360-Degree Review of Clinical Competencies: Identification of Resident Outliers

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Introduction: The ACGME suggests a variety of methods to evaluate the acquisition of the six clinical competencies by resident physicians. One suggested tool is the 360-degree review in which the resident is evaluated by different groups with whom they interact. How to interpret and utilize the data generated by this process is not yet clear. This report suggests a method to generate and interpret this data.

Methods: A series of ten questions relating to the clinical competencies (Figure 1) were given to five groups that interact with the residents: the residents themselves (PEER), attending anesthesiologists (ATTEND), operating room nurses and technicians (OR), post-anesthesia care unit nurses (PACU) and ambulatory surgery unit nurses (ASU). Each question was rated on a scale from 1 (Never) to 5 (Always). An aggregate score for the ten questions was generated for each resident in all five groups. A total score (TOTAL) was generated for each resident by summing the five aggregate scores. The data was analyzed by determining a) the correlation between groups and b) the correlation between each group and the TOTAL, by comparing rank order with Spearman rank order correlation and by comparing aggregate data with the Pearson product moment. The 95% confidence interval for the TOTAL score was determined and residents who fell above and below this threshold were identified. A p value of <0.05 was considered significant.

Results: When the 15 residents were considered in rank order (not shown) or aggregate data (Table 1), there was a strong correlation between ATTEND and PEER and between OR and ASU. PACU correlated with no other group in rank order and weakly with ATTEND, PEER and ASU in Pearson product moment. The correlation between the score from each group of evaluators and the TOTAL score was highly significant utilizing both types of analysis. When each resident's TOTAL score was compared to the mean ± 95% confidence interval (Figure 2), one resident (number 1) was identified as superior and two (number 14 and 15) as inferior. Two additional residents (numbers 2 and 3) scored slightly above the upper threshold.

Conclusions: None of the variety of assessment tools offered by the ACGME to evaluate the six competencies has been validated. Our data, from a 360-degree review, suggests that those who interact with our residents evaluate them very differently, both in terms of rank order and absolute score. While there is large variation between groups, the TOTAL data correlated well with each group of evaluators, both in terms of rank order and aggregate score. It seems reasonable to generate this type of summated data from different groups to provide an overall evaluation. By this method we have identified one resident who is clearly superior and two who are inferior to our average resident. Future evaluation may determine if feedback given to the residents who have been identified as deficient will lead to altered behavior and improved scores.