Clinical pathology selected abstracts

Editor: Deborah Sesok-Pizzini, MD, MBA, professor, Department of Clinical Pathology and Laboratory Medicine, Perelman School of Medicine, University of Pennsylvania, Philadelphia, and chief, Division of Transfusion Medicine, Children's Hospital of Philadelphia.

Evaluating adoption of laboratory practice guidelines

July 2020—The College of American Pathologists launched the Pathology and Laboratory Quality Center for Evidence-Based Guidelines in 2009 to develop and promote laboratory practice guidelines (LPGs) using the National Academy of Medicine's (NAM) standards for developing trustworthy guidelines. The center has published 17 evidence-based LPGs, including updated versions, using NAM's criteria. In 2013, the CAP was awarded a five-year cooperative agreement grant from the Centers for Disease Control and Prevention to increase the effectiveness of its LPGs. The intent of the agreement was to assess awareness and adoption of two CAP LPGs: IHC assay validation (IHC VAL) and initial workup of acute leukemia (AL). The authors performed baseline surveys of the LPGs in 2010 and 2015, respectively. A follow-up study consisting of surveys, telephone interviews, and focus group sessions was conducted with labs that perform IHC testing to measure the adoption of guideline recommendations and inform future versions. The CAP has planned a follow-up study for the acute leukemia LPG. The IHC survey analyzed 1,624 survey responses, 40 telephone interviews, and discussions with participants from five focus groups. The response rates for the survey modalities were 46 percent, 13 percent, and three percent, respectively. Most respondents were aware of the LPG and had adopted most or all of its recommendations. Feedback on the IHC survey indicated a need for continued communication, increased specificity, and more prescriptive recommendations when the guideline is updated. The written surveys, available in paper and electronic formats, were identified as the easiest to use and had good response rates and quantitative results that were easy to interpret. Telephone interviews, conducted for the CAP by an outside consultant, proved to be more time-consuming than the written interviews. Based on these findings from the IHC VAL guideline survey, the authors recommended using preselected laboratories willing to participate in telephone interviews, rather than random sampling, for the AL guideline. The focus group sessions in the IHC VAL guideline survey were the most complicated modality to execute but revealed unexpected findings. For example, the focus group discussions, as well as the follow-up telephone interviews, indicated some confusion between the LPG recommendations and CAP Laboratory Accreditation Program requirements. The authors concluded that the IHC VAL guideline survey helped identify gaps in LPG awareness, adoption, and effectiveness. Identifying these gaps helps improve testing practices in support of better patient care. Of all survey modalities, the written and electronic formats were the most feasible for collecting information and had the highest response rates.

Goldsmith JD, Fitzgibbons PL, Fatheree LA, et al. Evaluating the adoption of laboratory practice guidelines. *Arch Pathol Lab Med.* 2020;144(1):83–89.

Correspondence: Dr. Jeffrey Goldsmith at jeffrey.goldsmith@childrens.harvard.edu

Simple lab test utilization interventions to reduce inappropriate specialty coagulation testing

Coagulation factor assays are commonly ordered laboratory tests for assessing coagulopathy. The more common of the prolonged screening assays, prothrombin time (PT) and activated partial thromboplastin time (aPTT), are used to predict bleeding disorders or increased risk for bleeding. These and other factor activity assays are available at most specialized coagulation reference laboratories. The factors are named with the Roman numerals I, II, V, VII, VIII, IX, X, XI, XII, and XIII. This may cause confusion among clinicians using the electronic ordering systems and result in inappropriate test orders, which, in turn, may delay results and lead to unnecessary test ordering. The authors conducted a study to assess utilization before and after interventions for the specialty coagulation assays factor V and factor X. They implemented the simple but important interventions of changing the test names from factor assay to factor activity and having pathology residents review all factor V and X

requests. They performed a retrospective review of factor V and X activity orders for one year before and one year after interventions. Prior to their interventions, the authors had noticed several inappropriate orders due to clinicians' confusion regarding ordering factor V and X activities versus factor V Leiden mutational analysis and the anti-Xa assay, respectively. The authors found that after the interventions, factor V and X activity orders decreased by approximately 40 percent. This resulted in test volume decreases for factor V (53.8 percent) and factor X (47.8 percent), which produced savings of $2,493.05 and $1,867.80 per year, respectively. They also noted that factor V activity orders from outpatient clinics decreased by 21.6 percent. The authors concluded from their study that focused and systemic interventions, such as name changes in the electronic ordering system and pathology utilization review, can reduce inappropriate test ordering and unnecessary laboratory costs for factor V and X activity.

Huang H, Cunningham AM, Harrington AM. Simple laboratory test utilization interventions to reduce inappropriate specialty coagulation testing. *Am J Clin Pathol.* 2020;153(2):181–189.

Correspondence: Dr. Alexandra M. Harrington at aharring@mcw.edu