Medical certification and maintenance of certification (MOC) examinations measure the same competencies of different populations. To better understand the similarities and differences of certification and MOC examinations, direct comparisons of certification and MOC examinee and item performance are essential. The purpose of this study was to conduct such comparisons. Specific questions were:

1. Are MOC candidates equally competent as the certification examination candidates in clinical psychiatry and neurology?
2. Are MOC candidates equally competent as the certification examination candidates in the basic concepts of psychiatry and neurology?
3. Do MOC and certification items perform similarly on both examinations?

**Results**

### Table 1. Candidate Performance Comparison on the Common MOC Items

<table>
<thead>
<tr>
<th></th>
<th>Psychiatry</th>
<th>Neurology</th>
</tr>
</thead>
<tbody>
<tr>
<td>N Items</td>
<td>N Candidates</td>
<td>% Correct (Total)</td>
</tr>
<tr>
<td>MOC</td>
<td>37</td>
<td>166-209</td>
</tr>
</tbody>
</table>

**Method**

For both psychiatry and neurology, the ABPN certification and MOC examinations are considered different examinations and are developed by two independent test development processes. In order to compare MOC and certification candidates effectively, a small group of the most recent MOC examination items was given to certification candidates. Similarly, a group of the most recent certification examination items was given to MOC candidates. This design was used for both psychiatry and neurology.

Carefully selected 37 items from the February 2013 psychiatry MOC exam and 39 items from the February 2013 neurology MOC exam were randomly administered to the September 2013 Psychiatry and Neurology Certification Examination candidates respectively as unscored items.

30 basic science items from the September 2013 psychiatry certification exam and 15 basic science items from the September 2013 neurology certification exam were randomly administered to the February 2014 Psychiatry and Neurology MOC Examination candidates respectively as unscored items. Although they were basic science items, they were not fact-recall or strict academic items. Instead, they were application-oriented.

### Analysis

The mean percent correct on the common items was used to compare MOC and certification candidate performance. To test if an individual item performed differently between MOC and certification examinee groups, the following logistic regression was conducted for each item. A binary dichotomous variable for MOC or certification examinees, E2, a variable for “Medical School” (US graduates vs. international medical graduates), was included in the regression as a covariate.

\[
\log \left( \frac{P(Y=1|X)}{1-P(Y=1|X)} \right) = \beta_0 + \beta_1 E_2 + \beta_2 X_2 + \beta_3 X_3
\]

**Conclusion**

This experiment administered maintenance of certification (MOC) items to certification examinees and certification items to MOC examinees. Item performance and examinee performance comparisons suggest that the two examinations should be conceptually considered the same examinations except the width and depth of scientific foundations for certification and MOC examinations need delicate differentiations.

### References