However, age along with religion and education became the main predictors for the emotional models: social relationships and psychological aspects. Overall, age was the most important sociodemographic variable except in the Pain/Physical Discomfort domain where gender was most important. In this case, men had significantly lower scores than women. CONCLUSIONS: Sociodemographics are more strongly related to scores in the psychosocial domains of health related quality of life with age being the greatest single factor. Older individuals may be more likely to attribute health to aspects unrelated to physical well being such as their outlook on life and social relationships.

CARDIOVASCULAR DISEASES/DISORDERS—Clinical Outcomes/Healthcare Policy

VALIDATION OF EQUATIONS USED TO PREDICT WARFARIN DOSING DECISIONS
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OBJECTIVES: To assess whether fingerstick International Normalized Ratio (INR) devices lead to the same warfarin dosing decisions as a standard method, investigators commonly rely on mathematical formulas to estimate clinical decision-making. Our investigation assessed the degree to which these formulas predict actual clinical warfarin dosing decisions as a standard method, investigated formulas commonly rely on mathematical formulas to estimate clinical decision-making. Our investigation assessed the degree to which these formulas predict actual clinical (i.e. ‘dosing’) agreement of INR pairs. METHODS: Two hundred two patients provided 3 INR measurements for analysis: two from different fingerstick devices and one via reference laboratory. Actual dosing decisions (up, down, no change) based on these INRs were made by blinded clinicians. Actual dosing agreement based upon the fingerstick devices and the laboratory was used as a standard to assess agreement between published, but unvalidated, formulas. Bayesian hierarchical modeling was used to rank the algorithms in order of their ability to predict actual clinical decisions. An enhanced method used bootstrapped smoothing splines to investigate agreement as a function of POCT INR value. RESULTS: A total of 14 formulas have been used to estimate warfarin dosing decisions in 11 published investigations. The formulas misclassified dosing agreement for between 19% and 38% of paired INR values (mean: 27%). Formulas generally misclassified fewer pairs for the device with less bias (range: 16%–30%) than more bias (range 23%–44%). The method that offered the best proxy (posterior probability of being the best method = 70%) still misclassified 19% of INR pairs. The smoothing spline analysis showed that the misclassification of pairs by these formulas varies inconsistently throughout the INR scale. We developed an improved formula that is likely too complex clinical use. CONCLUSIONS: The unvalidated formulas routinely used to predict warfarin dosing decision agreement misclassify a significant proportion of paired INR values. More accurate formulas are too complex to be practical. Therefore, dosing decisions should be measured directly as opposed to predicted with a formula.