



將軍澳醫院  
Tseung Kwan O Hospital



醫院管理局  
HOSPITAL  
AUTHORITY

Tse PY<sup>1</sup>, Choy CF<sup>1</sup>, Law YY<sup>1</sup>, Tsang KY<sup>1</sup>, Lee S<sup>1</sup>, Lau IT<sup>1</sup>, Wong Y<sup>1</sup>, Chung Jimmy<sup>1</sup>, Li Lucia<sup>1</sup>, Ng KS<sup>1</sup>, Chong Virginia<sup>1</sup>, Wong KW<sup>1</sup>, Lai Yvonne<sup>1</sup>, Kwan Jack<sup>1</sup>, Cheung YW<sup>2</sup>, Ngan KTS<sup>2</sup>, Choi WM<sup>2</sup>, Choi WW<sup>2</sup>, Au TK<sup>2</sup>, Ng PS<sup>2</sup>, Yuen WY<sup>2</sup>, Wong FY<sup>2</sup>, Tang Andras<sup>2</sup>, Yip City<sup>2</sup>, Lo TC<sup>2</sup>, Hui Helena<sup>3</sup>, Lam Miranda<sup>3</sup>, Yeung KC<sup>3</sup>.

<sup>1</sup>Department of Medicine, Tseung Kwan O Hospital; <sup>2</sup>Department of Integrated Rehabilitation Services, Tseung Kwan O Hospital; <sup>3</sup>KE cluster, Community Nursing Service.

## Multidisciplinary Efficient and Superior Quality Program for Patients with Acute Exacerbation of Chronic Obstructive Pulmonary Disease (MES COPD Program): Preliminary results

### INTRODUCTION

Acute exacerbation of chronic obstructive pulmonary disease (AECOPD) is a common cause for hospital admissions, accounting for more than 700 episodes of admission and occupying 8.3% medical bed days in TKOH in 2008. The average length of hospital stay (ALOS) was 6.54 days and the unplanned readmission rate was 26.9% in 2008.

### OBJECTIVE

To improve the service provided to patients with AECOPD with a target to reduce the ALOS without increasing the unplanned readmission rate.

### METHODOLOGY

Patients with AECOPD were admitted directly from A&E department into COPD beds and managed by multidisciplinary team approach (including respiratory physicians, nurses, CNS, physiotherapists and occupational therapists). Appropriate patients were selected for various outpatient programs, including pulmonary rehabilitation program (PRP) and CNS case management program. Patients were also referred to other health care providers including Haven of Hope Hospital (HHH) when appropriate. (Fig.1)

Outcome measures included ALOS and unplanned readmission rate. Additional outcome measures were performed for various individual sub-programs.

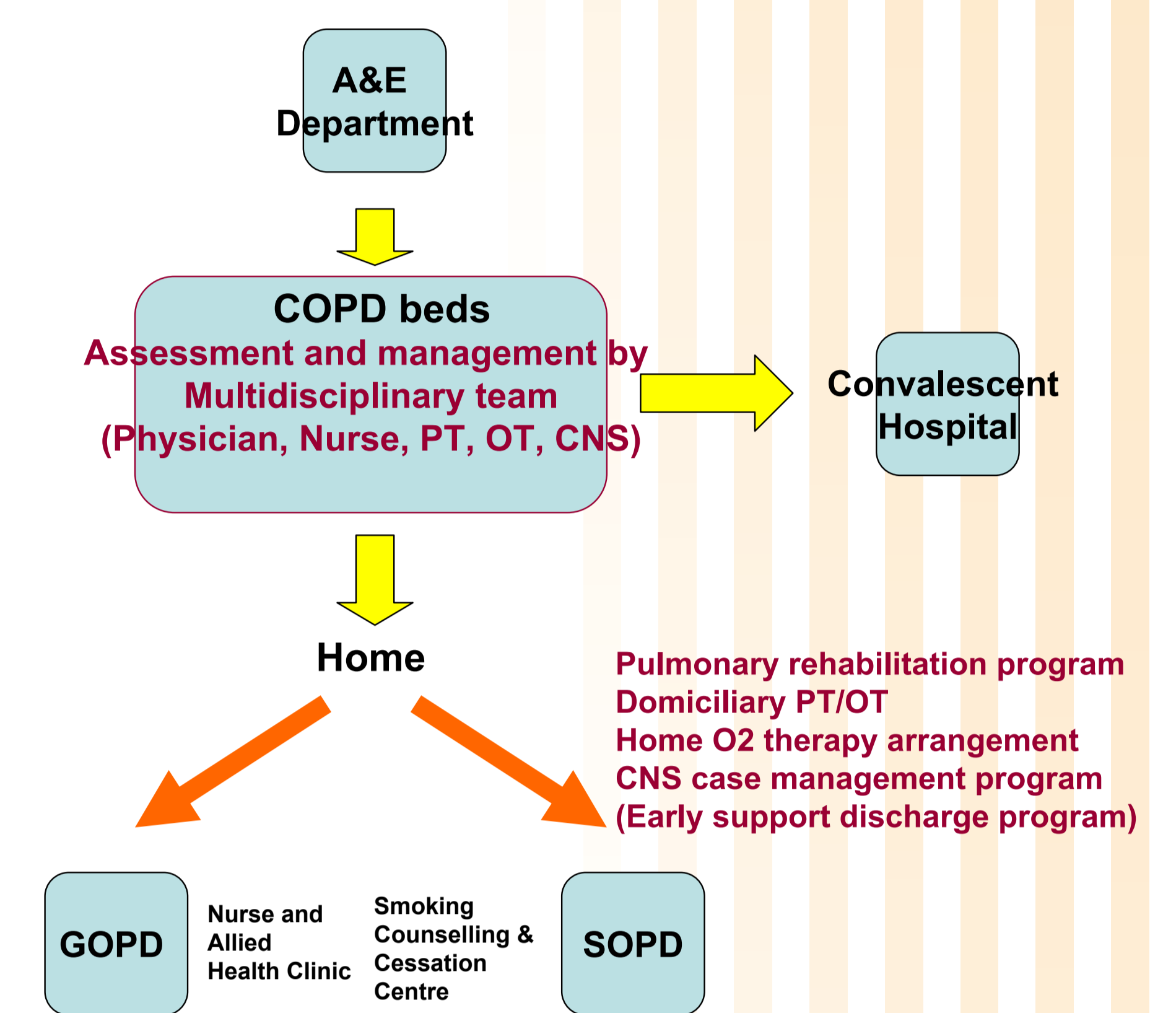


Figure 1 MES COPD Program

### RESULTS

Direct A&E admission was started since July 2009 and MES program was implemented since October 2009. 146 patients were admitted between October 2009 and January 2010 (Table 1).

	Jul 09	Aug 09	Sep 09	Oct 09	Nov 09	Dec 09	Jan 10
No of patients	21	23	30	43	29	43	31
Total bed days	128	150	183	248	164	243	141
ALOS (days)	6.095	6.522	6.1	5.767	5.655	5.651	4.548

Table 1

87.7% was male and the mean age was 76.7 (range 46-94). 17.8% patients had long term oxygen therapy and 2.7% had home non-invasive positive pressure ventilation before admission. Many had multiple co-morbidities, including hypertension (33.6%), ischemic heart disease (21.9%), arrhythmia (15.1%), old cerebral vascular accidents (12.3%), diabetes mellitus (11.6%), bronchogenic carcinoma (2.7%), other malignancies (8.9%), bronchiectasis (6.8%), dementia (5.5%), osteoporosis or collapse spine (4.1%), and cataract (3.4%) (Fig.2).

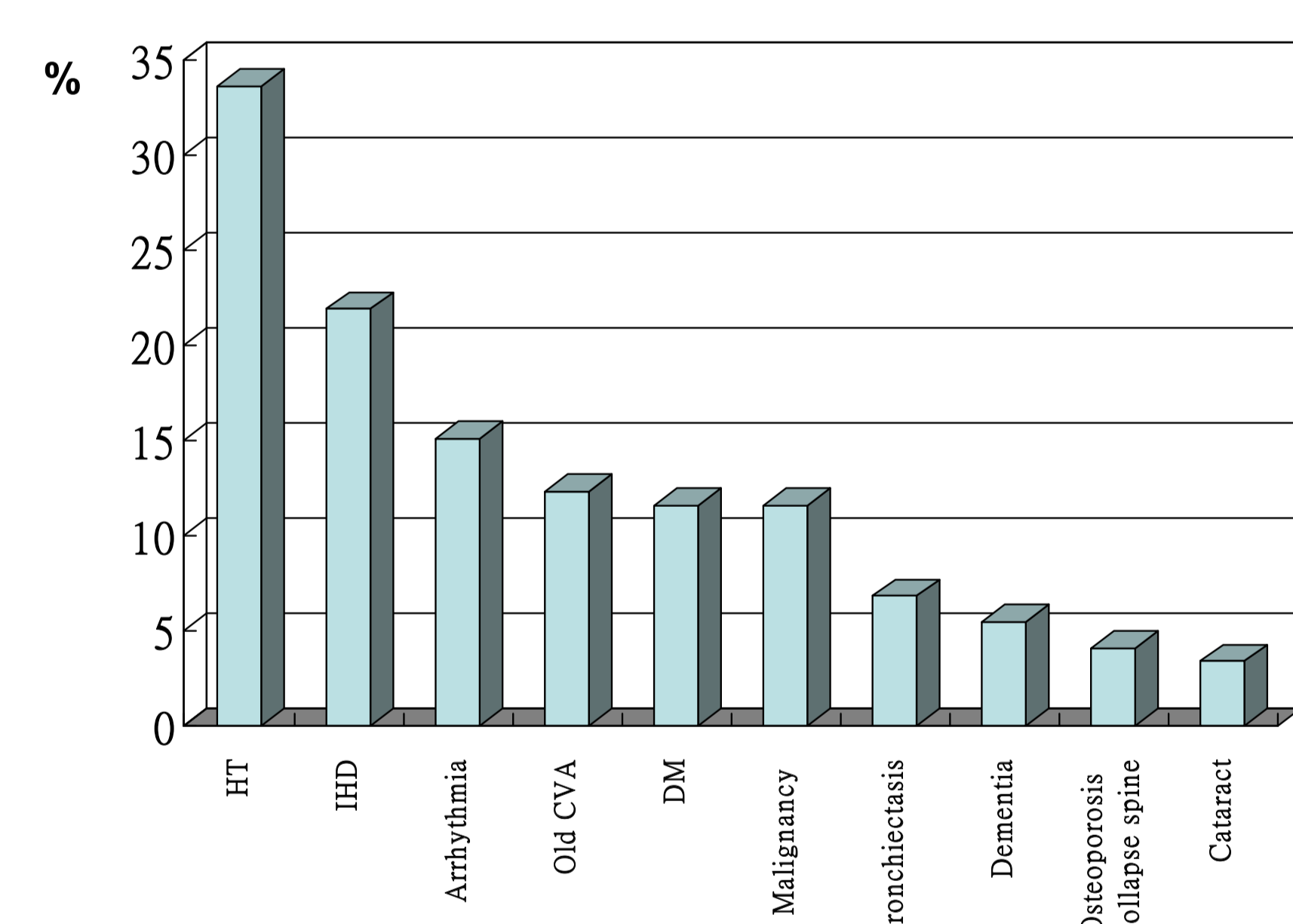


Figure 2 Co-morbidities of patients admitted from October 2009 to Jan 2010

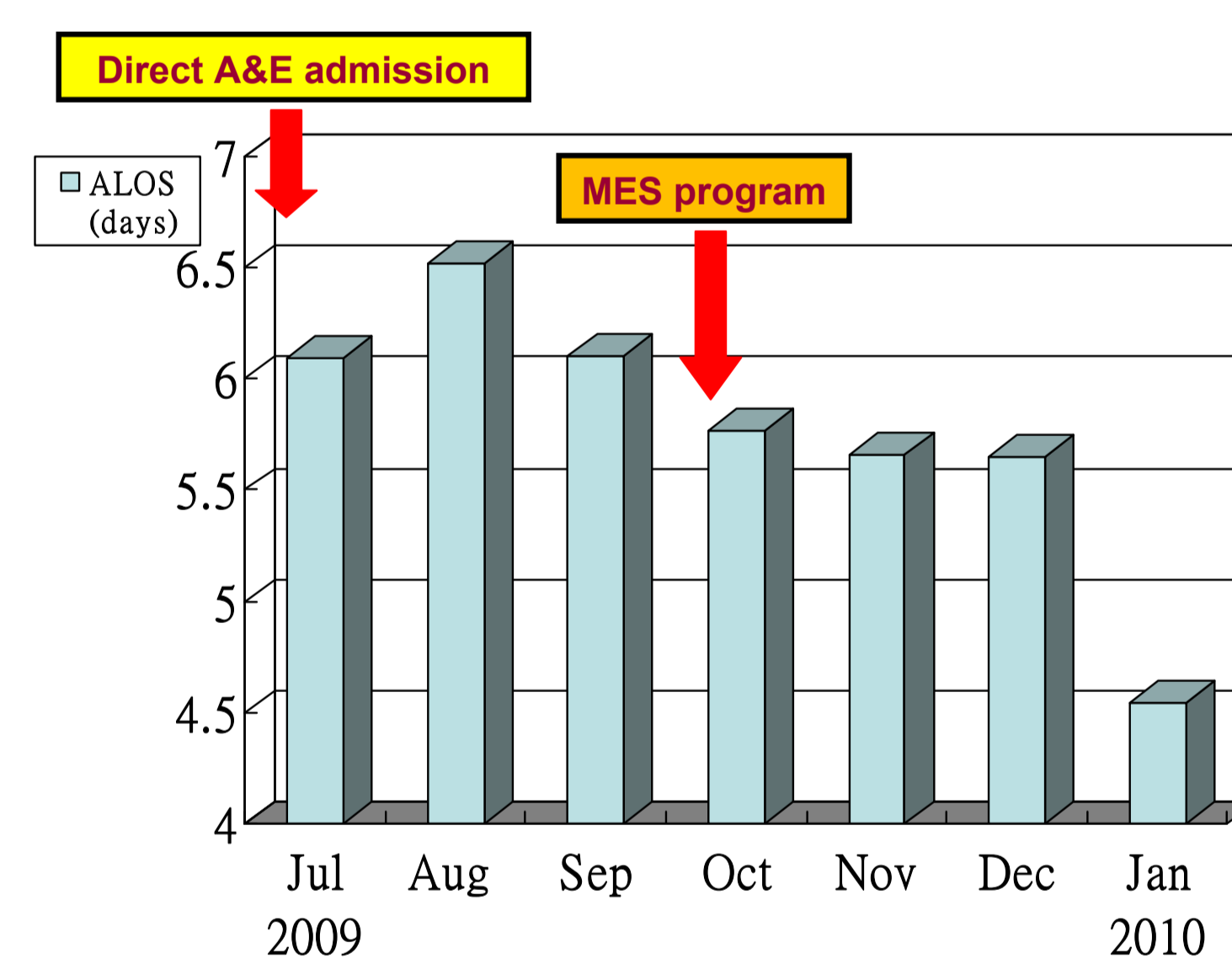


Figure 3 Average length of stay of patients admitted into COPD beds

The ALOS was 5.45 days (Fig.3). 13 % required noninvasive ventilation during hospitalization. 27.4% were transferred to HHH for convalescent or pulmonary rehabilitation. 12 patients had attended outpatient PRP program in TKOH and 10 patients had been followed up by CNS under the case management program. The unplanned readmission rate (< 28 days) for patients admitted between October and December 2009 was 26.1%.

### CONCLUSION

Comparing to 2008, the ALOS was reduced by 16.7%. The program will be reviewed again one year after implementation.

