

A development study of pulmonary rehabilitation for patients with chronic lung disease in Uganda.

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Introduction: COPD and post-TB lung disorder (PTBLD) are growing problems in Africa. Drug treatments are seldom available or affordable. Patients suffer stigma and social isolation. Many patients are young and economically important. Pulmonary rehabilitation (PR) offers a sustainable, scalable treatment option but has not been tested in Africa for PTBLD or COPD.



Aim: To investigate the acceptability of pulmonary rehabilitation (PR) in Kampala, for patients with Chronic Lung Disease including PTBLD.

Methods: Programme: twice weekly for 6 weeks
Exercise included resistance, endurance and flexibility as per international guidelines.
Education included COPD causes in Africa- smoking, biomass smoke, respiratory infections, HIV and nutrition.

- Outcome measures –**
- CCQ,
 - PHQ-9
 - Karnofsky scale,
 - Symptom questionnaire
 - Incremental shuttle walk test
 - Sit to Stand test
 - Biometrics



Results: Recruitment & retention

	PTBLD	COPD	Total
Screened	113	80	193
Assessed	56	15	2
Suitable	36	10	46
Started Rehab	34	10	44
Finished Rehab	29	10	39



Outcomes for 39 patients completing data collection (mean (95% CI))

Outcome measure	Baseline	End of PR	6 weeks after end of PR
CCQ total score	1.8 (1.5, 2.0)	1.0 (0.8, 1.2)	0.8 (0.7, 1.0)
PHQ-9 total score	3.0 (1.5, 4.5)	0 (0, 0)	0.3 (0, 0.7)
Karnofsky scale	75.4 (73.6, 77.2)	89 (87.4, 90.6)	89.7 (87.6, 91.9)
ISWT (meters)	299 (268, 329)	376.7 (340, 414)	373.9 (334, 413)
Sit to Stand time (seconds)	10.5 (9.5, 11.5)	8.0 (7.3, 8.8)	7.4 (6.8, 7.9)
BMI	21.9 (20.0, 23.9)	22.7 (20.6, 24.7)	22.9 (20.8, 25.0)

PR was very well received. Some patients reported life transforming improvements, especially in mood, fitness and social function.

Amongst PTBLD patients, 45% had chest pain prior to PR but only 24% 6 weeks after, and for haemoptysis 17% and 7% respectively.

Conclusions: PR offers a new option for treatment for a neglected group of patients, who saw major improvements in their quality of life and exercise capacity. Unexpected reductions in chest pains and haemoptysis were noted in post TB patients.

Future research: 3 RCTs are planned looking at PR in

1. post TB lung disorder
2. post-discharge after acute exacerbations
3. Stable COPD

Implementation studies in Zambia, Kenya & Tanzania will follow.

For further info see eposter PA3964; watch online video; <https://vimeo.com/163691621>



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