Health Services Research and Pharmacy Practice Conference 2023

Abstract Template

J.S. Wells[1], S.Mahendran[2], K. Dolgin[3] and R. Kayyali[1]

[1]Department of Pharmacy, Kingston University, Kingston Upon Thames, United Kingdom

[2]Respiratory Medicine, Kingston Hospital NHS Foundation Trust, Kingston Upon Thames, United Kingdom

[3]Behavioural Science Department, Observia, Paris, France

Abstract Title: A cross-sectional study to evaluate the validity of a novel patient-reported outcome measure of medication adherence in Chronic Obstructive Pulmonary Disease

Introduction: Chronic Obstructive Pulmonary Disease (COPD) is a respiratory condition characterised by a progressive and irreversible decline in lung function. COPD prevalence increased by 44.2% between 1990 and 2015, resulting in 3.2 million deaths globally in 2015.(1) Inhalers are an essential treatment for people living with COPD. However, poor adherence to inhaled medicines is associated with worsening symptom severity, increased hospitalisation, comorbidity, and mortality.(2) Patient Reported Outcome Measures (PROMs) have been designed to examine the factors that contribute to poor medication adherence (MA). To date, none provide a holistic assessment that could be used to design tailored MA interventions. This study sought to address this by evaluating a novel PROM that holistically assesses four key factors of MA referred to as Social, Psychological, Usage, and Rationale, in short, SPUR.

Aim: To explore the validity of the SPUR model as a holistic PROM of MA in patients living with COPD

Methods: This cross-sectional study surveyed adults living with COPD from a large London NHS Trust between January and December 2021. Participants were eligible if they had ≥1 inhaler prescribed for a minimum of 6 months prior to the study and were able to read and write in English. Participants who were too clinically unwell to independently complete the survey were excluded, which often included those with a Covid-19 diagnoses. Convenience sampling was used to recruit participants from in-patient wards and the acute admissions unit prior to administration of face-to-face surveys. Survey questions related to socio-clinical data, the SPUR tool, and a previously validated PROM known as the Inhaler Adherence Scale (IAS) that was included as a comparator. The Medication Possession Ratio (MPR), a measure of a patient's pill count in a given time period, was used as an objective comparator of MA. MPR, IAS, and SPUR scores were compared using Spearman's rank correlation coefficient (p). Symptom severity was examined using the COPD Assessment Test (CAT), with a Chi-square analysis (χ^2) conducted to explore the relationship between the CAT and SPUR.

Results: From 123 patients approached for this study, 100 participated providing a response rate of 81.3%. The modal age range was 70-79 years. Participants were predominantly white (90%), educated to GCSE level (51%), and identified as female (52%). Over two thirds (67%) were ex-smokers. SPUR was significantly (p<0.01) and positively correlated with IAS (p=0.65) and MPR (p=0.30), demonstrating that SPUR is a valid measure of MA. Chi-Square analysis identified a significant (p<0.01) relationship between CAT and SPUR scores (χ^2

=8.570); hence SPUR could reliably identify patients with poorer adherence, which was associated with worsening symptom severity.

Conclusion: A study strength includes the implementation of an objective measure (MPR) and PROM (IAS) as part of validating SPUR. However, the results should be treated cautiously given the small sample size, which was limited due to Covid-19. This study provides early evidence of SPUR as a reliable holistic measure of MA with significant associations to COPD symptom severity, which could be applied in clinical practice to prospectively address patient outcomes linked to poor MA.

References:

(1) Burney P, Jarvis D, Perez-Padilla R. The global burden of chronic respiratory disease in adults. The International Journal of Tuberculosis and Lung Disease. 2015 Jan 1;19(1):10-20.
(2) Humenberger M, Horner A, Labek A, Kaiser B, Frechinger R, Brock C, Lichtenberger P, Lamprecht B. Adherence to inhaled therapy and its impact on chronic obstructive pulmonary disease (COPD). BMC pulmonary medicine. 2018 Dec;18(1):1-6.