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How well do our chronic disease management program compare to international benchmark study? An outcome sharing of RAMP-DM from NTWC.

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Introduction

Diabetes increases the risk of developing long-term microvascular and macrovascular complications and represents a major public health concern. The United Kingdom Prospective Diabetes Study has demonstrated that rigorous glycaemic control can significantly reduce diabetic complications. In Hong Kong, most people with type II DM are treated by primary care physicians of the Hospital Authority (HA). At present, it was the second most frequently managed chronic problem in NTWC GOPC.

Therefore, an increased effectiveness of diabetic care in HA primary setting will dramatically reduced the personal and financial burden of the society. In 2011, Risk Assessment and Management Program [RAMP] was introduced to the NTWC general out-patient clinics (GOPCs) in an attempt to improve the quality of diabetic care.

Objectives

A. To assess the outcome of diabetic improvement after implement the RAMP by assessing the degree of changes amongst parameters such as HbA1C, blood pressure (BP) & low-density lipoprotein (c-LDL). B. To review the improvement of process for diabetic care, using capture rate of blood investigations and recruitment for GOPC insulin program.

Methodology

Under the RAMP program, multi-disciplinary teams of healthcare professionals including doctors, nurses, physiotherapists, occupational therapists, dietitians and pharmacists are set up at NTWC GOPCs to provide comprehensive health risk assessment for patients with type II DM, so that the patients can have enhancement on chronic disease self-management and appropriate preventive care. It also aimed at early detection of DM complications with increasing patient awareness of DM complications. The outcome and process of care for the program would be reviewed to compare before and after the program implementation. The outcome data would be used to compare with international benchmark review and meta-analysis. In Tricco review & meta-analysis¹, the quality improvement strategies reduced HbA1c by a mean difference of 0.37% (95% CI 0.28–0.45; 120 trials), LDL cholesterol by 0.10

mmol/L (0.05–0.14; 47 trials), systolic blood pressure by 3.13 mm Hg (2.19–4.06, 65 trials), and diastolic blood pressure by 1.55 mm Hg (0.95–2.15, 61 trials) versus usual care.

Result

After implementing the RAMP program for 1yr, the diabetic patients with HbA1c less than 7 increased from 44.5 % at the end of 2011 to 48% at the end of 2012 [i.e increased 3.5% of DM patients with satisfactory glycemic control] [Fig.1]. For another significant cardiovascular risk factor lipid profile, the diabetic patients with LDL less than 2.6 increased from 36.9% at the end of 2011 to 45.7% at the end of 2012 [i.e increased 8.8% of DM patients with satisfactory lipid control] [Fig2]. For the blood pressure control, the percentage of DM patients with Systolic BP less than 130 and Diastolic BP less than 80 modestly increased from 40% at the end of 2011 to 41% at the end of 2012. For the process of diabetic care, the capture rate of HbA1c for GOPC DM patients increased from 85% for the period of Jan2011 to Dec2011 to 88.4% for the period of Jan2012 to Dec2012 [i.e increased 3.4% of DM patients with annual checking of HbA1c and monitoring the disease control]. For diabetic patients with secondary oral anti-diabetic agents failure, we have launched the GOPC insulin initiation and management program since April 2007. The number of diabetic patients enrolled into the program increased from 643 at the end of 2011 to 952 at the end of 2012. [i.e 309 patients newly enrolled into the program [48% increase from 2011]. This is attributed to the multidisciplinary effort by the family medicine specialist, advanced practicing nurse and allied health professional after introduction of RAMP-DM program.