

The role of clinical pharmacist in the clinical pathway of acute exacerbations of chronic obstructive pulmonary disease (AECOPD)

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Abstract

Background: Clinical pharmacists play a significant role in clinical practice, but their work in the clinical pathway (CP) of acute exacerbations of chronic obstructive pulmonary disease (AECOPD) remains undefined. Objective: To study the role of clinical pharmacists in the CP of AECOPD. Methods: This prospective study included patients who met the discharge criteria during hospitalization at the department of respiratory medicine of the Second Affiliated Hospital of Fujian Medical University from March to December 2017 (no pharmacists involved) and from March 2018 to January 2019 (pharmacists involved). The Adverse Drug Reaction (ADR) reporting rate, antimicrobial use intensity, the per capita cost of pharmaceutical services, and the benefit-cost ratio (B/C) were analyzed. Results: Eighty participants were enrolled during the traditional period and 85 during the clinical pharmacist period. The average hospital stays (9.2 ± 0.4 vs. 10.7 ± 0.6 days, $P=0.032$), the total cost of treatment ($14,058 \pm 826$ vs. $18,765 \pm 1434$ yuan, $P=0.004$), the total cost of drugs (5717 ± 449 vs. 8002 ± 755 yuan, $P=0.004$), and cost of antimicrobial drugs (3639 ± 379 vs. 5636 ± 641 yuan, $P=0.007$) were all lower in the clinical pharmacist group than in the traditional group. The B/C was 10.38 and 5.05 in the intervention and traditional groups, respectively. The clinical pharmacists' participation was independently associated with the total hospitalization expenses ($\beta=-0.201$, 95% confidence interval: $-0.390-0.055$, $P=0.010$). Conclusion: The participation of the clinical pharmacist in the implementation of an AECOPD CP significantly reduces patients' hospitalization days, healthcare expenses, and antibiotic use and improves the B/C of AECOPD management. The clinical pharmacists' participation was independently associated with the total hospitalization expenses.

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