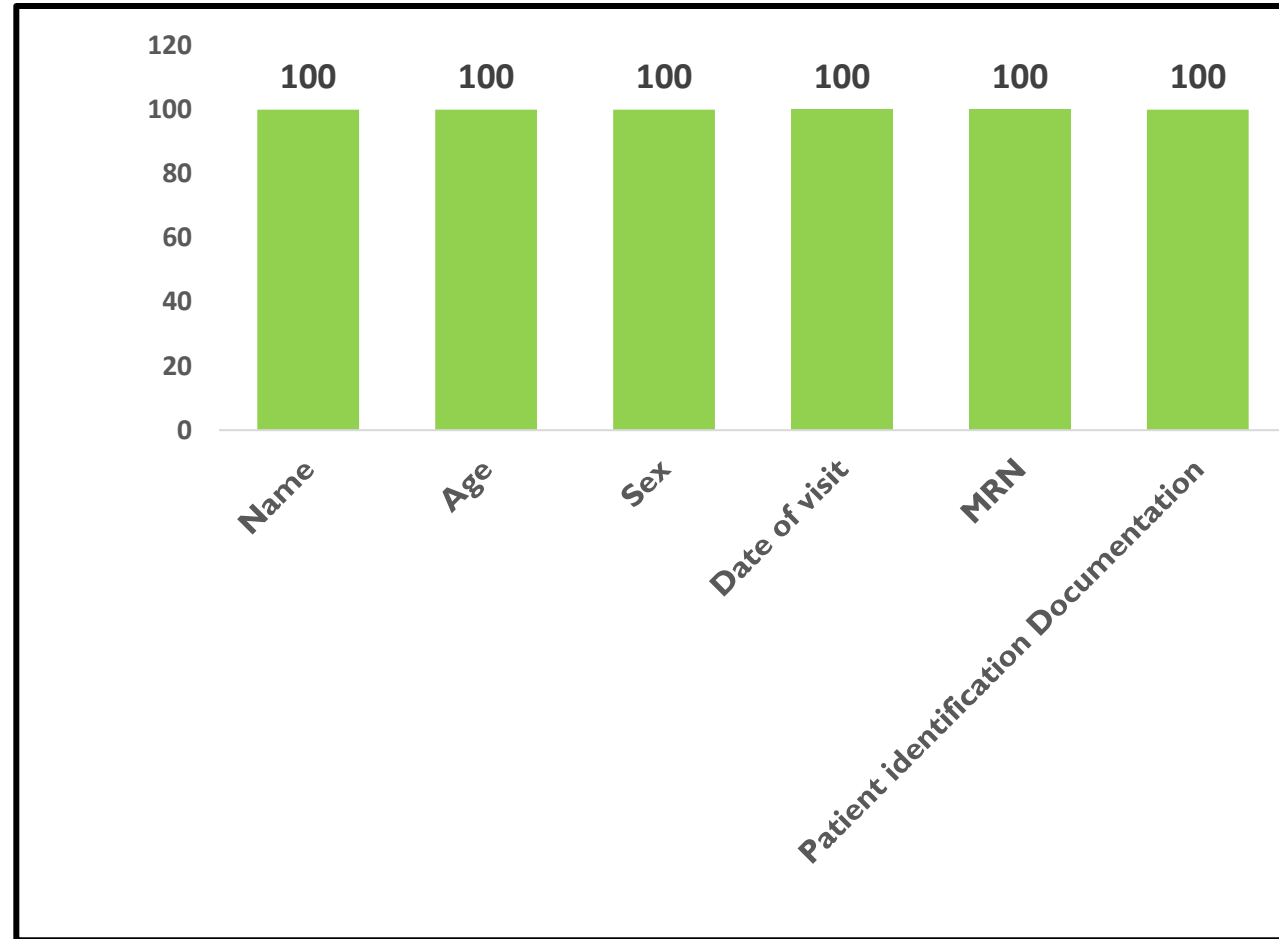


Figure 3: patient identification documentation

GRAPH SHOWING SCORE APPROPRIATE FOLLOW-UP HISTORY IS TAKEN FOR A KNOWN

The performance for appropriate follow-up history taken was **55%**. This indicates suboptimal compliance with recommended practices. Specific sub-elements include:

- Current anti-hypertensive drugs identified (84%)
- Lifestyle modifications assessed (68%)
- Symptoms related to complications inquired (58%)
- Medication side effects assessed

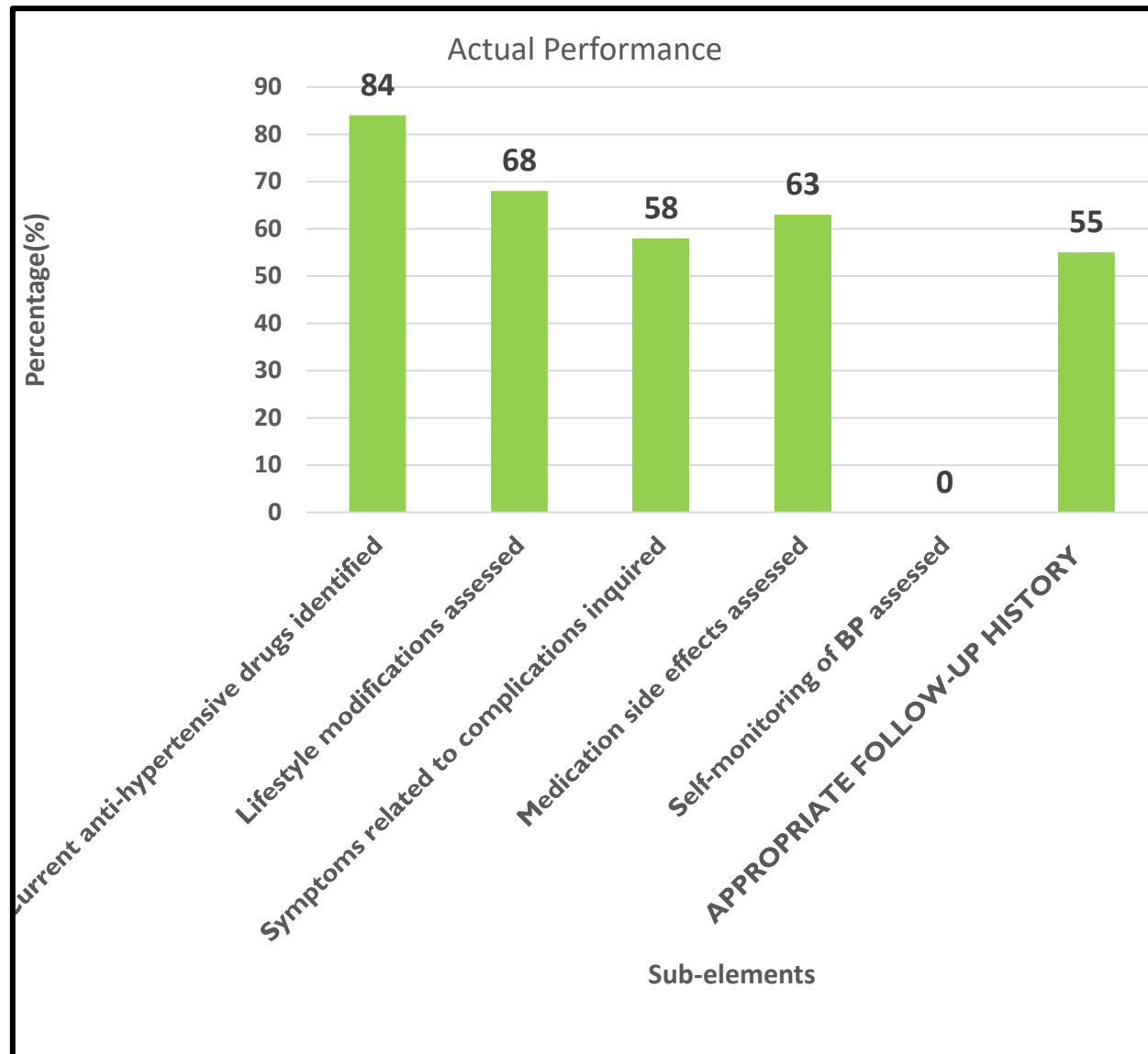


Figure 4: APPROPRIATE HISTORY TAKEN

GRAPH SHOWING SCORE APPROPRIATE PHYSICAL EXAMINATION IS PERFORMED FOR A KNOWN HYPERTENSIVE PAIENT DURING FOLLOW-UP

The rate of appropriate physical examination is performed for a known hypertensive patient during follow-up was only **59% and**

- The Specific sub-element performances include:
Blood pressure measurements performed: 89% compliance.
- Anthropometric measurements conducted: 63% compliance.
- Cardiovascular examination conducted: 58% compliance.
- Chest examination for basal crackles: 68% compliance.
- Lower extremity checked for peripheral edema: 68% compliance.
- Retinal screening performed: 5% compliance.

(figure 4)

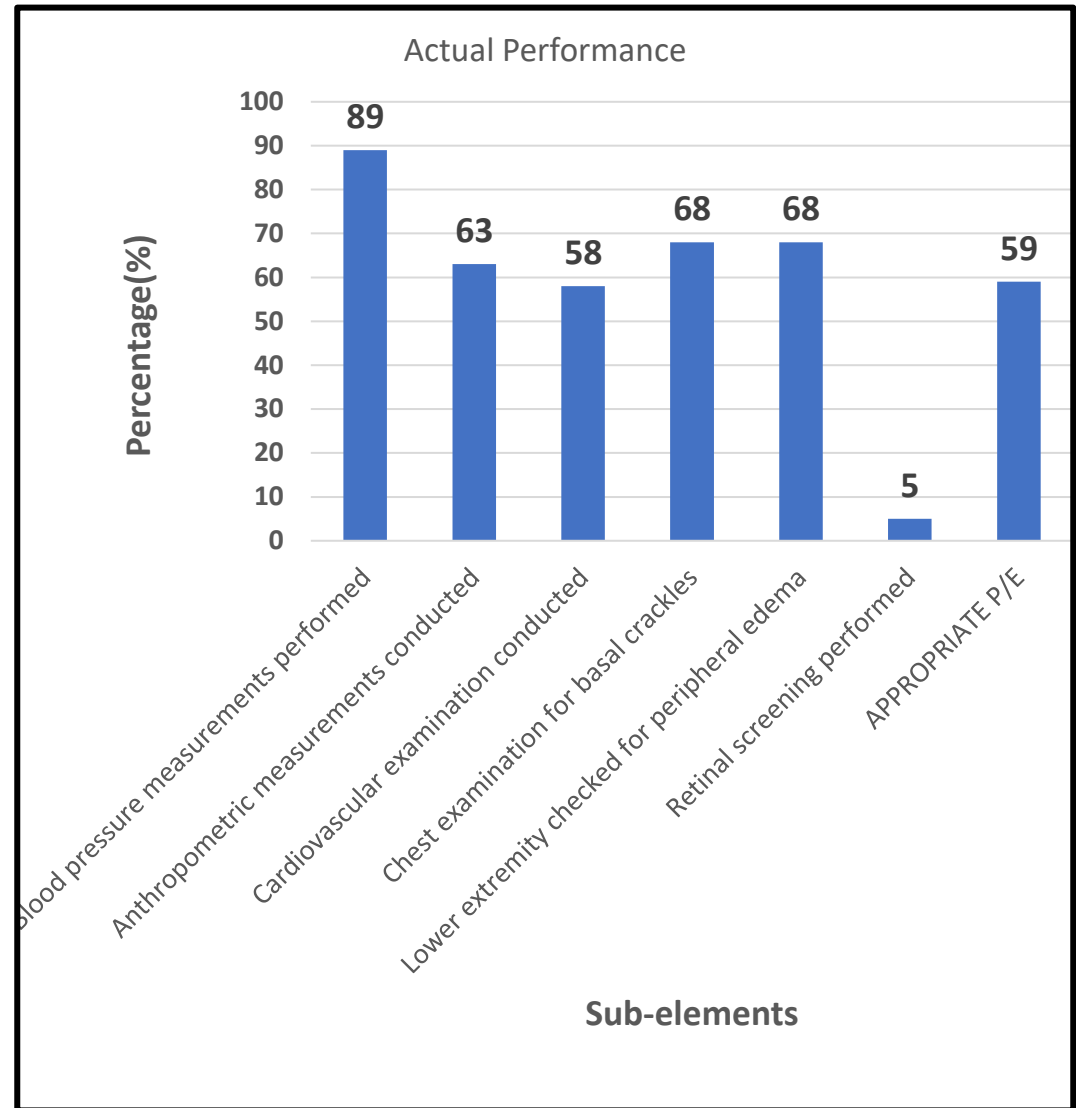


Figure 5: APPROPRIATE AND TIMELY PATIENT MOBILIZATION

GRAPH SHOWING SCORE RELEVANT FOLLOW-UP LABORATORY INVESTIGATION ARE DONE FOR A KNOWN HYPERTENSIVE PATIENT DURING FOLLOW-UP

The relevant lab investigation done for HTN follow-up patients was 54%. And the Sub-elements performances include:

- Blood tests updated yearly: 70% compliance.
- CBC: 70% compliance.
- Urea and serum creatinine: 70% compliance.
- Lipid profile: 45% compliance.
- Fasting blood glucose: 70% compliance.
- Serum electrolytes updated: 35% compliance.
- Urine dipstick test performed yearly: 70% compliance.
- 12-lead ECG performed yearly: 0% compliance % (**Figure 5**).

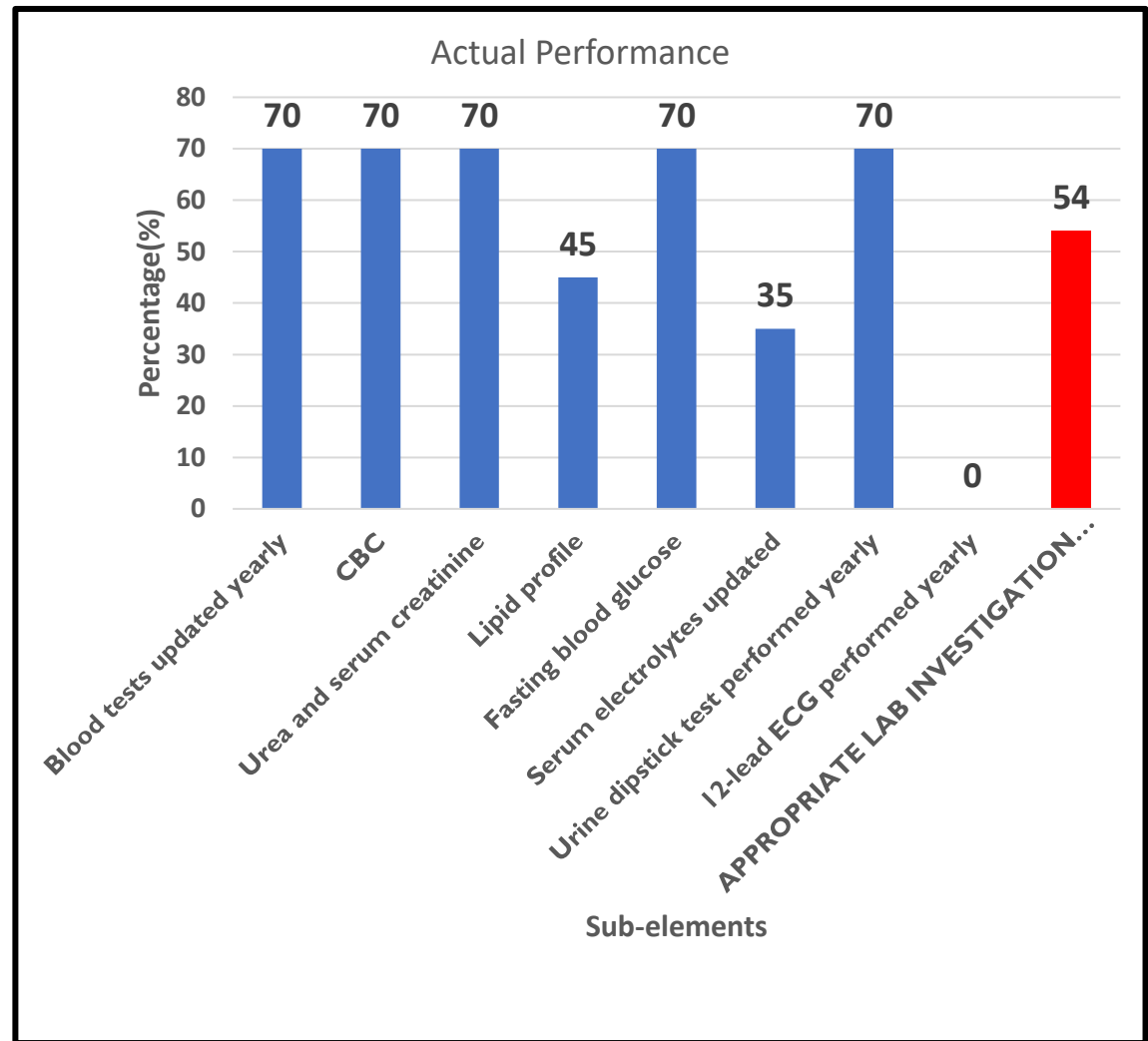


Figure 6: Relevant lab investigation performed

GRAPH SHOWING SCORE FOR HYPERTENSION ASSESSMENT

Appropriate hypertension status assessment is made for a known hypertensive patient during follow-up was 54%. And the Sub-elements performances include:

- The Hypertension type outlined (100%)
- Hypertension control status determined (84%).
- Hypertension-related complications identified (47%), and
- Co-morbidities identified (42%) (**Figure 6**).

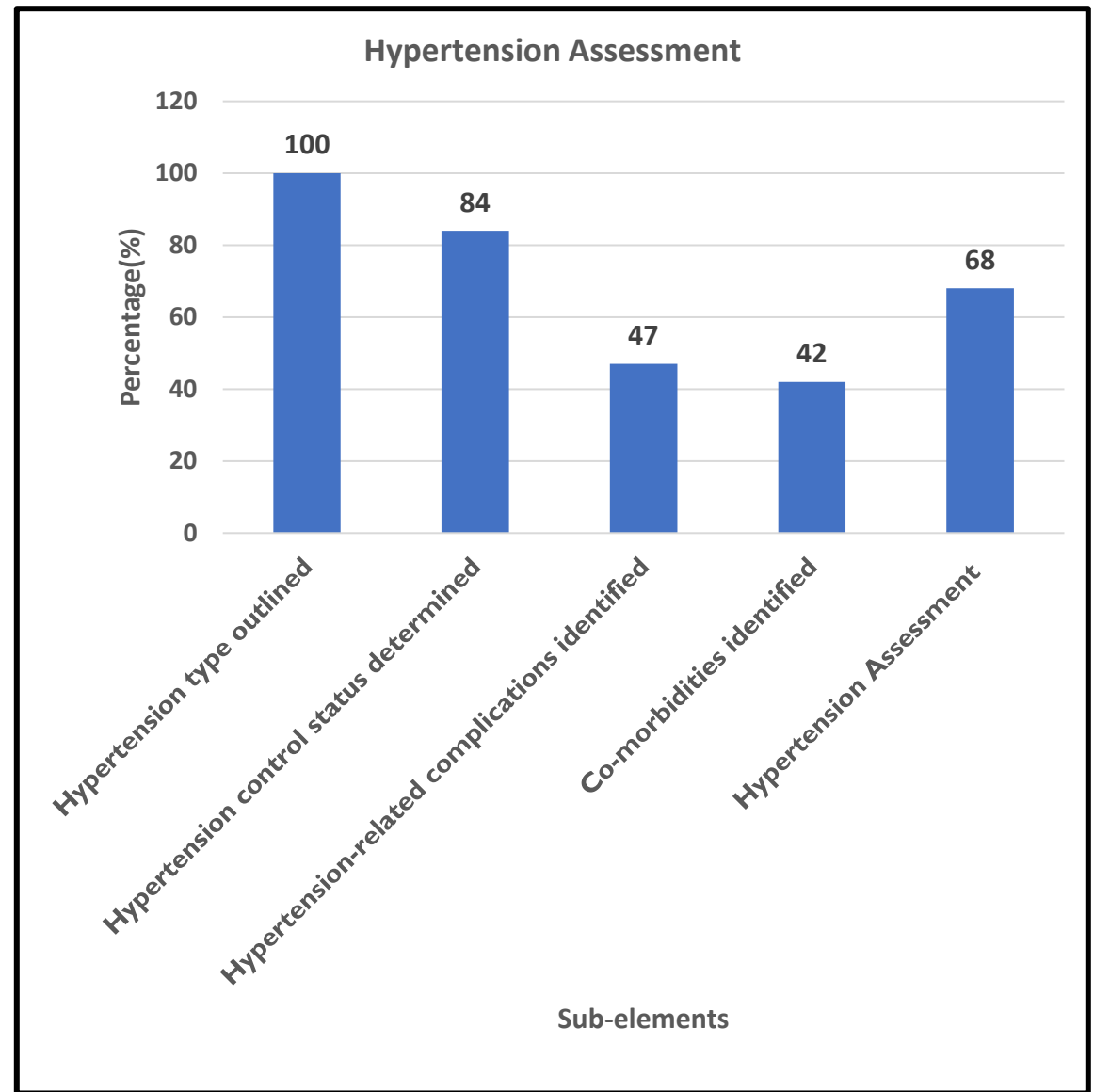


Figure 7: Hypertension Assessment

Table 3: Graph showing score for APPROPRIATE FOLLOW-UP TREATMENT IS PROVIDED FOR A KNOWN HYPERTENSIVE PATIENT DURING FOLLOW-UP

		Yes(#)	Performance (%)
1.	For patient with unmet target on life style modification amlodipine 5mg is initiated	9	47.4
2.	Amlodipine dosage is titrated to 10mg for a patient with unmet target after one month treatment with 5mg of amlodipine	9	47.4
3.	Dual drug therapy with amlodipine and hydrochlorothiazide is initiated for a patient with unmet target after a one month treatment with 10mg of amlodipine	8	42.1
4.	ACE inhibitor is added for a patient on dual anti-hypertensive drugs(amlodipine and hydrochlorothiazide) treatment for whom target is not met	8	42.1
5.	ACE inhibitor is titrated to maximum allowed dose for a patient with unmet target after a one month treatment with triple therapy	8	42.1
6.	Anti- hypertensive drug adherence assessment and counseling is done for a patient whose BP target is unmet after therapy with triple drugs at maximal allowed dose	10	52.6
7.	Patient on maximal allowed dose of triple treatment with good adherence but unmet BP treatment target is referred to higher health facility (for primary hospital)	10	52.6
8.	Patient on maximal allowed dose of triple treatment with good adherence but unmet BP treatment target is investigated for secondary hypertension and fourth drug of different class is initiated	9	47.4
9.	Patient developing ankle edema while on amlodipine is put on ACE inhibitor or other class of anti-hypertensive drug while the dose of amlodipine is reduced	9	47.4
10.	Patient developing cough while on ACE inhibitors are switched to ARBs or other class of anti-hypertensive drugs	8	42.1
11.	Patient with high CVD risk score is started on statin	6	31.6
12.	Patient with identified complications (MI,CKD, CHF, IHD, PAD) is managed appropriately(interfacility or intrafacility consultation/referral made)	6	31.6
13.	Appointment is given	13	68.4
	Overall APPROPRIATE FOLLOW-UP TREATMENT IS PROVIDED FOR A KNOWN HYPERTENSIVE PATIENT DURING FOLLOW-UP	113/247	46%

GRAPH SHOWING SCORE FOR APPROPRIATE COUNSELING

The proper counseling regarding hypertension control for a known hypertensive patient during follow-up was provided for 13(66%), and the Sub-elements performances were:

- Counseling on lifestyle modification: 60% compliance.
- Counseling on medication adherence: 75% compliance.
- Counseling on potential medication side effects: 68% compliance.
- Counseling on possible complications: 60% compliance. (**figure 7**).

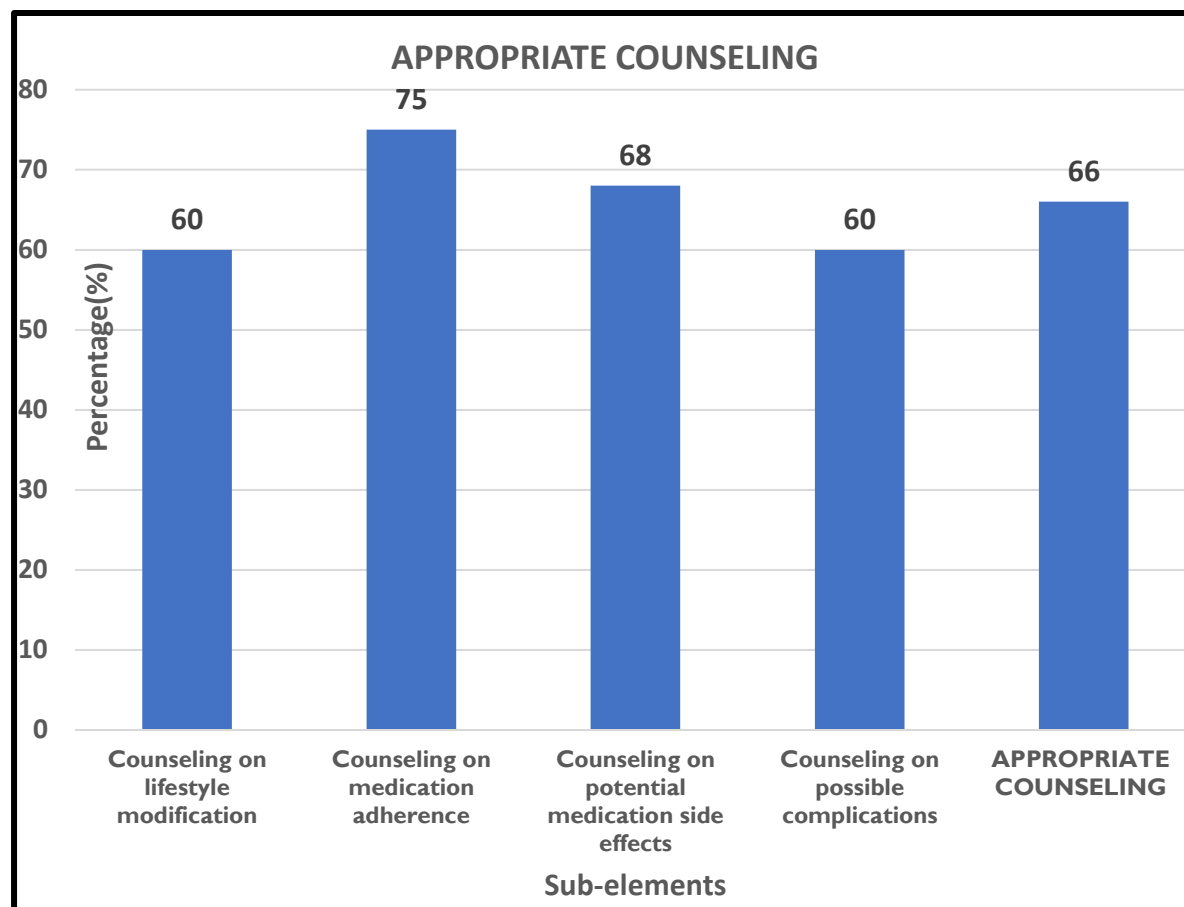


Figure 8: DOCUMENTATION OF PROVIDER IDENTIFICATION

GRAPH SHOWING SCORE FOR APPROPRIATE MONITORING

The appropriate monitoring is made for a known hypertensive patient during follow-up for 10(55%), and the Sub-elements performances were:

- Adherence to anti-hypertensive drugs assessed: 74% compliance.
- Adherence to lifestyle modifications assessed: 58% compliance.
- CVD risk assessment conducted: 32% compliance (**figure 8**).

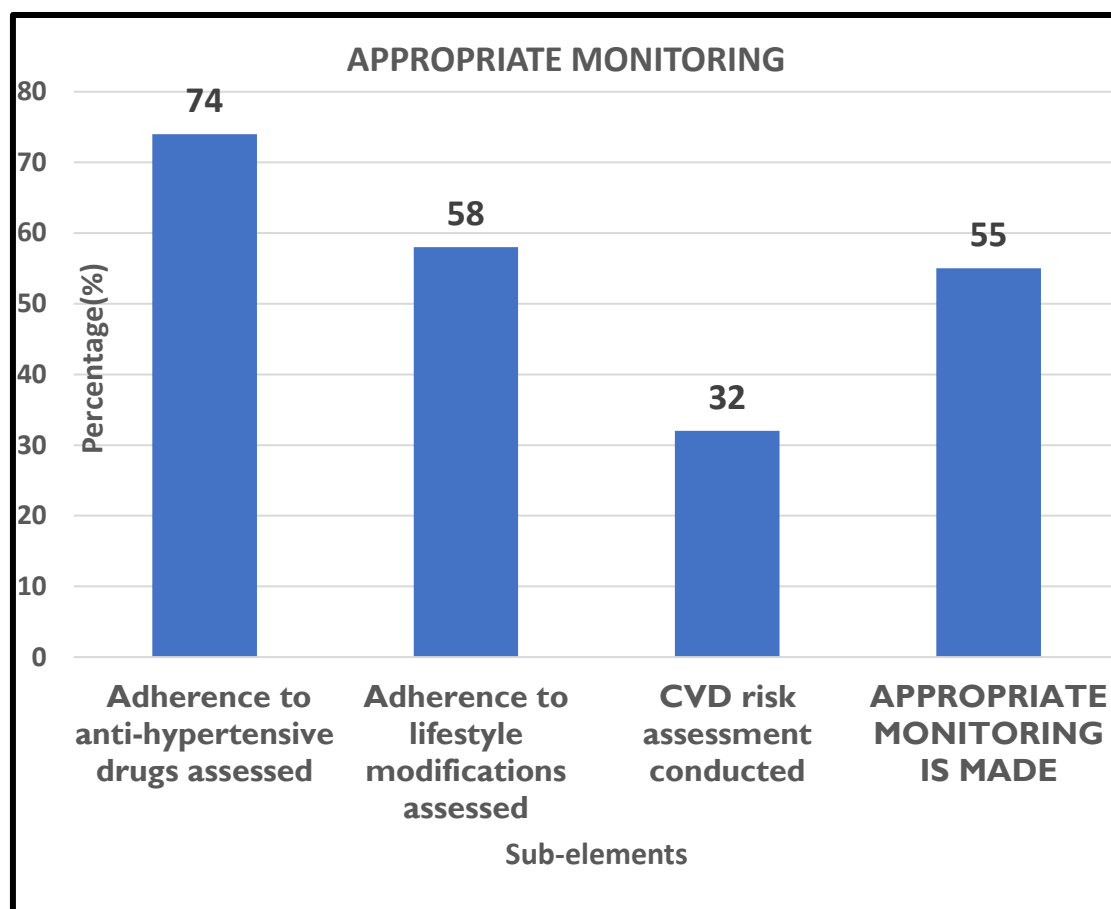


Figure 9: APPROPRIATE MONITORING

GRAPH SHOWING SCORE FOR PROVIDER DOCUMENTATION AND TARGET BP MET

The Physician name and signature documented was 79% while the BP target met after nine months was 70% (**figure 9**).

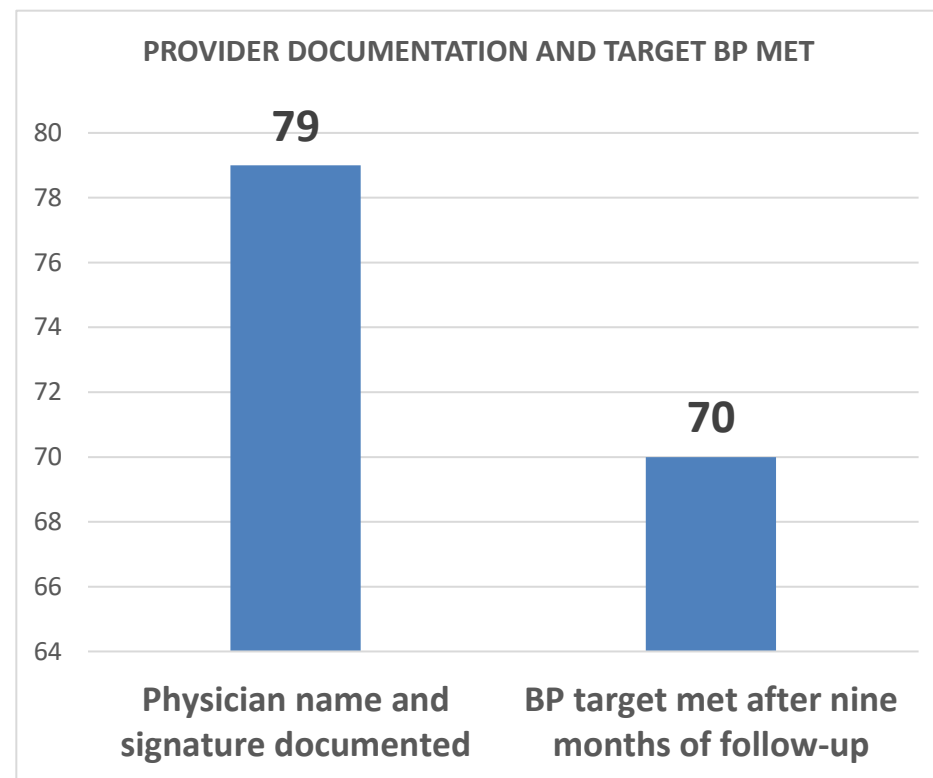


Figure 10: APPROPRIATE MONITORING

Recommendations

1. **Enhance Training and Awareness**
2. **Facilitate Access to Essential Investigations**
3. **Strengthen Patient Education and Counseling**
4. **Introduce Quality Monitoring and Feedback Mechanisms**

References

1. World Health Organization. *Global NCD Action Plan 2013-2020*. Geneva: WHO; 2013.
2. Ethiopian Ministry of Health. *National NCD Management Protocol*. Addis Ababa: MoH; 2021.
3. NICE Guidelines. *Hypertension in Adults: Diagnosis and Management*. London: NICE; 2022.
4. Deder General Hospital Clinical Audit Report, December 2017E.C.