Inter-scorer Reliability (ISR)

What is the intent of the ISR requirement?
The ISR program is an integral part of a facility’s quality assurance program. Close agreement of scoring personnel is necessary for accurate interpretation and quality patient management. Scoring technologists’ participation in an ISR program encourages continuous improvement of sleep scoring skills.

Which sleep facility staff members must participate in ISR?
- **All scoring technologists:** technical staff members who score sleep studies for the sleep facility must participate in the ISR program. This includes technical staff members that score as little as one record. It also includes staff who score for the facility, but may work remotely or at a corporate location.
- **The facility gold standard:** the designated board certified sleep specialist (individual meeting standard B-4) serves as the facility’s gold standard. This individual must participate in the ISR program. A corporate appointed board certified sleep specialist can also serve as the gold standard and must participate.

When must the sleep facility perform ISR?
ISR must be conducted on a quarterly basis as a part of the facility’s quarterly quality assurance program. Three polysomnograms are chosen randomly per quarter for use in ISR assessments for a total of 12 polysomnograms per year.

How must the sleep facility conduct ISR?
**Quarterly Comparison**
- For each of the three polysomnograms compared quarterly, 200 consecutive epochs will be selected for comparison.
- The facility gold standard and all scoring technologists must independently score the 200 consecutive epochs.
- Scoring must include four parameters: staging (epoch by epoch), respiratory events, leg movements and arousals.

**F-6 – Inter-scorer Reliability**
Inter-scorer reliability must be determined between each scorer and a reference sleep specialist as defined in standard B-4 or a corporate appointed board certified sleep specialist. Inter-scorer reliability assessment must be conducted for each sleep facility.

**F-7 – Conducting Inter-scorer Reliability Assessment**
For comprehensive polysomnography, the following parameters must be compared: sleep staging epoch-by-epoch agreement, respiratory events, leg movements and arousals. Sleep technologists must be blinded to the scoring of the sleep facility designated reference specialist and to all other scoring technicians. Comparisons between each scorer and the facility’s designated reference sleep specialist must be made on 200 consecutive 30-second epochs in each of three polysomnograms per quarter, for a total of 12 polysomnograms per year.

**F-9 – Inter-scorer Reliability Agreement**
Comprehensive polysomnography studies must report agreement between scorer and the facility’s designated reference sleep specialist as percent concordance defined as the quotient of the total number of epochs of agreement for a given parameter and the total number of epochs in the analysis sample multiplied by 100.
Quarterly Reporting
• Comparison data, including a percentage agreement, must be tabulated between the gold standard and each of the scoring technologists for each of the four parameters. This data must be detailed in the facility’s quarterly report for each of the three polysomnograms compared.
• For staging, epoch by epoch comparison must be reported.
• The facility’s ISR policy must include a goal percentage agreement (to be set by the facility) for each of the four parameters compared. The quarterly report should indicate whether each scoring technologist has met the goal percentage and, if not, what actions were taken to address inconsistencies.
• The quarterly report must be signed and dated by the gold standard indicating review and corrections if necessary.

AASM ISR Program: The AASM’s optional online mechanism for meeting the ISR accreditation standards.
The AASM posts a set of 200 epochs to the online ISR program each month. The AASM Gold Standard has scored the epochs already. Participating facilities must have all scoring technologists score the 200 epochs. The technologists’ scores are compared to the gold standard and a percentage agreement report is generated. The sleep facility’s gold standard must review their sleep technologists’ results and sign the report as part of the quarterly quality assurance program.

Educational and reporting features of the AASM ISR Program include:
• Monthly record review videos, scoring learning modules and other educational products are available
• Monthly scoring records are provided as well as national gold-standard scores.
• Immediate feedback provided to technologists and supervisors.
• Center and national results are provided for each record.

KEY THINGS TO KEEP IN MIND...
• A complete ISR report is signed and dated by the gold standard.
• ALL scoring technologists must participate in ISR.
• A complete ISR report reflects a full quarter (three months) of data.
• The facility “gold standard” must meet standard B-4 – this individual cannot be a technologist.