(Draft) DRS External Quality Assurance (EQA) Scheme V 1.2

Aims of DRS EQA

"The aim of quality assurance in NHS screening is to maintain minimum standards and to improve the performance". The EQA scheme for DRS is intended to achieve this by aiding continual professional development of graders and to provide assurance that common standards of feature recognition are being applied across all grading centres.

Principles

DRS EQA is not designed to be a proficiency test of individual graders. It is assumed that internal QA resolves individual proficiency issues. EQA provides assessment of grading centre performance and as such individual graders must provide assurance that common standards of feature recognition are being applied.

Proposed approach

1. **All graders and grading centres will participate in EQA.**

   All graders will participate in EQA, however it is recognised that staff may not be able to complete a specific round of EQA if they are unavailable during the EQA window. The EQA rounds will be publicised well in advance and will be timed to minimise overlap with busy periods. Graders will be expected to complete 3 out of 4 rounds over a 2 year period.

2. **EQA will be provided by an external web site hosted by Aberdeen University.**

   Graders will be provided a login and password by the local administrator who is usually the DRS Service manager. The administrator will have access to the web based administrative functions such as adding users to the system and generating a username and password for them. Only the local administrator will know which grader corresponds to which username – this information is not stored on the EQA database, which will contain no personal information about the graders.

   Graders will be able to participate in EQA from non-work locations as the system is entirely web based, both for the tests themselves and all the associated administration and statistics generation. The grader may grade as many images from the current test set in one sitting as they like; when they next log on to the system they will begin from where they left off. It will not be possible for a single grader to sit the same test set more than once. Images from the test database will be presented in a different random order to each grader. A test set will be available for a fixed period of time (e.g. 3 weeks) during which the grader must complete the set.

   The web layout will be similar to that of the Soarian system, with the image displayed on the left and drop menus for feature notation on the right hand side. Controls will be available to perform the basic image processing functionality of the Soarian system, namely to toggle between colour and red-free display, zoom, brightness adjustment, contrast adjustment. The derived grade (i.e. whether it is observable, referable etc.) will not be shown.

The following information will be recorded against each image graded:

(i)   User responses to each drop down menu.
(ii)   Time taken to complete grading. .
(iii)   Image adjustment controls used.

3. Frequency of testing will be 2 rounds per calendar year.

There will be one EQA round in Spring and one in Autumn in a 6 monthly bi-annual cycle. The actual dates will be varied to minimise disruption where possible. Between each round the Lead clinicians group will meet to review best practice, learning needs and national developments and will give advice to the lead clinician on the next set of training/EQA images. Annex A shows an example timetable of how these events would link in with each other.

4. Test sets will be made up of specifically chosen images by the Lead Clinician or delegate as suggested by the lead clinicians group.

There will be approximately 100 test images to grade. These images will be varied on each round and each grader will be presented the images in random order.

It is proposed that the set chosen would include a proportion of image sets that are unequivocal and a small proportion that are borderline in the opinion of the selector. The overall set would be used to provide consensus data on the performance of the grading centres and individuals. Each image is graded on a consensus reached by all Level 3 graders taking part as to whether or not the image is referable (where referable includes grades R3, R4, R6 and M2). Each question image will have a score of the number of Level 3 graders whose feature grading class the image as referable. For the image to be included in the analysis there must be a **clear majority** decision that the image is referable, with at least twice as many graders selecting the final result for it to be included. For example with 15 Level 3 graders

Number of Graders referable	Result
<=5	Not Referable
6 to 9	No Consensus (remove from analysis)
>= 10	Referable

[A consensus of 10:5 or 5:10 is statistically significant (X^2 test; $p < 0.05$]

The results from these would be used to measure consistency across the grading centres. Any ambiguous/borderline images or those removed because of no consensus would be used in group discussion and learning sessions at EQA result group meetings.

5. Anonymity of results will be preserved and individual graders and grading centres will not be identified in any reports.

Individual graders will be advised of their own results and will be able to log back into the EQA system after the results have been finalised to view their own grading in comparison to other graders. Lead clinicians will also be advised of their grading centre results. Grading centres will only have access to their own detailed statistical results including the individual graders of that grading centre to ensure that anonymity is preserved. Only the DRS Lead Clinician or delegate will

have access to the detailed overall national results. The DRS Lead Clinician will provide an executive summary of the national results prior to any publication.

6. Procedures for the management of performance

Aberdeen University will provide the DRS Lead Clinician with the anonymised overall results for each grading centre. The lead clinician will also be informed of any anonymised individual grader who is identified to be out-with the normal range of performance.

Individual graders with a normal range of results will not require further action.

Individual graders with a range of results that fall below the normal distribution of results may expect to have their results reviewed and discussed with their lead clinician. Local administrators will be required to identify those graders as requested by the local leads and DRS Lead Clinician. Further training, re-training and/or supervision may be considered appropriate. If required an action plan may be drawn up with the individual to improve performance. Confidentially and sensitivity will be required to handle this situation and every effort must be made to support the individual. Leads of health board areas would be expected to liaise with the DRS Lead Clinician as appropriate.

Grading Centres with a normal range of results will not require further action.

Grading centres with a range of results that fall below the normal distribution of results may expect to have their results reviewed and discussed with the DRS Lead Clinician. Local administrators will be required to identify those grading centres as requested by the DRS Lead Clinician. It will be the responsibility of the grading centre lead clinician to take appropriate action to remedy the situation. The DRS Lead Clinician will offer assistance and advice as appropriate.

Grading centres will be required to hold post EQA review meeting or meetings as required with the centre lead clinician, individual graders and service manager. Health Board Coordinators from areas serviced by the grading centre may also be involved. Any outcomes or actions from these meetings will be reported to the DRS Lead Clinician for central correlation.

The proposed approach by the lead clinicians group is intended to provide support for ongoing training and improvement for all graders and grading centres by:

- reviewing standards and performance against those standards
- sharing best practice and providing guidance
- providing a forum for peer-to-peer learning
- identifying training needs and advising how they should be met
- providing training where appropriate
- providing information on developments and national policy standards
- Identifying research needs.

Annex A

Month	Event	Who's involved
Jan/Feb	Leads meeting to agree topics for compiled set of EQA images	Leads and Lead Clinician
Feb/Mar	EQA Round 1 images graded by all graders	All graders
Mar/April	EQA results compiled and reports distributed for use in lead meetings	Coordinator and Lead Clinician
May/Jun/Jul	Leads meeting to agree topics for compiled EQA set of images	Leads Lead Clinician
Aug/Sep	EQA Round 2 images graded by all graders	All graders
Oct/Nov	EQA results compiled and reports distributed for use in lead meetings	Coordinator and lead clinician
Nov	Annual review of EQA, presentation of annual statistics report.	All graders at study day Leads, Lead clinician, Coordinator