

Additional file 2. Transitional care service protocol

- Supplementray Description of the Transitional care protocol

Table S1. Summary of transitional care intervention components

	Study period					
	Enrollment (t ₁)	Post-allocation			Follow-up	
		In the hospital	Within 48 hours before discharge	Within 48 hours of discharge	1m (t ₂)	3m (t ₃)
		Enrollment and assignment				
Informed consent	X					
Randomize participants	X					
Baseline data collection	X					
Transitional care group (TCG)						
Education		X	X	X	X	X
Community connection		X				
Home visit				X	X	
Telephone consultation					X X X X	
Usual care group (UCG)						
Education brochure provided	X				X	X
Clinical data collection						
mMRC, CAT, TAI, hospitalization, emergency room visits, exacerbation history, and patients' experience	X				X	X

* Table S1 is adapted from Jo et al. [17], with permission.

1. During TCG hospitalization

The coordinators conducted a baseline survey and interview to assess clinical and psychosocial needs, based on which individualized discharge plans were developed and patient education delivered. Educational materials, adapted from the Living Well with COPD (Montreal Chest Institute), covered disease characteristics, symptoms, exacerbation triggers, inhaler techniques, breathing strategies, and daily self-monitoring. Two face-to-face educational sessions using printed booklets and videos were delivered, and social workers were consulted for linkage to community services, when required.

2. Post-TCG discharge

The patients received two home visits: one within 48 hours and another at 1 month post-TCG discharge. Coordinators reviewed the discharge plan, monitored home environments, reinforced inhaler and breathing practices, and helped establish routines to maintain physical activity. Weekly telephonic follow-ups (four in total) assessed condition and adherence using structured checklists, with triage decisions based on responses. Follow-up data were collected, and intervention completed at the 3-month final visit (home or clinic).

3. UCG procedure

Participants in the UCG received standard inpatient care and discharge instructions, including brief medication education and outpatient scheduling, without structured education or post-discharge support. Progress reviews were made during weekly meetings between coordinators and the study team; meanwhile, medical issues arising during care delivery were addressed during monthly multidisciplinary meetings with pulmonologists and family physicians.

Table S2. Summary of telephone consultation and monitoring checklist

Subject name			Age	Sex
Date	____ Year __ Month ____ Day		Examiner	
F/U implementation	☐ Implemented ☐ Not implemented	Contact Person	☐ Patient ☐ Caregiver (cohabiting) ☐ Caregiver (non-cohabiting) ☐ Others ()	
Phone retry	1 st () 2 nd () 3 rd ()		Reason for non-implementation	
Category				
Health status check	How is your condition today compared to your usual health status?		☐ Same as usual ☐ Worse than usual	
Same as usual	1. Inhaler use		☐ Yes	☐ No
	2. Application of breathing techniques in daily life		☐ Yes	☐ No
	3. Diet		☐ Yes	☐ No
	4. Physical activity		☐ Yes	☐ No
	5. Smoking status		☐ Yes	☐ No
	6. Sleep		☐ Yes	☐ No
	7. Diary recording		☐ Yes	☐ No
Worse than usual	Patient status	1. Is breathing more difficult?	☐ Yes	☐ No
		2. Are you coughing more than usual?	☐ Yes	☐ No
		3. Has your sputum color become darker than usual?	☐ Yes	☐ No

		4. Do you feel throat swelling and heat sensation?	☐ Yes	☐ No
	Self-management	5. Did you perform pursed-lip breathing?	☐ Yes	☐ No
		6. Did you perform diaphragmatic breathing?	☐ Yes	☐ No
		7. Are you having digestive problems?	☐ Yes	☐ No
		8. Are you still smoking?	☐ Yes	☐ No
		9. Has your depressed mood increased?	☐ Yes	☐ No
Standard guidelines	◎ Participant same as usual: Check and finish ◎ Participant worse than usual ✓ Participant status: If 2 or more items among 1-4 apply → Recommend outpatient visit (provide appointment support with patient consent) ✓ Self-management: provide self-management education for each item → Recheck management plan and finish ✓ Guidance on inhaler use (method), actions during dyspnea, respiratory management techniques, healthy living, stress and anxiety management, smoking cessation (clinic)			

Action taken	
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