

# Clinical decision rules accurately ID rhinosinusitis

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(HealthDay)—Clinical decision rules can be used to diagnose acute

rhinosinusitis and acute bacterial rhinosinusitis, according to a study published in the July/August issue of the *Annals of Family Medicine*.

Mark H. Ebell, M.D., from the University of Georgia in Athens, and Jens Georg Hansen, M.D., from Aarhus University Hospital in Denmark, developed clinical decision rules for the diagnosis of acute rhinosinusitis and acute bacterial rhinosinusitis. They prospectively recorded signs, symptoms, C-reactive protein (CRP), and reference standard tests for 175 Danish patients aged 18 to 65 years seeking care for suspected acute rhinosinusitis. Two clinical decision rules were developed for each reference standard using a point score based on logistic regression model and an algorithm based on a classification and regression tree (CART) model.

The researchers found that there were between five and six predictors for each point score, and the area under the receiver operating characteristic curve (AUROCC) was between 0.721 and 0.767. Low-, moderate-, and high-risk groups had a 16, 49, and 73 percent likelihood of acute bacterial rhinosinusitis, respectively, for positive bacterial culture as the reference standard. The AUROCC ranged from 0.783 to 0.827 for CART models. Low-, moderate, and high-risk groups had a likelihood of acute bacterial rhinosinusitis of 6, 31, and 59 percent, respectively, for positive bacterial culture as the reference standard.

"We have developed a series of clinical decision rules integrating signs, symptoms, and CRP to diagnose acute rhinosinusitis and acute bacterial rhinosinusitis with good accuracy," the authors write. "They now require prospective validation and an assessment of their effect on clinical and process outcomes."

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