



Service Priorities and Programmes Electronic Presentations

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Submitting author: Mr Tsz Hin LEUNG

Post title: Resident Pharmacist, Queen Mary Hospital

Pilot Program for Improving Drug Adherence and Minimizing Drug Wastage in Patients with Asthma or Chronic Obstructive Pulmonary Disease (COPD)

Leung THS(2), Ngai CYV(2), Chui CMW(2), Ip MSM(1), Wang KLJ(1), Ho KYC(3), Mo SLS(4), Poon KHH(4), Chan HWF(1)

(1) Department of Medicine, QMH

(2) Department of Pharmacy, QMH

(3) Integrated Care Service, QMH

(4) Patient Resource Centre, QMH

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Introduction

Inhalation therapy is important for asthma and COPD. Poor drug adherence and inhaler techniques may compromise disease control and increase health-care cost. From July 2016 to January 2017, a pilot collaborative program involving Department of Pharmacy, Department of Medicine, Integrated Care Service and Patient Resource Centre (PRC) was launched for these patients.

Objectives

(1) Improve patients' inhaler techniques; (2) Improve drug adherence; (3) Reduce drug wastage

Methodology

Pharmacists recruited suitable asthma or COPD patients attending respiratory Specialist Outpatient Clinic (SOPC). Recruited patients were invited to bring back any extra on-hand inhalers for reusability evaluation by pharmacists. Trained PRC volunteers introduced the program to recruited patients, executed questionnaires on drug adherence and disease control, and recorded drug-taking problems or social issues identified for pharmacists or PRC staff to follow up.

After patients' SOPC attendance, pharmacists assessed patients' inhaler techniques, educated the drug regimen and identified any drug-related problems. Pharmacists contacted physicians for problem necessitating regimen changes. Patients were invited for second visit for reassessment.

Measured outcomes include: (1) Inhaler techniques; (2) Drug adherence; (3) Drug-related problems; (4) Drug cost savings (reuse of patients' own inhalers).

Result

From 26/7/16 to 31/1/17, 103 patients were recruited. At baseline, 90% of patients missed one or more key steps in inhaler technique affecting drug delivery. Forty percent of patients were non-adherent to prescribed inhalers based on the Morisky Medication Adherence Score-4 (MMAS-4). Ninety-one drug-related problems were identified, such as drug misuse (28%) and use of expired/ empty inhalers (11%). For those attended second visit at pharmacist clinic (n=71), improvement in key inhaler technique score was demonstrated in 72% of technique assessments. 39 patients (38%) brought back reusable inhalers, leading to drug cost saving of \$27,944. Four patients were referred to PRC for emotional and caring support. Non-adherence and suboptimal inhaler techniques are common in asthma/COPD patients. A multidisciplinary approach including volunteers, pharmacists, social workers and doctors improves patients' inhaler techniques, drug adherence and helps rectify drug-related as well as social problems. Drug cost can be saved by reusing patients' on-hand inhalers.