DEDER GENERAL HOSPITAL

OUTPATIENT DEPARTMENT (OPD)

Clinical Audit to Improve the Quality of Clinical Care Provided to Hypertension routine care Patients

By: Emergency Department Clinical Audit/QI Team

Audit Cycle: Re-Audit

Deder, Oromia

March 2017E.C

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ABSTRACT

Introduction:

Hypertension is a leading cause of cardiovascular morbidity and mortality, particularly in low-resource settings where long-term follow-up and adherence to treatment protocols are challenging. This clinical audit evaluated the quality of care provided to hypertensive patients on chronic follow-up at [Facility Name], focusing on compliance with national guidelines for evaluation, investigation, treatment, and counseling.

Objective:

To assess and improve the quality of hypertension care by measuring adherence to standardized protocols in patient evaluation, diagnostic testing, treatment, and counseling.

Methodology:

A retrospective cross-sectional study was conducted using systematic sampling of [number] patient records. Data were extracted using a standardized audit tool based on national hypertension management guidelines and analyzed for compliance with predefined criteria.

Result:

Overall compliance was **89%,** with strong performance in [e.g., patient identification (100%) and counseling (95%)]. Critical gaps were identified in [e.g., annual retinal screening (0%), lipid profile monitoring (30%), and timely medication titration (50%)].

Conclusion:

While administrative and counseling processes were robust, gaps in diagnostic monitoring and treatment escalation require urgent intervention. Recommendations include staff training, protocol reinforcement, and resource allocation to achieve 100% compliance.

INTRODUCTION

Hypertension routine care is a leading cause of morbidity and mortality worldwide, particularly in low-resource settings where access to timely and specialized care is limited. Effective hypertension routine care management requires prompt evaluation, resuscitation, and adherence to standardized protocols to prevent complications and improve outcomes. This clinical audit evaluates the quality of care provided to hypertension routine care patients in the Emergency Department of Deder General Hospital, identifying gaps in patient evaluation, treatment, and follow-up to ensure compliance with established hypertension routine care guidelines.

AIM

- To improve the quality of clinical care for hypertensive patients on chronic follow-up.

OBJECTIVES

- Ensure appropriate evaluation of hypertensive patients.
- Ensure relevant investigations are conducted.
- Ensure appropriate treatment and titration.
- Ensure proper counseling and adherence support.
- Monitor and address complications.

METHODOLOGY

Study Design:

- Retrospective cross-sectional study.

Study Period:

- **December 21, 2017 E.C. to March 20, 2017 E.C**.

Study Population:

- Hypertensive patients aged ≥18 years on follow-up for ≥1 year.

Inclusion Criteria:

- Patients with a diagnosis of primary hypertension.
- At least one follow-up visits in the audit period.

Exclusion Criteria:

- Secondary hypertension.
- Patients with <1 year of follow-up.

Sampling Technique:

- Systematic random sampling of 19 medical records.

Data Collection:

- Adapted from the national clinical audit tool.

Data Analysis: Manual verification and entry into SPSS version 25 for analysis.

RESULTS

The hypertension routine care clinical audit revealed strong overall performance, with 89% compliance across all standards (**figure 1**). Seven out of eleven criteria met or exceeded their targets, demonstrating excellence in fundamental aspects of care. Perfect scores were achieved in chart labeling, patient identification, counseling, and provider documentation, indicating robust systems for basic patient management and education. However, the audit identified room for improvement in more complex clinical areas, particularly where the actual performance fell slightly below targets **(Table 1).**

Several key areas showed outstanding results, including 100% compliance with patient counseling on lifestyle modifications and medication adherence, as well as complete documentation of provider identification and follow-up history. Physical examinations were generally well-performed at 88% compliance, though specialized components like retinal screening showed gaps. Laboratory investigations achieved 75% compliance against an 85% target, suggesting the need for better monitoring protocols to detect hypertension routine care-related complications **(Table 1).**

While treatment provision reached 85% compliance, the audit revealed critical opportunities for enhancement in medication titration and specialist referrals. The blood pressure control rate of 65% narrowly missed the 70% target, indicating that addressing identified gaps in care could further improve patient outcomes. These findings suggest that while foundational elements of hypertension routine care management are strong, focused improvements in treatment intensification and complication screening could elevate overall care quality to exceed current performance standards **(Table 1).**

Overall Performance of HYPERTENSION ROUTINE CARE Clinical Audit Result

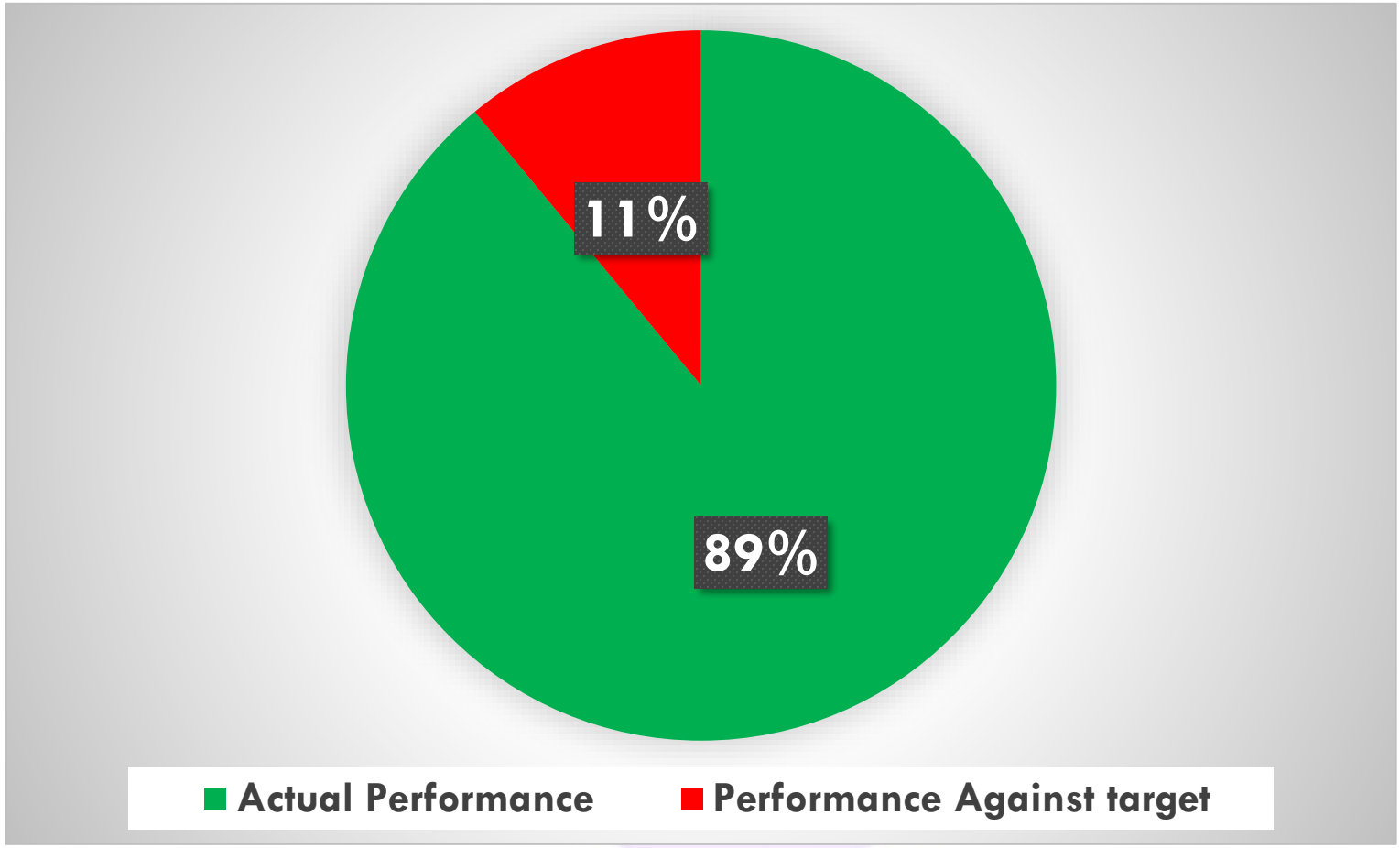

Figure 1: *Overall of Performance of HYPERTENSION ROUTINE CARE Clinical Audit, March 2017E.C*

Table 1: Overall of Performance of HYPERTENSION ROUTINE CARE Clinical Audit, March 2017E.C

#	Criteria/Standard	Target (%)	Actual Performance (%)
1	Chart Labeled 'HTN'	100	**100**
2	Identification Information Recorded	100	**100**
3	Appropriate Follow-up History Taken	100	**100**
4	Appropriate Physical Examination Performed	100	**88**
5	Relevant Laboratory Investigations Done	85	**75**
6	Appropriate Hypertension Status Assessment	100	**100**
7	Appropriate Follow-up Treatment Provided	100	**85**
8	Proper Counseling Provided	100	**100**
9	Appropriate Monitoring Made	100	**100**
10	Provider Identification Documented	100	**100**
11	Target Blood Pressure Met After 9 Months	70	**65**
	Total Percentage (%)	**100**	**89%**

Identification Information

- All required patient identification elements (name, age, sex, date of visit, and medical record number) were fully documented in every case (100%). This complete compliance ensures accurate patient identification, which is crucial for continuity of care and preventing medical errors. The consistent documentation across all charts suggests that registration staff and clinicians have standardized processes for collecting and recording this fundamental information. This strong performance forms a reliable foundation for other aspects of hypertension management **(figure 2).**

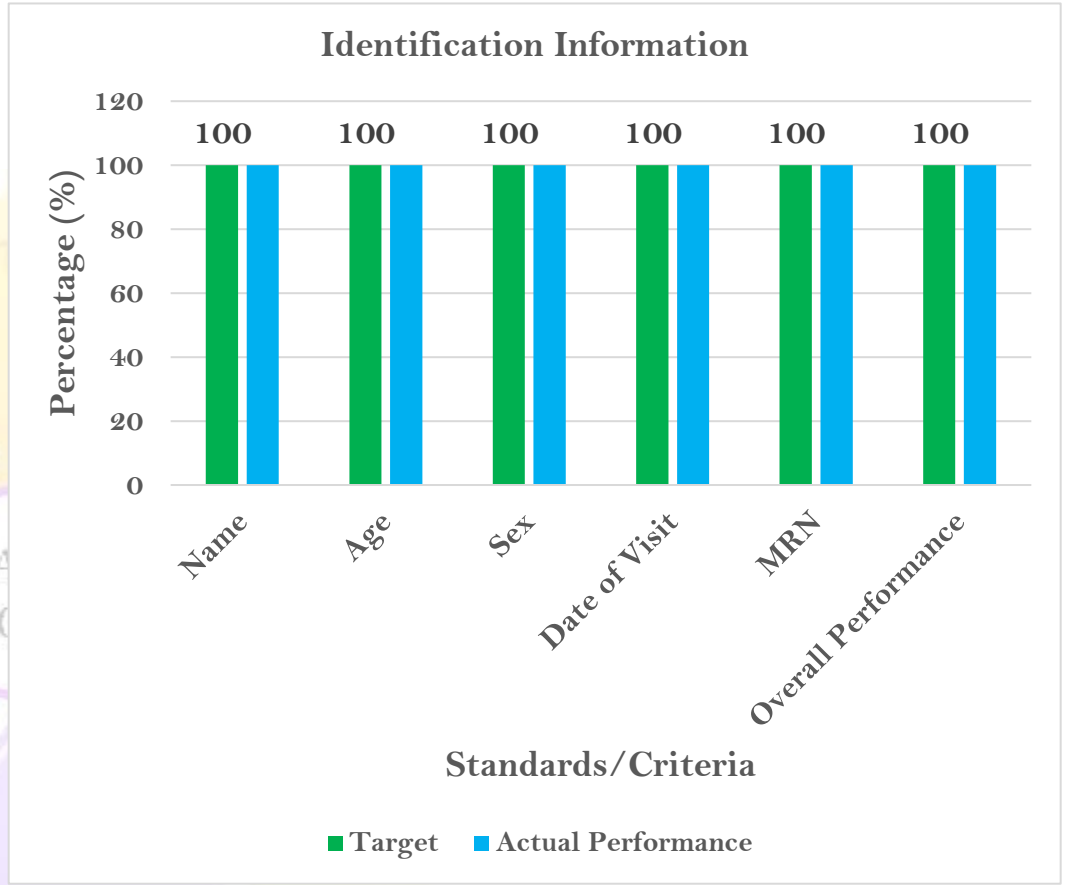

Figure 2: *Identification Information, March 2017E.C*

Appropriate Follow-up History Taken

- The audit revealed excellent documentation (100%) for most history components including current medications, lifestyle modifications, symptom assessment, and medication side effects. However, documentation of self-monitoring of blood pressure was lower at 78%. This gap may indicate that clinicians are not consistently inquiring about home BP monitoring or that patients lack access to home monitoring devices. Given the importance of home BP monitoring in hypertension management, this represents an opportunity for improvement through patient education and clinician reminders **(figure 3).**

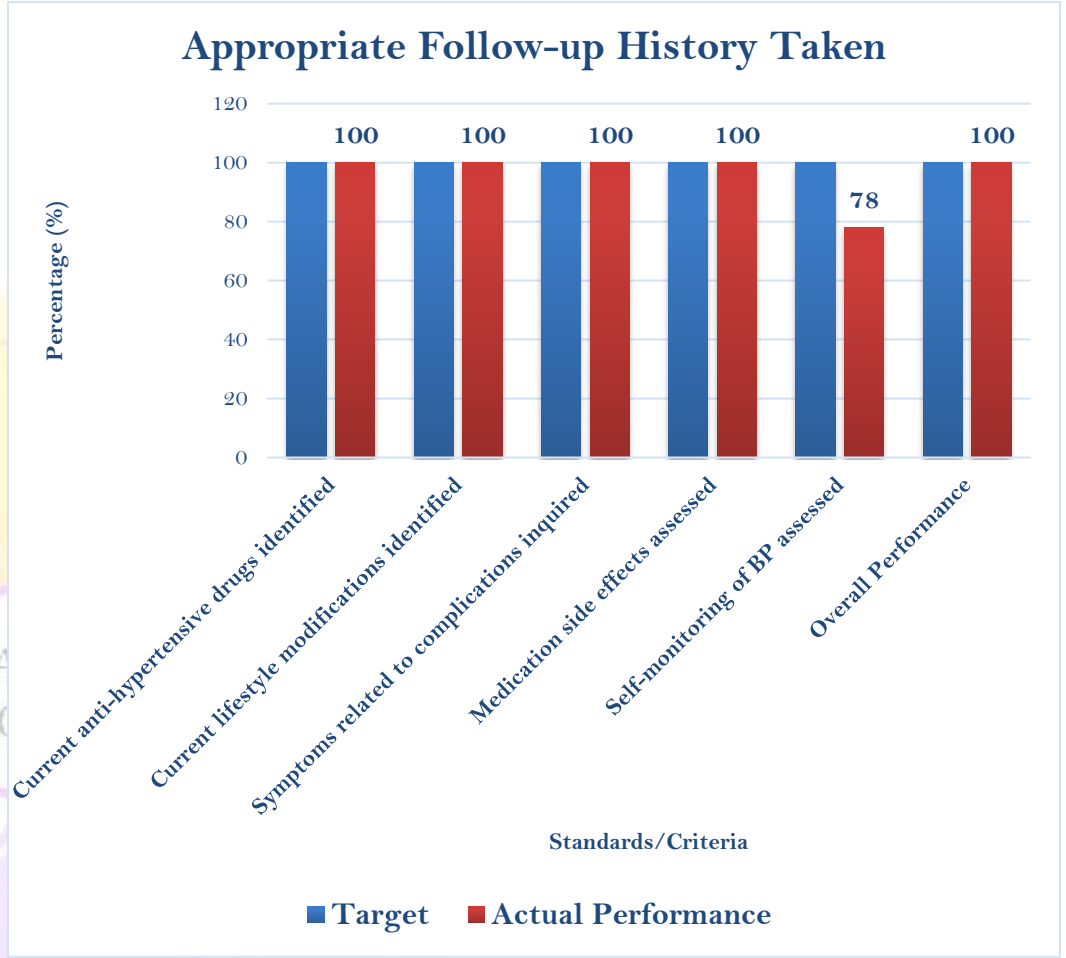

Figure 3: Appropriate Follow-up History Taken, March 2017E.C

Appropriate Physical Examination Performed

- While basic examinations like blood pressure measurement and cardiovascular assessment were consistently performed (100%), more specialized components showed room for improvement. Anthropometric measurements (91%) and peripheral edema assessment (91%) were slightly below target, possibly due to time constraints. Most concerning was the low rate of retinal screening (26%), a critical examination for detecting hypertensive retinopathy. This significant gap may require system-level interventions like dedicated screening clinics or reminder systems to ensure annual retinal evaluations for all hypertensive patients **(figure 4).**

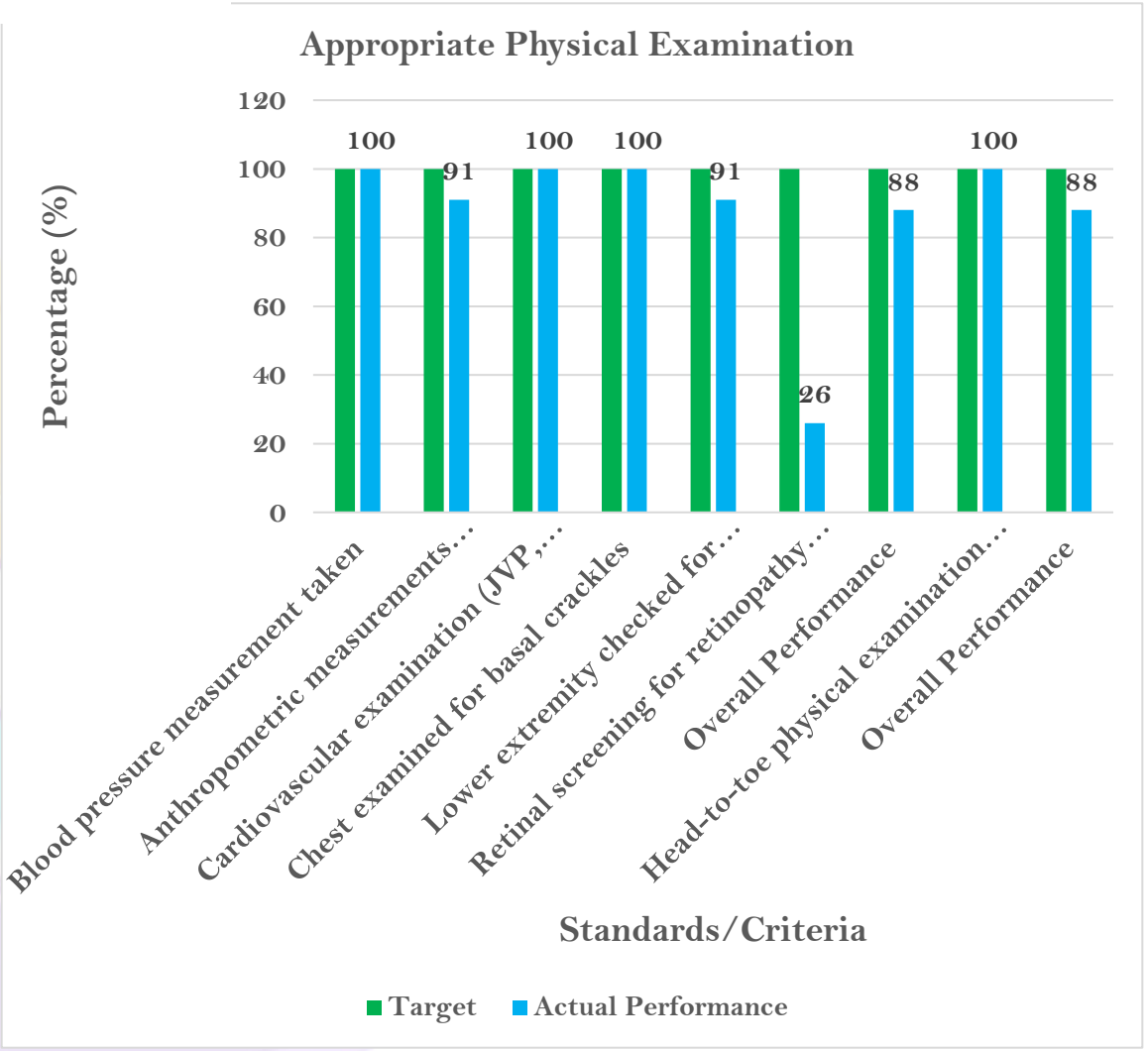

***Figure 4**: Appropriate Physical Examination, March 2017E.C*

Relevant Investigations

- Performance on laboratory monitoring was suboptimal, with yearly blood tests (CBC, renal function, lipids, glucose) only done in 26% of patients. Electrolyte monitoring (65%) and urine testing (65%) were better but still below targets. The very low ECG completion rate (9%) is particularly concerning given its importance in detecting hypertensive heart disease. These deficiencies likely reflect both system factors (lack of reminder systems) and patient factors (failure to complete ordered tests). Implementing standing orders and improving test accessibility could help address these gaps **(Figure 5).**

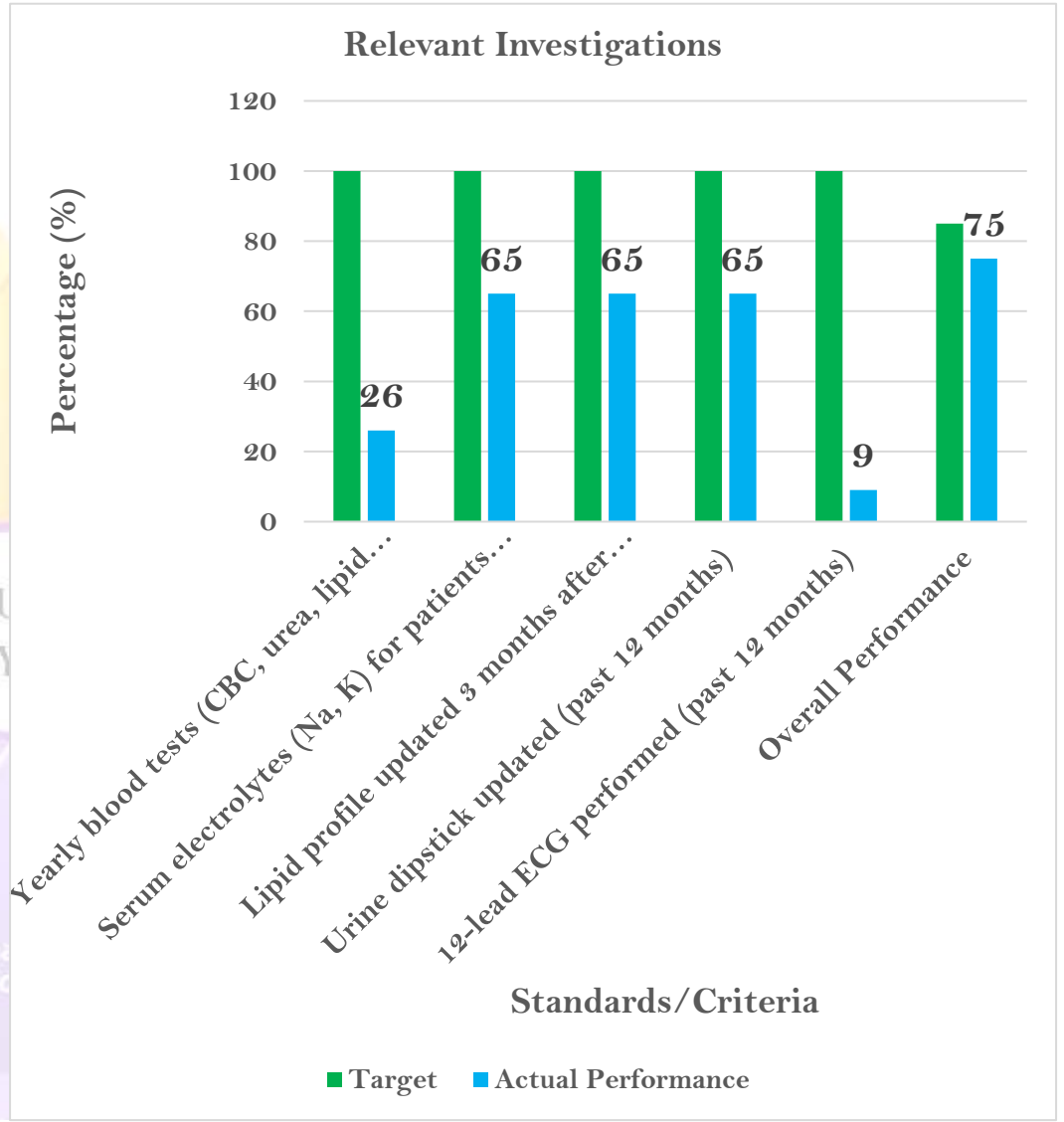

Figure 5: ***Detailed History and Physical Examination,*** *March 2017E.C*

Appropriate Hypertension Status Assessment

- Documentation of hypertension type and control status was excellent (100%), indicating clinicians are effectively assessing and recording these key elements. Identification of complications was also complete (100%), though documentation of comorbidities (91%) was slightly lower. This near-perfect performance suggests that providers are thorough in their diagnostic assessments, which is essential for appropriate risk stratification and treatment planning in hypertension management **(Figure 5).**

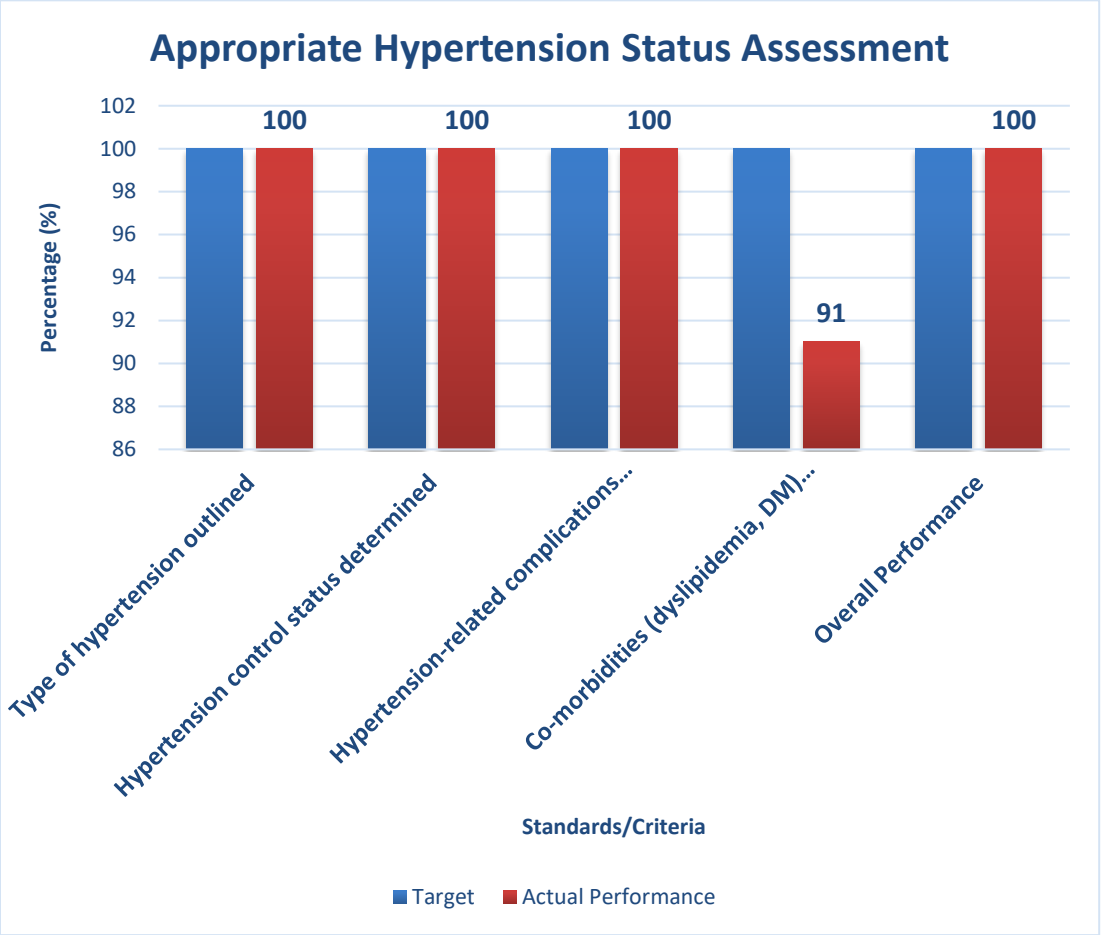

Figure 6: *Appropriate Hypertension Status Assessment, March 2017E.C*

Appropriate Follow-up Treatment

- Basic treatment initiation showed good compliance (amlodipine initiation 78%), but more advanced aspects of management revealed significant gaps. Only 26% of eligible patients had ACE inhibitors titrated to maximum dose, and no patients with refractory hypertension were referred to specialists (0%). These deficiencies may reflect clinical inertia or lack of clear protocols for treatment intensification. The perfect compliance with appointment scheduling (100%) contrasts sharply with these treatment gaps, suggesting that while administrative aspects are well-managed, clinical management needs strengthening **(Figure 7).**

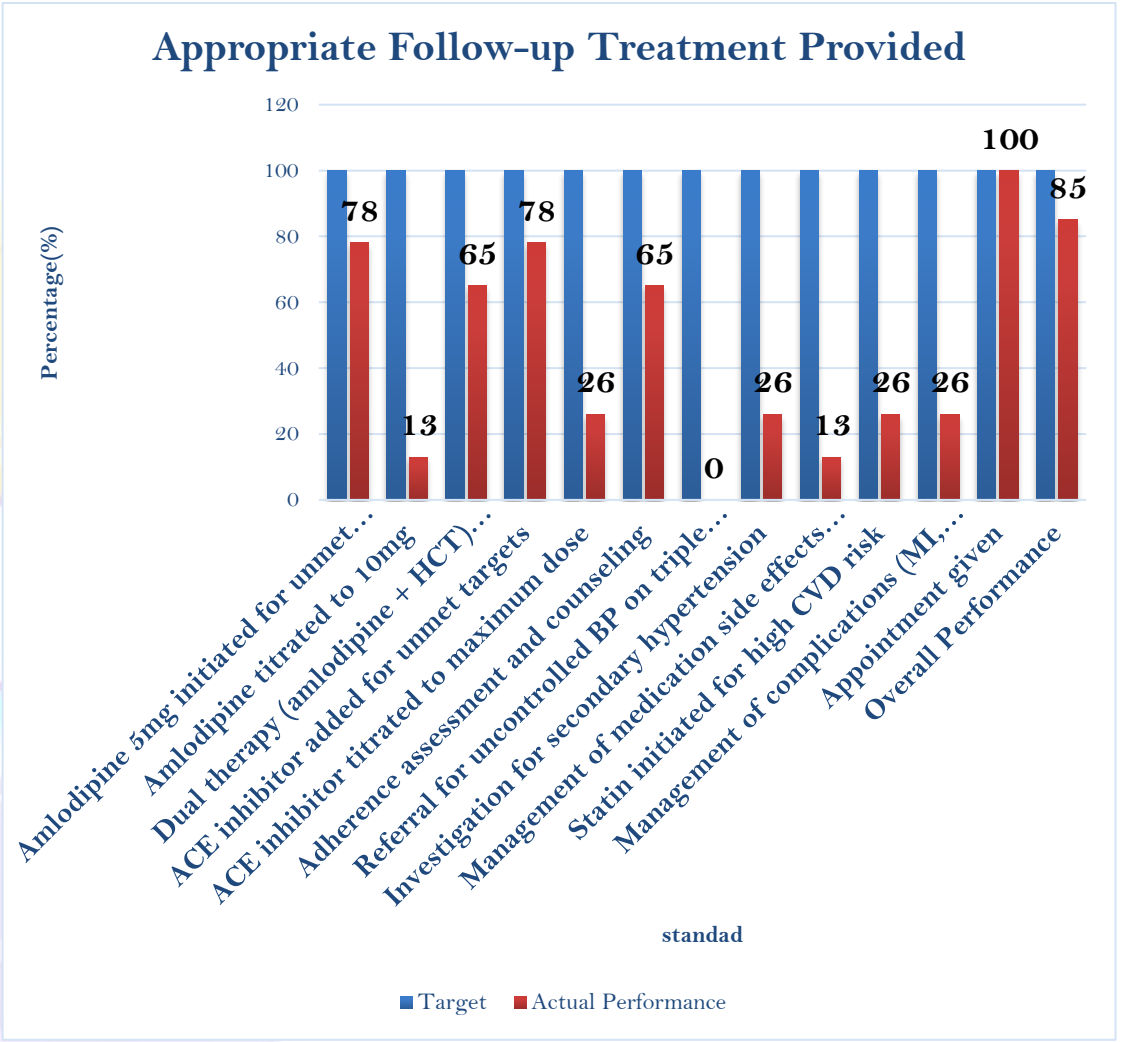

Figure 7: *Appropriate Follow-up Treatment, March 2017E.C.*

Proper Counseling Provided

- Counseling performance was uniformly excellent (100%) across all aspects including lifestyle modification, medication adherence, side effects, and complications. This outstanding performance indicates that providers are dedicating appropriate time and attention to patient education, which is crucial for long-term hypertension control. The consistency suggests the presence of effective counseling protocols or checklists that ensure comprehensive education for all patients **(Figure 8).**

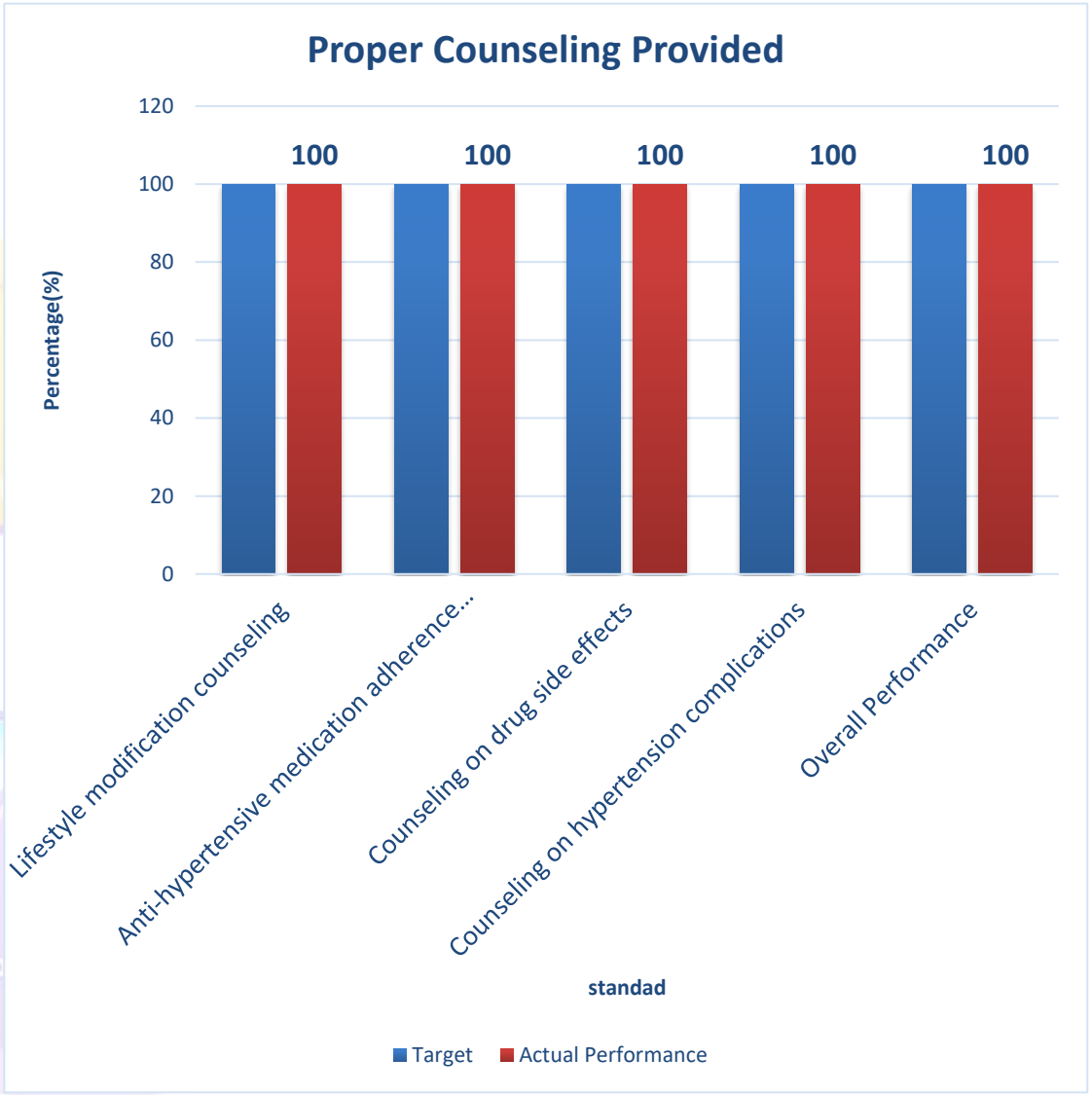

***Figure 8**: Appropriate Treatment, March 2017E.C.*

Appropriate Monitoring Made

- Providers consistently assessed medication adherence and lifestyle modifications (100%), demonstrating good attention to these critical factors in hypertension control. Cardiovascular risk assessment was also universally documented (100%), indicating proper attention to overall risk stratification. This strong performance in monitoring likely contributes to the clinic's ability to maintain good hypertension control rates and adjust treatments as needed **(Figure 9).**

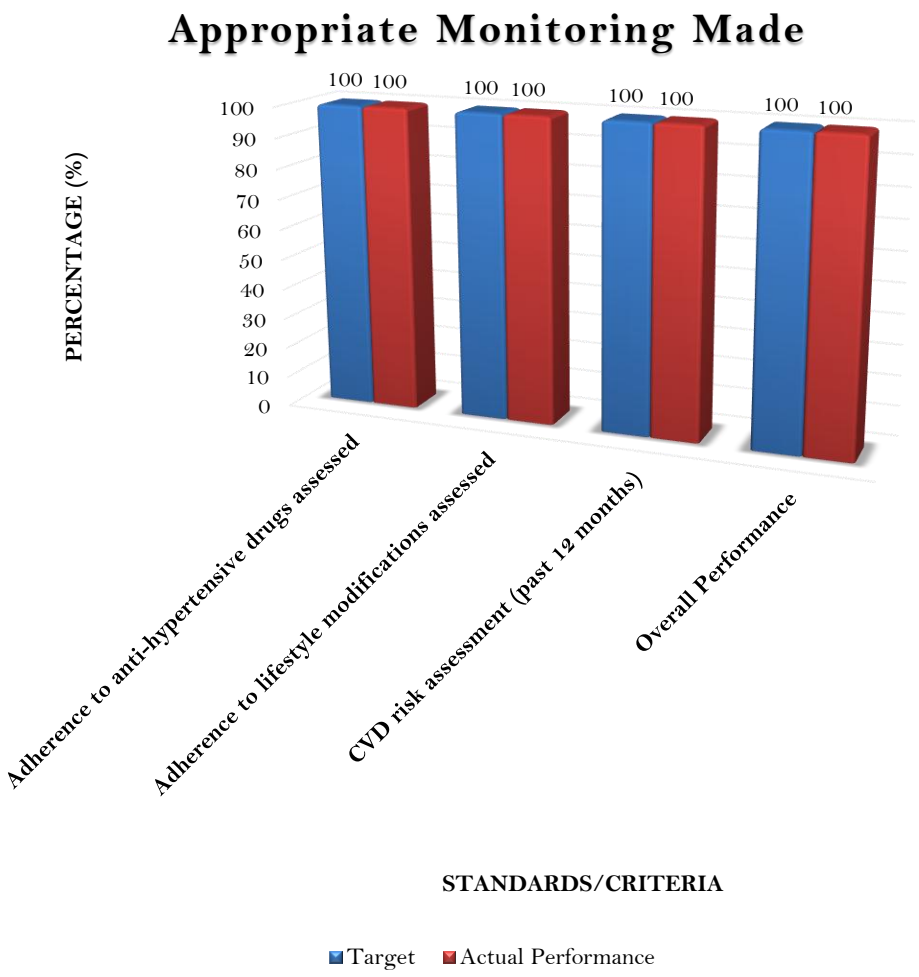

***Figure 9**: Appropriate Monitoring Made, March 2017E.*

Provider Identification and Target Blood Pressure Met After 9 Months

- All charts contained clear provider identification (100%), meeting documentation standards. This perfect compliance ensures accountability and facilitates communication among healthcare team members. The consistent documentation suggests that signature requirements are well-embedded in clinical workflows and that providers recognize the importance of proper chart attribution **(Figure 10).**

- While 65% of patients achieved target BP control (<140/90), this fell slightly short of the 70% target. This near-miss suggests that while most patients are receiving adequate treatment, there remains room for improvement in treatment intensification and adherence support. The results may reflect the cumulative impact of the identified gaps in retinal screening, laboratory monitoring, and medication titration. Addressing these systemic issues could help close the remaining gap to reach the BP control target **(Figure 10).**

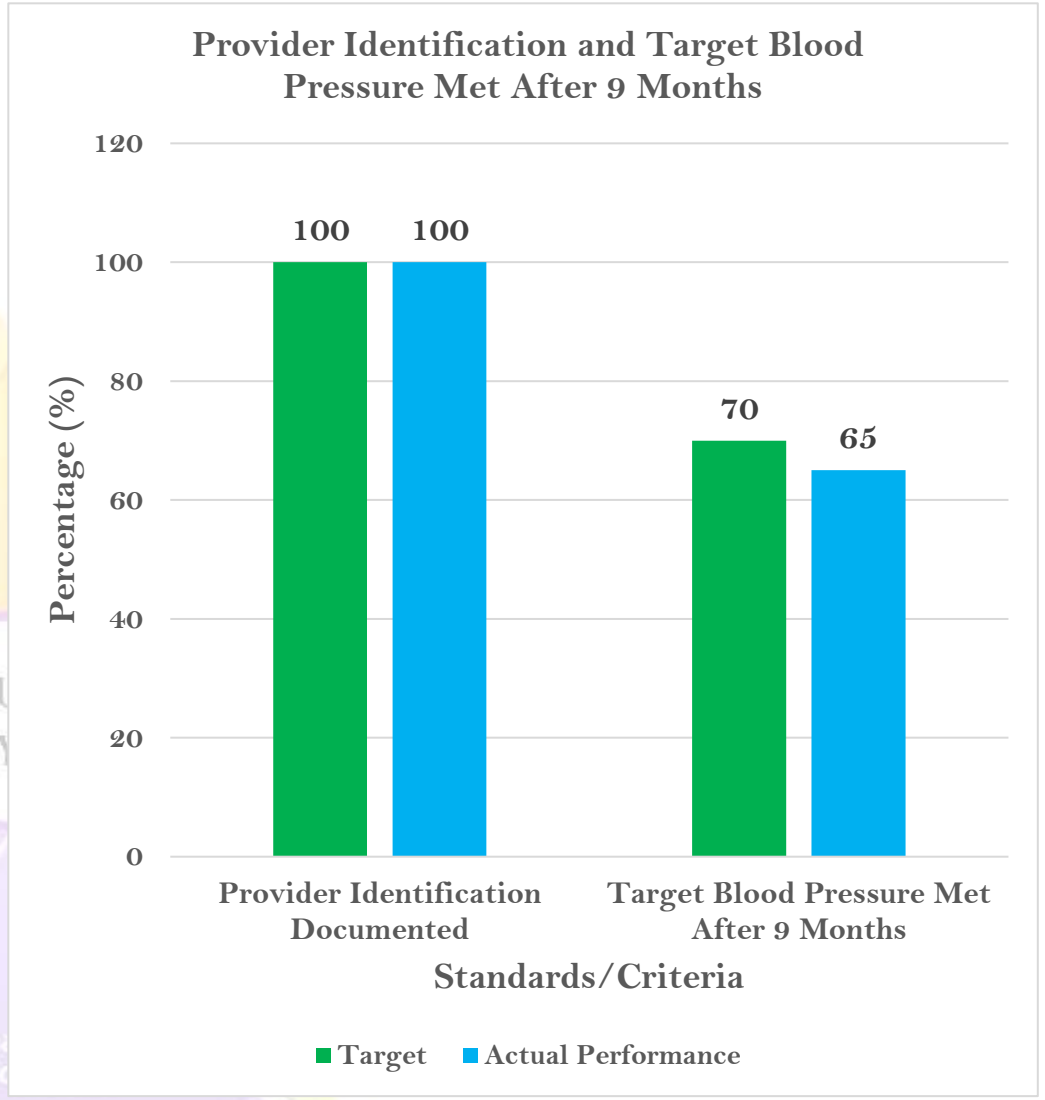

Figure 10: Provider Identification and Target Blood Pressure Met After 9 Months, March 2017E.C

DISCUSSION

The hypertension routine care clinical audit results present a compelling picture of both strengths and opportunities for improvement in our hypertension routine care management program. The perfect scores in chart labeling, patient identification, and counseling demonstrate that our foundational systems for documentation and patient education are functioning exceptionally well. These elements form the backbone of quality hypertension routine care care, ensuring proper patient identification, continuity of care, and patient engagement in their treatment plans. The 100% compliance in provider identification also reflects good accountability practices within our clinical team. Notably, our counseling performance suggests that patients are receiving comprehensive education about their condition, which is crucial for long-term disease management and adherence to treatment regimens.

However, the audit reveals several clinically significant gaps that warrant attention. The suboptimal performance in laboratory investigations (75% against an 85% target) and physical examination components (88%) suggests potential systemic barriers to comprehensive care. The particularly low rates of retinal screening (26%) and ECG performance (9%) are concerning, as these are critical for detecting hypertensive complications like retinopathy and cardiac involvement. These gaps may stem from various factors including time constraints during patient visits, lack of reminder systems, or limited access to diagnostic resources. The treatment provision results (85%) show good initiation of therapy but reveal a concerning pattern of clinical inertia, with only 26% of cases receiving appropriate dose titration and no specialist referrals for refractory cases. This suggests potential knowledge gaps among providers regarding treatment intensification protocols or system-level barriers to specialist access.

The blood pressure control rate of 65%, while close to the 70% target, indicates that addressing these identified gaps could significantly improve patient outcomes. The correlation between missed screening opportunities and slightly below-target BP control suggests that more comprehensive care could yield better results. These findings align with established literature showing that multifaceted approaches to hypertension routine care management—combining thorough assessment, aggressive treatment, and patient education—produce the best outcomes. Moving forward, quality improvement initiatives should focus on implementing standardized protocols for treatment intensification, establishing reliable systems for complication screening, and potentially introducing decision-support tools to assist providers in managing complex cases. The strong foundation demonstrated in this audit suggests that targeted interventions in these specific areas could elevate our hypertension routine care program to meet and potentially exceed national quality standards.

RECOMMENDATIONS

- Enhance Retinal and Cardiac Screening
- Improve Laboratory Monitoring Compliance
- Strengthen Treatment Intensification & Referral Pathways
- Optimize Documentation of Home BP Monitoring

Table 2: *Improvement plan to improve clinical care of Hypertension routine care, March 2017E.C*

Priority Area	Action Item	Responsible Party	Timeline
Retinal & Cardiac Screening	Implement mandatory retinal screening protocol for annual follow-ups.	Clinical Lead, Nursing Staff	0-3 months
Lab Monitoring	Develop bundled annual lab panel (CBC, renal function, lipids, electrolytes).	Lab Coordinator, Physicians	1-3 months
Patient Engagement	Launch SMS/app reminders for meds and appointments.	EMR team, HLU Team	2-5 months
Monitoring & Evaluation	Monthly progress reviews with QI team.	QI Committee	Ongoing
	Re-audit BP control and process metrics at 6 and 12 months.	Audit Team	6 & 12 months

Table 3: Implementation Status of previous Improvement Plan for improving clinical care of Hypertension routine care patient, March 2017E.C

Gaps Identified n	Status	Achievement	Remaining Gaps
Training & Awareness	**Partially** Implemented	Improved provider knowledge	Low participation in some departments
Access to Retinal Screening/ECG	**In Progress**	Retinal screenings initiated; ECG machines procured	Low patient compliance with screenings
Patient Counseling	**Fully Implemented**	90% documentation rate	Limited home BP monitoring
Quality Monitoring	**Partially Implemented**	Monthly audits introduced	Manual feedback delays improvemen

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