

Section 11. Scoring Procedures

Scale Scores

The MD Mod-HSA reporting scale ranges from 240 to 650. This scale was aligned to the MD HSA scale, which was established in 2003. Scale scores describing both total test and subscore performance on the MD Mod-HSA are maximum likelihood estimates obtained using item-pattern (IP) scoring and the parameters estimated for the items in each operational test form.

Beginning with the May 2009 administration and onward, subscores were calculated using IP scoring instead of raw score to scale score conversion tables. This change was implemented to provide consistency in scoring between total test scores and subscores, and to mitigate possible confusion due to different scoring methods within the MD Mod-HSAs. Total test results in the scale score metric were reported to students. Subscores were not reported to students but were aggregated at the classroom level to provide teachers and administrators with additional information about student performance in each of the subscore categories.

Lowest and Highest Obtainable Test Scores

The maximum likelihood procedure under the 3PL model cannot produce reasonable scale score estimates for students with perfect scores or scores below the level expected by guessing. While maximum likelihood estimates are usually available for students with extreme scores other than zero or perfect, occasionally these estimates have very large conditional standard errors of measurement (CSEMs), and differences between these extreme values have little meaning. Therefore, scores were established for these students based on the procedure used for the MD HSA (refer to Appendix 3.C of the 2004 Technical Report). These values were called the lowest obtainable scale score (LOSS) and the highest obtainable scale score (HOSS). The same LOSS and HOSS values were used for RS–SS tables and the IP scoring. Starting with the summer 2005 administration of the MD HSA, MSDE decided that the LOSS and HOSS values would be 240 and 650, respectively, for all content areas. Since the MD Mod-HSA is on the same scale as the MD HSA, the same LOSS and HOSS values were used.

Cut-Scores

MSDE requested that the MD Mod-HSAs be aligned with the MD HSA scales so that the cut-scores established for the MD HSAs could be applied to the MD Mod-HSAs. The MD HSA cut-scores associated with each performance level in the non-English content areas were established by MSDE in 2003.¹³ The MD HSA English cut-scores were established during a standard setting held in October 2005.

¹³ Technical documentation on the standard-setting method used to establish MD HSA cut-scores is available on the Maryland State Department of Education website at <http://www.marylandpublicschools.org/divisions/planningresultstest/maryland+standard+setting+technical+reports.htm>.

Two cut-scores were established for the Algebra and English tests, enabling students to be classified as Basic, Proficient, or Advanced. Two cut-scores were needed because the results for these tests are used as the high school mathematics and English/language arts components of Maryland’s system of accountability under NCLB.¹⁴ Prior to the 2007–2008 school year, Biology had only one cut-score. In 2007 an advanced cut-score was set for Biology, and the results are now used as components of the MSDE accountability system. There is only one cut-score for the Government test; it is used to classify students as Basic or Proficient.

To verify that the cut-scores established for the MD HSAs were appropriate for the MD Mod-HSAs, a standard setting was conducted in August 2008 using the MD Mod-HSA student results. The standard-setting panels, consisting of Maryland general and special educators, confirmed that the MD HSA cut-scores were appropriate for the MD Mod-HSA.¹⁵

Students eligible to take an MD Mod-HSA and who entered grade 9 in or after the 2005–2006 academic year must pass MD Mod-HSAs or MD HSAs in all four content areas or achieve an overall combined score of 1602 as part of the requirements for graduation. The Proficient cut-scores are used to determine Pass/Fail classifications. The cut-scores by content area are given in Table 11.1.

Table 11.1 MD Mod-HSA Cut-Scores by Content Area

Content Area	Cut-Score	
	Proficient	Advanced
Algebra	412	450
Biology	400	452
English	396	429
Government	394	--

¹⁴ Information regarding the system of accountability is available on the Maryland State Department of Education website at http://www.marylandpublicschools.org/NR/rdonlyres/0146EDA2-5F91-47DD-9A84-16164BDEA25C/18082/Acct_workbook_final_w_table_appendices_r_93008.doc.

¹⁵ Information regarding the standard-setting process for the MD Mod-HSA is available at the MSDE website at http://www.marylandpublicschools.org/NR/rdonlyres/3253C1DD-CA2E-4E64-A066-D6F36EBADF9B/18003/ModHSA_SB_Final.ppt.