Pharmacist led, primary care based disease management reduced risk factors and improved glycaemic control in diabetes


In vulnerable patients with poorly controlled type 2 diabetes mellitus, does a pharmacist led, primary care-based, disease management programme reduce cardiovascular risk factors and improve glycaemic control?

METHODS

Design: randomised controlled trial.

Allocation: [concealed]\(^\dagger\).

Blinding: blinded (outcome assessors and data collectors)\(^*\).

Follow up period: 1 year.

Setting: University of North Carolina General Internal Medicine Practice, Chapel Hill, North Carolina, USA.

Patients: 217 English speaking patients who were \(\geq \)18 years of age, had a clinical diagnosis of type 2 diabetes, had poor glucose control (glycated haemoglobin [HbA\(_1c\)] concentration \(\geq 8.0\)), and had a life expectancy \(>\)6 months.

Intervention: primary care disease management programme \((n = 112)\) or usual care \((n = 110)\). The intervention consisted of usual care supplemented with intensive diabetes management; 3 clinical pharmacists who had training in outpatient disease management delivered intensive educational sessions and used evidence-based algorithms and proactive management of clinical parameters. See www.evidence-basedmedicine.com.

Outcomes: blood pressure (BP), HbA\(_1c\), concentrations, aspirin use, and lipid concentrations.

Patient follow up: 89% at 1 year (intention to treat analysis).

\(^*\)See glossary.

\(^\dagger\)Information provided by author.

MAIN RESULTS

Systolic and diastolic BP, HbA\(_1c\) concentrations, and aspirin use for cardiovascular risk prevention were more improved in patients who received the primary management programme than in those who received usual care (table). Cholesterol concentrations did not differ significantly between groups.

CONCLUSION

In vulnerable patients with poorly controlled type 2 diabetes mellitus, a pharmacist led, primary care-based, disease management programme reduced cardiovascular risk factors and improved glycaemic control.

**Pharmacist led, primary care management programme v usual care in type 2 diabetes\(^*\)**

<table>
<thead>
<tr>
<th>Outcomes at 1 year</th>
<th>Mean change from baseline</th>
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<tbody>
<tr>
<td></td>
<td>Programme</td>
</tr>
<tr>
<td>Systolic BP (mm Hg)</td>
<td>(-7)</td>
</tr>
<tr>
<td>Diastolic BP (mm Hg)</td>
<td>(-4)</td>
</tr>
<tr>
<td>HbA(_1c)</td>
<td>(-2.5%)</td>
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<tr>
<td>Total cholesterol (mg/dl)</td>
<td>(-27)</td>
</tr>
<tr>
<td>Aspirin use</td>
<td>91%</td>
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</tbody>
</table>

\(^*\)HbA\(_1c\) = glycated haemoglobin; BP = blood pressure. Other abbreviations defined in glossary; RBI, NNT, and CI calculated from data in article.