The Management of Hypertension in Afro-Caribbean Patients with Type 2 Diabetes at a Primary Care Centre in Birmingham

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Introduction

- Hypertension (HTN) affects approximately a third of the population in England, with Afro-Caribbean people constituting a high-risk group[1].
- Afro-Caribbean groups are 2-4 times more likely to develop type 2 diabetes (T2DM)[2].
- Drugs causing renin-angiotensin system blockade have less effective anti-hypertensive effects on Afro-Caribbean people due to their low renin profile, but have been shown to have reno-protective effects[3,4].

NICE guidelines (CG87 and NG28)[5] state that:

1. **The first-line antihypertensive drug treatment for a person of African or Caribbean family origin should be an angiotensin converting enzyme inhibitor (ACEi) plus either a diuretic or a calcium-channel blocker (CCB).**
2. **Do not combine an ACEi with an angiotensin II-receptor antagonist (ARB) to treat hypertension**
3. **Repeat blood pressure measurements within:**
   - **1 month if blood pressure (BP) > 150/90 mmHg**
   - **2 months if BP > 140/80 mmHg**
   - **2 months if BP > 130/80 mmHg and there is kidney, eye or cerebrovascular damage.**

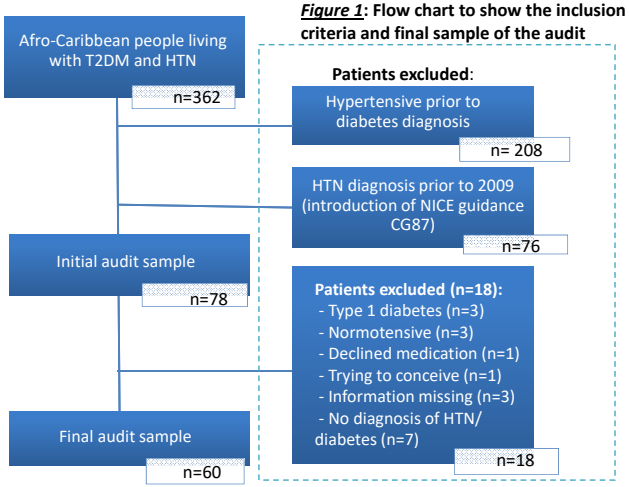
Aim

Investigate whether the NICE guidance on hypertension management is being adhered to in Afro-Caribbean people with type 2 diabetics at a large, teaching primary care centre in Birmingham.

Methods

- Data collection tool: EMIS health electronic records
- Type of data collected: Demographics, hypertension medication, BP reading and monitoring duration, presence of microvascular complications.
- Setting: Primary Care Centre in an ethnically diverse area of Birmingham
- Analysis: Data was coded and analysed using Microsoft Excel.

***Figure 1*: Flow chart to show the inclusion criteria and final sample of the audit**



Results

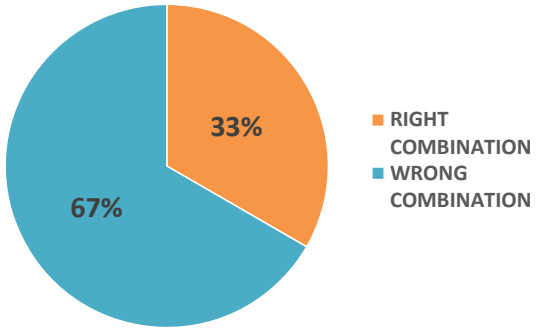


***Figure 2*: Proportion of patients prescribed anti-hypertensive medications according to the NICE guidance (ACE/ARB with CCB/Diuretic)**

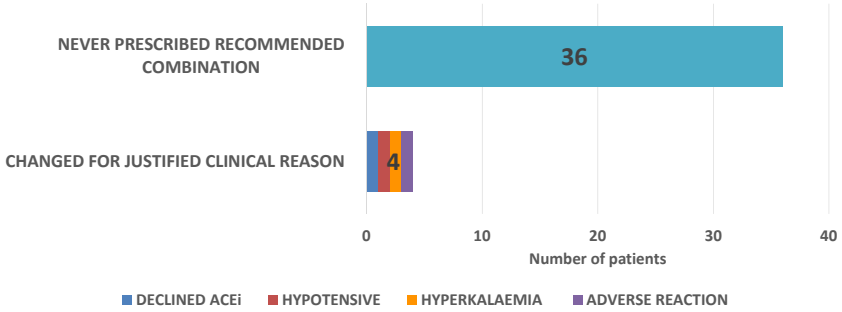


***Figure 3*: Reasons for patients being prescribed anti-hypertensive combinations not in line with the NICE guidance**

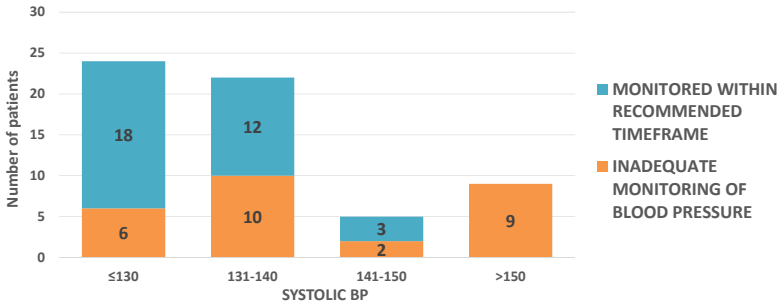


***Figure 4*: Number of patients monitored in-line with the NICE guidance based on their last systolic blood pressure**

Discussion

Principle Findings

- A third of patients were prescribed the recommended anti-hypertensive medications in-line with the NICE guidance (see Figure 2).
- Of the two-thirds who were not, 90% had **not** been prescribed the recommended combination from the time of diagnosis (see Figure 3). The remaining 10% were changed for justified medical reasons.
- **No patients were treated with an ACEi and ARB concurrently.**
- 45% of patients were **not** monitored within the recommended timeframe according to their blood pressure readings (see Figure 4).

Limitations

- Relies on GP coding and data entry
- Small sample size
- Data collected in one centre

Conclusion

Adherence to NICE guidance in relation to ethnic-specific hypertension prescribing for type 2 diabetic patients appears to be suboptimal in primary care

Recommendations

- Reinforce guidance at a primary care level through education programmes.
- Re-audit annually to assess improvement, with a larger sample involving other primary centre locations within the GP partnership.

References

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Student ID numbers:

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