A consecutive sample of 428 patients after orthopaedic trauma for the follow-up after three months and one year were included. Work status was assessed three months and one year after discharge of the rehabilitation. To evaluate the performance of the prediction tool, we used calibration (agreement between predicted probabilities and observed frequencies) and discrimination. First, we fitted the predictive model in the new sample. Second, we calculated the probabilities for nRTW based on the coefficients from the two-year prediction and evaluated performance. Third, a re-calibration was necessary for the adjustment of different probabilities of nRTW at three months and one year, thus we updated the intercepts for the prediction models for:

– three months;
– one year and re-evaluated performance.

Results Sociodemographic characteristics were similar in all samples (mean age 43; female 15%). The proportion of nRTW at two years was 50.36%. The proportion of nRTW in the sample with the one-year follow-up was 53.4% and for the sample with the three-months follow-up was 63.8%. Performance of the original WORRK for the one year and three months prediction: the area under the curve (AUC) was 0.73 for both the outcomes at one year and three months. For the calibration test, the original WORRK showed statistical significant miscalibration for the one-year and the three-year prediction ($P < 0.001$). After the updating of the intercept, the calibration was improved and did not show significant miscalibration ($P = 0.458$ and 0.341). The AUC stayed at 0.73.

Discussion/conclusion The WORRK model was successfully adapted for the prediction of nRTW at three months and one year and is now available for the use in clinical practice.

CO44-007-e Updating the Wallis Occupational Rehabilitation Risk (WORRK) model: Predictive values at 3 months and one year

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Objective Recently, we developed and validated a tool for the prediction of non-return to work (nRTW) at two years after an inpatient rehabilitation after orthopaedic trauma (the WORRK model) [1]. In this study, we aimed to update the prediction formula for nRTW at three months and one year.

Patients and method A consecutive sample of 428 patients after orthopaedic trauma for the follow-up after 3 months and 431 patients for the outcome at one year were included. Work status was assessed three months and one year after discharge of the rehabilitation. To evaluate the performance of the prediction tool, we used calibration (agreement between predicted probabilities and observed frequencies) and discrimination. First, we fitted the predictive model in the new sample. Second, we calculated the probabilities for nRTW based on the coefficients from the two-year prediction and evaluated performance. Third, a re-calibration was necessary for the adjustment of different probabilities of nRTW at three months and one year, thus we updated the intercepts for the prediction models for:

– three months;
– one year and re-evaluated performance.

Results Sociodemographic characteristics were similar in all samples (mean age 43; female 15%). The proportion of nRTW at two years was 50.36%. The proportion of nRTW in the sample with the one-year follow-up was 53.4% and for the sample with the three-months follow-up was 63.8%. Performance of the original WORRK for the one year and three months prediction: the area under the curve (AUC) was 0.73 for both the outcomes at one year and three months. For the calibration test, the original WORRK showed statistical significant miscalibration for the one-year and the three-year prediction ($P < 0.001$). After the updating of the intercept, the calibration was improved and did not show significant miscalibration ($P = 0.458$ and 0.341). The AUC stayed at 0.73.

Discussion/conclusion The WORRK model was successfully adapted for the prediction of nRTW at three months and one year and is now available for the use in clinical practice.
Keywords   Return to work; Activity and participation; Musculoskeletal disorders

Disclosure of interest  The authors have not supplied their declaration of conflict of interest.

Reference


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