P-1161 Does a hospital diabetes inpatient service reduce short-term and long-term blood glucose and HbA1c levels?

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Introduction

Pathology testing for the diagnosis and management of diabetes mellitus (DM) includes testing of patients' glucose levels, and glycated haemoglobin (HbA1c) levels. DM education is effective in helping patients with DM in controlling their illness, and maximising their health.

The aim of this study was to determine whether a hospital diabetes in-service, and specifically diabetes education, results in reduced glucose and HbA1c levels after hospital discharge.

Materials and methods

A retrospective review was performed at a large teaching hospital in Canberra, Australia. 67 patients comprising 35 males and 32 females, who were referred to the Diabetes Services from February 1st 2015 until January 31st 2016, were evaluated. The admission blood glucose level (BGL) was compared to the BGL after hospital discharge. HbA1c was taken before, and 3-6 months after Diabetes Service education. A between subjects t-Test was used to compare patient averages.

The Diabetes Service consisted of one inpatient nurse practitioner-diabetes (NPD), and one part-time educator. The role of the NPD is essential to the hospital's Diabetes Service, and functions within a clearly defined scope of practice, as detailed by the Australian Diabetes Educators Association. Upon referral the role of the NPD is to educate people with diabetes and their families about the condition and how to manage it. The NPD and the diabetes educator focus includes self-empowerment by focusing on an individual's needs, providing knowledge, motivation and support to aid the prevention of diabetes related health complications.

Results

The average admission BGL result was 13.3, compared to the post-discharge result of 11.2. This indicates that the measured blood glucose decreased ($p < 0.01$). The average pre-HbA1c result was 10.45, compared to the post-HbA1c result of 8.96. This indicates that the measured HbA1c decreased ($p < 0.05$).

Conclusions

This study is believed to be the first to measure the direct benefits associated DM education within Australia. It provides measured evidence on the effectiveness of a Diabetes Service in reducing patient BGLs. This in turn will hopefully encourage ongoing efforts and translate into reduced micro and macro cardiovascular risk factors associated with DM.