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Clinical Telemedical Measurement of Pinch Strength Thresholds for Work-Related Injury Impairment Rating JERRY ARTZ, Hamline University, GRACE ALCHEMY, Stanford University, JOHN ALCHEMY, Rate-Fast Corporation, SARAH ALCHEMY, University of Puget Sound, BRUCE BOLON, Hamline University, CHRIS YOUNG, Alverno College — Neuromuscular hand strength evaluation is challenging with the growing importance of telemedicine. Objective documentation of the hand function requires a simple procedure. This study tests a method of measuring finger pinch-strength without a clinical visit to determine if a patient with a work-related injury meets criteria to be eligible for medical insurance benefits. The procedure involves pinching a piece of paper that is folded multiple times and wrapped around a bucket handle. Diminished pinch strength will not support a specified weight of water in the bucket without slipping. An individual who meets criteria using this method may qualify for compensation. Volunteers in this pilot study provide calibration for this procedure, each doing 50 repeated trials for each hand. The weight at which the apparatus began to slip was measured. The coefficient of friction of skin on paper was calculated based on the weight of the apparatus and compared with a standard measurement using a clinical pinch dynamometer. These measurements and the calculated coefficient are presented in this paper.

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