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Validity Testing of an Abbreviated Algorithm Used to Calculate Permanent Whole Person Impairment (WPI) Ratings for Work-Related Injuries JERRY ARTZ, ZACHARY REED, Hamline University, Saint Paul MN, JOHN ALCHEMY, Alchemy Logic Systems, Santa Rosa CA — The calculations of permanent Whole Person Impairment (WPI) Ratings for patients who have sustained injuries or illness are crucial for determining benefits and liability. WPI Ratings vary from 0% (normal) to 100% (totally nonfunctional). WPI Ratings are difficult to calculate and require specialized knowledge and an exhaustively detailed patient medical exam. This research investigates the validity of replacing this time-consuming, costly medical exam (the classical method) with an algorithm that requires relatively fewer data points during the exam (the faster method). We found that, for a large sample of patients, the WPI Ratings generated by the faster method were surprisingly similar to the slower classical method. The average of the difference between the two calculated WPI Ratings was 0.1%, and the standard deviation of the difference was less than 3%. This is far less than that allowed by administrative rulesets used to adjudicate injury claims. These results may have major consequences for the calculation of WPI Ratings, medical providers, insurance carriers, patients, and other stakeholders in distributing and receiving injury benefits. This work results from an interdisciplinary medical and physics collaboration.

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