Introduction

- Hypertension (HTN) affects approximately a third of the population in England, with Afro-Caribbean people constituting a high-risk group.
- Afro-Caribbean groups are 2-4 times more likely to develop type 2 diabetes (T2DM).
- 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.

NICE guidelines (CG87 and NG28) 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.

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.

Aim

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

Results

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

<table>
<thead>
<tr>
<th>Number of patients</th>
<th>Never Prescribed Recommended Combination</th>
<th>Changed for Justified Clinical Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Figure 3: Reasons for patients being prescribed anti-hypertensive combinations not in line with the NICE guidance](image)

<table>
<thead>
<tr>
<th>Number of patients</th>
<th>Declined ACEi</th>
<th>Hypertensive</th>
<th>Hyperkalaemia</th>
<th>Adverse Reaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>18</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>10</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Figure 4: Number of patients monitored in-line with the NICE guidance based on their last systolic blood pressure](image)

<table>
<thead>
<tr>
<th>Number of patients</th>
<th>Monitored within Recommended Timeframe</th>
<th>Inadequate Monitoring of Blood Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>10</td>
<td>5</td>
</tr>
</tbody>
</table>

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.
- 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.

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


Acknowledgements

We would like to acknowledge thanks to Dr Heather Lodge for facilitating us during data collection.