Diabetes management for patients in rural Pakistan: initial findings

DGHS

RESEARCH BRIEF

There were an estimated 7 million people living with diabetes in Pakistan in 2015.[1] Around 3 million diabetes patients in Pakistan were undiagnosed in 2015.[1] Diabetes is strongly associated with cardiovascular disease (CVD), which includes angina and myocardial infarction, stroke, and also renal and other serious complications.

NCD care in Pakistan:

In Pakistan, a National Action Plan for Non-Communicable Disease (NAP - NCD) was initiated in 2004.[2] This plan focuses on the prevention, screening, management, monitoring and surveillance of NCDs.[3]

However, rural healthcare centres and sub-district hospitals do not have adequate resources to fully implement the national plan, as these facilities often lack standardised operating practices to diagnose, treat, educate, follow up and report on diabetes patients.

Research aim:

To assess whether adopting and implementing this intervention package in primary healthcare settings results in:

- better diabetes control
- improved blood pressure
- better lipid profiles
- smoking cessation, and
- a reduction in diabetes-related complications and morbidity.

Methods:

The trial was conducted in the Sargodha district in Punjab Province. We used 9 rural health centres and 5 sub-district hospitals in control and intervention arms.

Control arm: We used 4 rural health centres and 3 sub-district hospitals that provided standard routine care.

The intervention:

We developed a package for delivering quality CVD and diabetes care in rural healthcare facilities. This package includes: screening of overweight adults; standardised diagnosis; lifestyle education about diet, exercise and quitting smoking; standardised drug treatment for diabetes, hypertension and hyperlipidaemia; and active follow-up of patients.

The package was piloted in 4 primary healthcare facilities, evaluated for feasibility and effectiveness, and then refined for the trial.

In these facilities, there were no operational guidelines available for staff on how to manage diabetes or its complications. For the purposes of the study, additional resources were provided to strengthen diagnosis and recording.

Intervention arm: We used 5 rural health centres and 2 sub-district hospitals. These facilities had the same standard of care as the control arm facilities, but were given additional support, including:

intensive education on how to diagnose diabetes using guidelines;

context-adapted consultation room desk guide and materials for case management of diabetes, CVD and hypertension, including information about how to refer severe or complex cases;

standardised treatment schedules; and

enhanced support for monthly follow-up with SMS text and telephone reminders.

Diagnosis

1. The definition and understanding of fasting blood glucose (FBG) testing varied among patients: some patients reported taking a cup of tea with milk and sugar (but no breakfast) before coming for FBG testing.

2. No patients were given lifestyle modification trials before being prescribed drugs. All patients were prescribed medication at the time of diagnosis.

3. There were inconsistencies in staff using either a single disease code or a dual disease code to label patients with co-existing diabetes and hypertension.

4. There were also inconsistencies in recording drugs for hypertension patients due to either, a) some patients not being prescribed anti-hypertension drugs because they were already taking hypertension treatment from somewhere else and were advised to continue, or b) the facility not recording any drugs being taken by the patient if that facility had not provided them.

Counselling

1. Staff prioritised counselling on diet and exercise above smoking cessation. Staff reported time pressures and a perceived unwillingness by patients to quit smoking as 2 reasons for not emphasising smoking cessation.

2. The average reported duration of a lifestyle counselling session at the time of registration was about 10 minutes. Subsequent counselling sessions were shorter at around 5 minutes.

3. Women showed more interest in lifestyle counselling, including weight reduction.

Lifestyle modification

1. Patients reported challenges in managing their daily walk (30 minutes) due to lack of access to a suitable space and insufficient time due to other responsibilities.

2. Women also reported an additional cultural challenge to walking saying they needed a male family member to accompany them. Some women managed by walking within their household boundaries, such as in courtyards and on roof tops.

3. Change of diet was a complex social issue. For example, male wage earners were more likely to get the family diet changed compared to a housewife or an elderly person.

4. A few women also reported managing their salt and oil intake by taking their food portion out of the cooking pot before adding salt or oil for the rest of the family.

References:

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