10 steps to checking your spirometry result

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The 10-step process ensures that best practices for data validation, interpreation and record keeping are adhered to in the assessment of every spirometry test. This 10-step series briefly outlines each step, one by one (Figure 1).

STEP 10 – STORAGE AND RECORD KEEPING

Meticulous record keeping is a critical component of a good spirometry programme. Records allow links to be made between exposure and health effects. The Occupational Health and Safety Act No. 85 of 1993 states that all employee medical surveillance records should be retained for 40 years after employment has ceased. All records, despite their retention period, must be easily accessible and kept in a secure environment. After any retention period, all documents or records should be destroyed and disposed of in a responsible, environmentally friendly way, recycling where possible.

In spirometry, there are three main record-keeping components: 1) spirometry test reports, 2) equipment maintenance records, and 3) personnel training and evaluation records.

1. Spirometry test results

Spirometry test results are to be maintained for at least 40 years following the end of employment. To protect worker confidentiality, providers must not disclose individual worker's personal health information to employers without the employee's consent.[1]

2. Equipment maintenance records

Since equipment maintenance records support the accuracy of the spirometry test results in the medical record, saving the equipment calibration check log and information about the spirometer is recommended.[1] Availability of such records permits later troubleshooting of problematic spirometry test results, which is particularly important when conducting periodic spirometry testing.

3. Personnel training and evaluation records

Personnel qualifications should be documented and available for review. Records should include technician continuing medical education, certificates from completed spirometry training courses, and results of evaluation and feedback to technicians.[1]

Occupational physicians and the businesses for which they work should ensure that they have explicit policies on data retention that are provided to employees when their records are created. This should, ideally, also include record management if the employer changes its occupational health provider. Occupational physicians should make arrangements to ensure compliance regarding records that they have generated, after they leave employment, or if the employer ceases to trade. Record storage methods should be updated as technology changes to assure access to records in the future.[2]

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Step 1	Calibration and patient data
Step 2	Reference values and ethnicity
Step 3	Acceptability and usability
Step 4	Repeatability
Step 5	Lower levels of normal/Z-scores
Step 6	Best test/Best curve
Step 7	Interpretation
Step 8	Grading
Step 9	Recording and reporting
Step10	Storage and record keeping

Figure 1. The recommended 10-step process to ensure your spirometry result derives from best practices for data validation, interpretation, and record keeping

REFERENCES

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2. Torrance I. What clinical records should we retain and for how long? (Editorial). Occup Med. 2012; 62(3):162-164. Available from: https://academic.oup.com/occmed/article/62/3/162/1432436#21441714 (accessed 6 Aug 2020).