

# Non-profit & Self-financing model of Diabetes complications screening & follow up care in the community of Tai Po

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## Introduction

Diabetes Mellitus is a chronic disease that is increasing in frequency in Hong Kong. At present, about 10% of the local population is having diabetes disease of various degree and the percentage in older age group is more serious (Diabetes Hong Kong, 2007). One of the most serious complications of the disease is retinopathy (damage to blood vessels at the back of the eye); which is a major cause of blindness in the community. Neglect of the feet among diabetes patients is a cause of amputation, and kidney damage by uncontrolled blood sugar is another preventable complication. These 3 permanent disabilities may be readily prevented by regular screening of the retina by retinal photo and of the circulation, sensation and skin condition of the feet, and urine test.

Despite these complications, diabetes mellitus could be treated and prevented at the community level. Diabetes complications screening may be performed by trained health professionals, including family medicine doctors, in the private sector community at a reasonable cost given support for essential equipment and space.

## Purpose of the Project

Objectives of the project -

- To make regular eye and foot examination for diabetes sufferers in the Tai Po community easily accessible to detect early treatable changes in the eye and feet in diabetes sufferers by taking annual photo of retina using a retinal camera and assessment of foot circulation.
- To relieve the burden on the public hospital system of caseload that may be readily cared for at primary level in the community.

## Material & Methods

From 2003, The Kwong Fuk Community Health Centre, has provided such a service with the generous donation of equipment from the Robert Hotung Foundation. The service is open to referrals from health professionals of both private and public sectors as well as welcoming walk-in patients on a self-referral basis. The procedures are performed by trained health staff, and if the patient selects the option of biochemical blood tests, the results, together with the retinal photo are interpreted by the doctor who provides a report. The report is explained to the patient by the health staff, and any need for continuing treatment and management is advised. If the patient is not under the care of any doctor or health establishment, he is offered ongoing care at the centre. Quality assurance in retinal

photo interpretation by doctors was conducted with the support of specialist ophthalmologist in the form of QA exercise and seminar and also ongoing photo sharing by email for controversial cases. Fees are charged. The programme runs on a not-for-profit self-financing model.

## Results

From start of the programme, the number of cases taking up the DMCS has increased from 122 in 2003 to 250 in 2006. From June 2004 to June 2006, 400 clients participated the DM complication-screening program. Diabetic Retinopathy (DMR) was present in 14% of participants; and 30% of those DMR were of moderate severity. Significant maculopathy was also found in 2.5% of participants. Among newly diagnosed diabetic cases, 4% were found to have DMR. The prevalence of DMR increased with the duration of DM and raised to 8.3%, 15% & 28% in patients with 1 to 4 year, 5 to 9 year and more than 10 year of DM history respectively.

The number of consultations for Diabetes mellitus in the same medical clinic increased from 464 in 2004 to 956 from January to November 2007.

The income and expenditure of the programme is balanced and the programme is sustainable. In 2007, we started to receive a few referrals from HA GOPC, but the number was small.

## Conclusions

There is a growing demand for diabetes complications screening. As a preventive medical care, every DM client should be given such screening and care and their conditions should be monitored more closely.

Diabetes complications screening may be performed efficiently in the community by trained medical and health staff along a self-financing model that is sustainable. We recommend more funding support to non-profit medical organisations to take up such screening. This service is also open to Hospital Authority patients as well as diabetes patients in the community.

Ref: Diabetes Hong Kong (2007) from the website of <http://www.diabetes-hk.org/>