

Routine assessment of patient index data (RAPID) scores.

No single measure can serve as a “gold standard” for assessment of patient status in rheumatoid arthritis (RA). Therefore, a pooled index (1), such as the American College of Rheumatology (ACR) Core Data Set (2-4) and disease activity score (DAS) (5;6), and more recently, a simplified disease activity index (SDAI) (7) and clinical disease activity index (CDAI) (7) have been developed. All these indices include a formal joint count of tender and swollen joints performed by a physician/assessor.

The joint count is the most specific measure to assess RA (8), and is regarded by rheumatologists as the most important assessment measure (9). However, while most rheumatologists perform careful qualitative joint examinations at most visits, a formal quantitative joint count is not included at most visits of most patients with RA to rheumatologists (10). Therefore, most care of patients with RA is conducted without quantitative data, other than laboratory tests, which often are not informative, or associated with false positive and false negative results (11).

An index of only the 3 ACR Core Data Set patient reported outcome (PRO) measures - physical function, pain, and global estimate, is available on the health assessment questionnaire (HAQ), and distinguishes active from control treatments at levels similar to the ACR Core Data Set and DAS in clinical trials involving leflunomide (12;13), methotrexate (12;13), and adalimumab (14). PRO indices are correlated with the DAS in clinical trials (12-14) and in clinical settings (15). An index which does not require formal joint counts might enhance feasibility to incorporate quantitative data into standard rheumatology care. The additional indices are termed “routine assessment of patient index data” (RAPID), as they have been designed for use in a busy clinical setting; a number is added to indicate the number of individual measures included.

The prototype RAPID 3 includes physical function, pain, and patient global estimate, the 3 patient measures from the Core Data Set (2-4). RAPID 3 is mathematically identical to a patient activity score (PAS), but with a raw score of 0-30 and adjusted score of 0-10 rather than 0-9 (15). The score for physical function is converted from 0-3 to 0-10 by multiplying by 3.33, using a template on the MDHAQ. Pain and global estimate are assessed according to visual analog scales (VAS), both scored 0-10. The three 0-10 scores for physical function, pain VAS, and global VAS, are added together for a raw score of 0-30, and divided by 3 to give an adjusted 0-10 score for comparison with other RAPID indices. The rationale for RAPID 3 is to include the three PRO measures from the ACR Core Data Set, available on a standard patient questionnaire, requiring no activity on the part of a health professional, other than to calculate simple arithmetic totals.

RAPID 4 adds to RAPID 3 a rheumatoid arthritis disease activity index (RADAI) self-report joint count, which includes 8 joints or joint groups, scored 0, 1, 2 or 3,

for a 0-48 scale, which is recoded to 0-10, using scoring templates on the MHAQ. The rationale for RAPID 4JC is that rheumatologists indicate that the joint count is the most valuable measure to assess patients with RA (9), and the joint count is the most specific measure of RA (8). A 66 tender joint count is converted to a 0-10 scale using simple division by 6.6. The raw RAPID 4JC score is 0-40, i.e., the sum of four 0-10 scores for physical function, pain VAS, global VAS, and tender joint count. The raw RAPID 4JC score is divided by 4 to give an adjusted 0-10 score.

RAPID5 adds a physician global estimate (0-10) to RAPID4. The rationale for RAPID 5 is to include both the measure that most rheumatologists indicate is most valuable to assess patients with RA, i.e., the joint count (9), and the measure with the highest relative efficiency in clinical trials, i.e., physician/assessor estimate of global status (16). RAPID 5 is therefore the most comprehensive RAPID index. The RAPID 5 raw score is 0-50 and divided by 5 to give an adjusted 0-10 score.

Templates to score RAPID3, RAPID4, and RAPID5 are found at the right side of the "For Office Use Only" section at the right. Templates at the bottom of page 1 of the MDHAQ recode 0-30 scores for RAPID3, 0-40 scores for RAPID4, and 0-50 scores for RAPID5 to 0-10. In general, RAPID3, 4, and 5 yield very similar scores, and it is necessary to score only RAPID3, which can be accomplished in 10 seconds or less. If the rheumatologist is more comfortable to include a joint count in the index, RAPID5 requires about 20 seconds.

Reference List

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