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A Model of Collaborative Primary Care – A Nurse-led Assessment Programme for Inhalation Technique for Patients with Chronic Obstructive Pulmonary Disease and Asthma

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Introduction

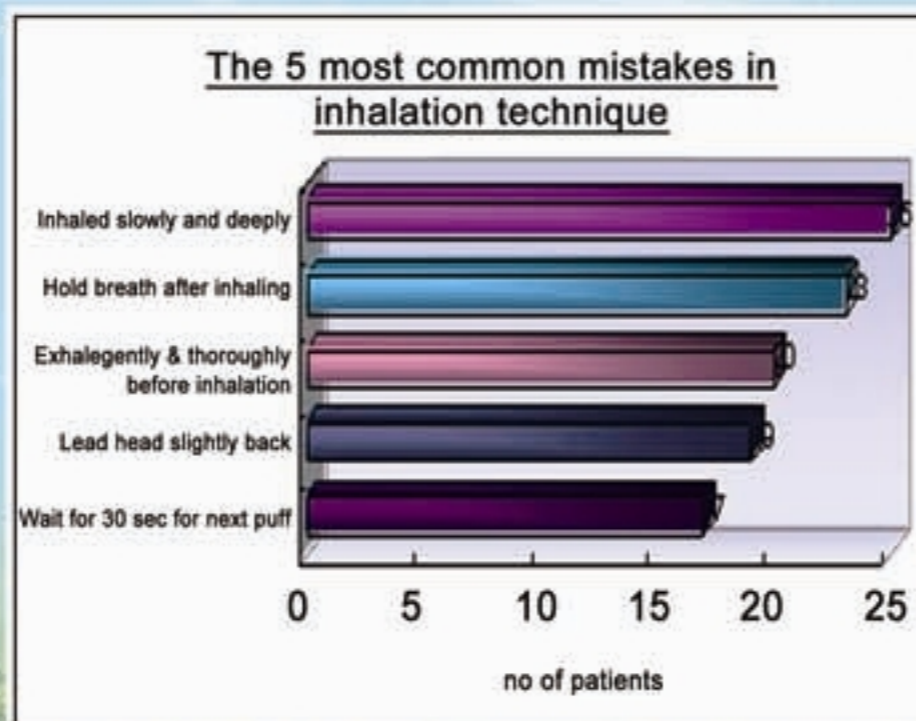
Chronic obstructive pulmonary disease (COPD) and asthma are common respiratory diseases in Hong Kong. Prevalence of COPD in Hong Kong is 3.5%; prevalence of asthma is 9.4% for school children and 5.8% for elderly population. Both conditions are associated with significant morbidity and mortality. Inhaled medications are the mainstay of treatment for both conditions according to current international guidelines and correct inhalation technique is crucial for disease control. Various studies reported that around 25-80% patients did not use the inhaled medications correctly. To evaluate the magnitude of such problem locally, a pilot nurse-led programme for assessment of inhalation technique is launched at Cheung Sha Wan Jockey Club General Outpatient Clinic (CSW JC GOPC).

Objectives

1. To review the inhalation technique of patients who are prescribed with inhaled medications
2. To identify common errors in inhalation technique
3. To formulate new care plan

Methodology

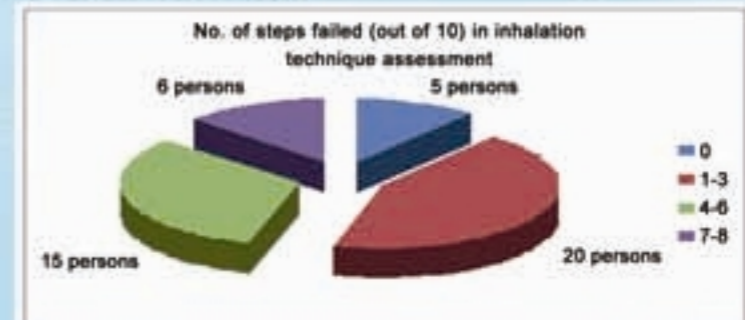
Patients who were prescribed with inhaled medications were recruited from CSW JC GOPC for assessment of inhalation technique by nursing staff using a standardized 12-item checklist (10 essential, 2 optional) since February 2011.



(Figure 1)

Results

46 patients were recruited in the study (30 male: 16 female; age range 3-89, average 69.7 years). 29 (63%) and 17 (37%) patients were diagnosed with COPD and asthma respectively. Only 5 (10.9%) patients performed all steps correctly. Among the 10 essential items, 41 (89.1%) patients failed in one or more items, among which 20 (48.7%) patients failed in 1 to 3 items, 15 (36%) patients failed in 4 to 6 items and 6 (14.6%) patients failed in 7 to 8 items. Most people failed to inhale slowly and deeply or to hold breath after inhaling.



(Figure 2)

Conclusion

Most patients in our study did not use the inhaled medication correctly. This could hamper their disease control and potentially lead to frequent exacerbations and hospitalization, decreased quality of life and increased healthcare burden. Regular assessment and individualized education on inhalation technique is essential to prevent these occurrences. However, consultation time constraint hinders the provision of these interventions by doctors in primary care setting. Alternatively, our well-equipped primary care nurses can collaborate with doctors and lead an assessment and education programme for our COPD or asthmatic patients in need. This simple programme can be anticipated to improve patients' disease control and satisfaction; further evaluation of its clinical impact is yet to be evaluated. Nevertheless, this program reflects effective use of resource in the search for quality care and can serve as a model for collaborative care in primary care setting.



(Figure 3)