



Service Priorities and Programmes Electronic Presentations

Convention ID: 528

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FM Primary Care Clinic- Hospital Cardiologists Collaboration on Echocardiography Service Reduces Investigation Waiting Time and Risks to Patients

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Keywords:

Primary Health Care

Cardiology

Echocardiography

Primary Secondary care collaboration

waiting time

reduce risk

Introduction

Transthoracic echocardiography (TTE) is an invaluable non-invasive diagnostic tool for the evaluation of cardiac structures and functions. Primary care physicians frequently encounter cases which are indicated for echo. Currently, majority of cases were being done hospital cardiologists with a long waiting time and limited access from primary care.

Objectives

We propose to strengthen the role of primary care physicians of making timely and accurate diagnosis by providing echo service to General Outpatient Clinic (GOPC) patients by collaboration with Princess Margaret Hospital cardiologists.

Methodology

Pilot Point-of-care bedside Echocardiography (Echo) service was set up in Ha Kwai Chung GOPC since Apr 2016. Bedside Ultrasound machine with Echo probe, package and ECG leads were set up. Patients clinically indicated for Echo according to the appropriate use criteria in American Society of Echocardiography (ASE), who were normally referred to hospital SOPC, were referred to this service. The first and second authors were regularly trained in hospital Echo clinics by fourth and fifth authors. They have taken part in the Special Competency Test in Echocardiography of ASE. There were 2-3 Echo GOPC sessions per month. The schedule and reporting of echo was approved by hospital cardiologists.

Result

108 patients with mean age 66 (16 to 91); male: female ratio 0.42, attended the clinic from Apr 2016 to Dec 2017. 82% referral were initiated from GOPC, while 19 % referral were from FM specialist clinics. The most common reason of referral was shortness of breath (38%), followed by heart murmur (32%), abnormal ECG such as

atrial fibrillation (29%), suspected cardiomegaly in CXR (19%) and ankle edema (14%). Fifteen patients (14%) were found to have suboptimal transthoracic windows. The average waiting time from booking to clinic date was 2.4 weeks (0-14weeks). The most common diagnosis was various valvular regurgitations, followed by left ventricular hypertrophy due to hypertensive heart disease, heart failure with preserved EF, dilated cardiac chambers. Half of the patients had change of diagnosis, while drugs needed to change in 27% of patients after echocardiography. We have identified 5 cases of significant aortic stenosis, 2 cases of mitral stenosis. These patients were referred to hospital cardiologists promptly and speedy treatment was arranged. Overall, 25 (23%) patients were referred to hospital specialist clinics after GOPC echo. Others were scheduled GOPC follow-up in stable condition. Conclusion: The model of GOPC Echo clinic demonstrated prompt and supportive diagnosis to non-specific cardiac presentation, that benefit patients and reduced risk of delay in diagnosis.