employed by Simplivia Healthcare, Ltd., the manufacturer of the Tevadaptor CSTD.

6ER-013 ENHANCING PATIENT-CENTREED CARE THROUGH PREDICTIVE MODELLING OF PATIENT-REPORTED OUTCOMES IN HOSPITAL PHARMACY SETTING

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10.1136/ejhpharm-2024-eahp.475

Background and Importance Patient-reported Outcomes (PROs) have established themselves as key tools for measuring the real impact of medical interventions from the patient's perspective. However, to maximise their usefulness, it is crucial to anticipate and understand these outcomes. Machine learning is emerging as a powerful solution to predict PROs and optimise healthcare.

Aim and Objectives This study presents a novel predictive model based on the Random Forest algorithm for the prediction of PRO scores from sociodemographic variables and medication registries obtained in hospital pharmacy practice.

Material and Methods Data from 400 Spanish chronic patients (including psoriasis, asthma, HIV and migraine among others) from the NAVETA telemedicine program were analysed. Sociodemographic variables were included as well as the drugs dispensed by hospital pharmacies. Using these variables, a Random Forest model predicted the PRO values. Predictions were evaluated using an ad hoc metric based on the mean squared error (MSE). The maximum allowable error was taken as 25% of the total response range of each PRO (e.g. 0–100). Predictions were then rated as 'excellent' if the MSE was within 25% of this reference value, 'good' within 50%, 'moderate' within 75% and 'out of range' in case of exceeding 76% of the reference value. This method provides a weighted assessment of the quality of the predictions made by our model.

Results The Random Forest model demonstrated outstanding predictive ability with an R2 of 0.93, effectively capturing the variability of the PRO measurements. The MSE was 0.07, indicating good accuracy. Based on the prediction quality rating, our system ranked 40% of the questionnaires as 'excellent' or 'good', including the WRFQ (Work Role Functioning Questionnaire), HIV SI (HIV Symptom Index), MOS30 HIV (Medical Outcomes Study-short form 30 items) and DLQI (Dermatology Life Quality Index), suggesting a good performance of the model in predicting PROs scores.

Conclusion and Relevance The results indicate that Hospital Pharmacy records obtained from the NAVETA cohort significantly predict patient health outcomes. The use of this predictive model in telemedicine systems such as NAVETA would improve patient care by helping to quickly identify needs and tailor treatments, leading to accurate, patient-centred care in the context of hospital pharmacy.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest.

6ER-014 ASSESSING ADHERENCE TO ESC/ERS GUIDELINES FOR VASOREACTIVITY TESTING AND PRESCRIPTION OF CALCIUM CHANNEL BLOCKERS IN PULMONARY HYPERTENSION PATIENTS

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10.1136/ejhpharm-2024-eahp.476

Background and Importance The ESC/ERS Guidelines for treating pulmonary hypertension (PH) recommend vasoreactivity testing (VT) during right heart catheterisation for patients with idiopathic/hereditable/drug-associated PH (IPH/HPH/DAPH) and subsequent treatment with calcium channel blockers in those with a positive result.

Aim and Objectives To evaluate the consistency in conducting VT in patients with IPH/HPH/DAPH and to ascertain whether positive test outcomes lead to the initiation of calcium channel blocker therapy.

Material and Methods We carried a multicentre cross-sectional observational study in three hospitals including adults treated between 2006 and 2023. We reviewed clinical charts for all patients with a PH type-I diagnosis to identify IPH/HPH/DAPH patients. For these patients we reviewed catheterisation data to find VT; If a positive result was found, prescription ambulatory data was reviewed in search for prescriptions of calcium channel blockers.

We estimated the number of patients who could potentially benefit from calcium channel blockers, based on the assumption that 10% of patients will exhibit a positive VT test.

Results The study encompassed 176 Type-I PH patients across three tertiary hospitals, including 125 women (71.0%) with a median age of 58 (IQR: 24). Underlying aetiologies were congenital heart disease 38.6% (68), Connective Tissue Disease 27.8% (49), Portopulmonary Hypertension 6.8% (12), HIV 3.4% (6), IPH 15.3% (27), and 1.1% DAPH (2).

VT was reviewed for a subset of 29 patients (27 IPH and two DAPH). Of these, 12 underwent VT with five returning positive results and consequently receiving prescriptions for calcium channel blockers. For the remaining 17 patients, four had missing catheterisation data, and 13 underwent catheterisation but were not tested for vasoreactivity. If the aforementioned rate remains consistent, an estimated 1–2 patients could benefit from calcium channel blockers.

Conclusion and Relevance VT was not consistently carried out in IPH/HPH/ADPH patients; a subset of patients could benefit from high dose calcium channel blockers. For those patients with a positive result, calcium channel blockers were adequately prescribed.

Hospital pharmacists could play a role in reviewing new prescriptions of PH-specific therapy in order to identify patients not tested for vasoreactivity.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest.