



## Service Priorities and Programmes Electronic Presentations

**Convention ID:** 685

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### **Impact of a Pharmacist Clinic in Patients with Asthma or Chronic Obstructive Pulmonary Disease (COPD): a Prospective Observational Study**

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#### **Keywords:**

Inhaler technique

Pharmacist

Adherence

Asthma

Chronic Obstructive Pulmonary Disease

#### **Introduction**

Inhalation therapy is important for asthma and COPD. Poor drug adherence and inhaler techniques may compromise disease control and increase health-care cost. In 2016, a pilot collaborative program in Queen Mary Hospital 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 (SOPD). 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' SOPD 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 29/12/16, 92 patients were recruited. At baseline, 85% of patients missed one or more key steps in inhaler technique affecting drug delivery. 45% of patients were non-adherent to prescribed inhalers, in which 10% had problem

resolved by initialing regimen changes agreed by physicians. Seventy drug-related problems were identified, such as drug misuse (22%) and use of expired/ empty inhalers (9%).

For those attended second visit at pharmacist clinic (n=60), improvement in key inhaler technique score was demonstrated in 70% of technique assessments. Non-adherence and suboptimal inhaler techniques are common in asthma/COPD patients. A multidisciplinary approach including pharmacists, doctors, and PRC volunteers improves patients' inhaler techniques, drug adherence and helps rectify drug-related problems.