The following factsheet has been designed to support you as you progress through your spirometry learning. This factsheet will be provided to you every month after each tutorial.

New to the programme?

Please ensure that you have viewed the meet and greet video for those of you working through the Spirometry Online blended learning with ARTP and the Spirometry Refresher Programme with ARTP.

Support Available

We have changed the way you can contact us to ensure your questions and queries are managed effectively. If you have a question or query, please can we ask that you access the following link and complete the form rather than emailing us. A member of the team will contact you. Alternatively, you can use the form if you would like a particular topic to be covered at the monthly tutorial.

https://forms.office.com/Pages/ResponsePage.aspx?id=VsTAAthQqkWkgjh 96Vc-

WY9ZFgW_JFBDmuyqYm8_KopUMTBUNIIJMVVVRTZXSDY3R0JCQ0xJUD ZKVC4u

Your monthly tutorial

We are continually looking to review the way in which we deliver the course. We want to ensure that each monthly tutorial is catered to the learning needs of our learners. Therefore, we are changing the names of the tutorial so that you can be really clear around which tutorial you would like to attend. These will now be:

• Performing

These sessions are designed to provide you with an overview of how to perform spirometry. Here we will be discussing key components such as

calibration and verification as well as providing some key hints and tips to support your patient getting ready to undertake spirometry.

• Performing and Reporting (interpreting)

These sessions are designed for those learners who will be involved in performing spirometry and reporting (interpreting) on spirometry traces. We will cover a step-by-step process on how to report (interpret) a basic spirometry trace. You should attend this tutorial if you are confident on performing spirometry and are ready to report (interpret) a spirometry trace.

• Reporting and getting ready to undertake your ARTP certification

These sessions are designed for those learners who are nearing completion of their spirometry eLearning and are ready to apply for their ARTP certification (assessment). Within this tutorial we will be covering how to report (interpret) more complex traces and providing you with hints and tips to the ARTP certification process.

Please ensure that you have attended the performing and performing and reporting tutorials.

Occupational Health

These sessions have been designed for those learners who are operating outside of primary and secondary care and are currently operating in the following area of practices Army, Ministry of Defence and occupational health settings.

Which tutorial to attend?

These tutorials are rolling and therefore as you work through your programme, you can move from one tutorial to another so for instance you can attend the performing tutorial initially. Once you are confident with performing spirometry then you can attend the performing and reporting tutorial and so on.

There will be an opportunity to ask questions during the monthly tutorials; any questions that may come in advance and are not covered on the rolling programme, will be addressed on the day.

How to work through the Spirometry Online blended learning programme?

The Spirometry online blended learning programme consists of eLearning units and monthly tutorials. We encourage you to work through the chapters in a linear format so that you gain a thorough understanding of the spirometry process. Depending on your role in spirometry you may wish to spend more or less time on some chapters versus others. Please check your welcome pack for further details. **Please note this does not apply to those of you on the Spirometry Refresher programme.**

I am completing the Spirometry Blended Online Programme with ARTP certification. Do we have to complete the eLearning before we access the ARTP certification?

Education for Health's learning is independent of the ARTP assessment. We would recommend that you apply for your ARTP once you have completed all the eLearning chapters and have undertaken practical training in your area of practice.

Frequently Asked Questions (FAQs):

The Association for Respiratory Technology and Physiology (ARTP) have put together a number of FAQs: <u>https://www.artp.org.uk/Spirometry-FAQs</u>

Spirometers

If you have any questions around spirometers, we encourage you to contact the manufacturers in the first instance. Education for Health does not endorse any particular spirometer for use in the clinical situation. For advice re: suitability of spirometers, please refer to the manufacture's website for detail of the variety and performance of their products.

Questions from April 2024 on-line Tutorial

Q 1. For diagnosis with no previous spirometry would you do baseline spirometry and then post bronchodilator for suspected COPD?

NICE (2019), GOLD (2024), NICE CKS (2023: all confirm post-bronchodilator spirometry to confirm the diagnosis of COPD.

Q 2. If there is >400mls improvement in Fev1 but less than 12%, would this be positive or negative reversibility?

BTS/SIGN (2019) In adults with obstructive spirometry, an improvement in FEVI of 12% or more in response to either agonists or corticosteroid treatment trials, together with an increase in volume of 200 ml or more, is regarded as a positive test.

Some people with COPD can have significant reversibility.

An improvement of greater than 400 ml in FEVI strongly suggests underlying asthma.

In children, an improvement in FEVI of 12% or more is regarded as a positive test.

Q 3. If baseline spirometry is obstructive and returns to normal after bronchodilator but FEVI does not improve by 200mls /12%, is this a positive reversibility test?

Always think of the clinical picture. If the clinical hisotry followed by an examination suspected asthma, look at the result in the clinical context. Remember the importance of probability of asthma (BTS/SIGN 2019). If considering asthma and spirometry returns to normal after a bronchodilator, and clinical history has suspected asthma, consider home peak flow chart and FeNO measurement. See figure 1 diagnostic algorithm BTS/SIGN (2019), and various algorithm in NICE (2021) NG80 for more information.

Q 4. Are there any sample questions or guidance that help create rapport for enriching the communication for the internationally professionals, specifically for spirometry?

There are many examples of good communication techniques, consultation models etc online. If you look at NHS to start, then consider journal articles. <u>https://www.nhs.uk/conditions/social-care-and-support-</u> <u>guide/practical-tips-if-you-care-for-someone/how-to-care-for-someone-</u> <u>with-communication-difficulties/</u>

Q 5. With regards calculating airflow obstruction, if given two values (VC FVC) what calculation do you use? I got the last two calculations incorrect as only used one of the values I suspect.

The values obtained for a relaxed vital capacity SVC or a forced vital capacity FVC should be comparable in normal lung function. For patients showing obstructive airway disease, there may be a difference due to causing dynamic airway compression. Apart from machine error, there are no instances where it would be expected to see a significantly higher FVC compared to SVC and this would likely be cause by a technical error. Whether the two are comparable in normal lung function, or not, for instance in obstruction, the higher of the two should be used as this represents the patient's capacity, whatever the speed of the blow.

Q 6. I understand that Individuals vary in their response to bronchodilators, while expressing results in terms of percentage change after the delivery of an inhaled bronchodilator relates to the degree of baseline airway obstruction. If the baseline obstruction is severe, a small change in absolute lung volume may produce a large percentage change. It is therefore important to look at both the percentage change and the change in absolute volume when assessing response? I did not understand this, is it possible to elaborate the answer please.

It is always important to start with the patient. Why are you doing spirometry? What are you expecting to see? Does the patient feel any better after taking a bronchodilator, such as improvement in symptoms, less breathless. Spirometry is a tool to support the clinical diagnosis or monitoring of the patient and supports the examination and any other investigations for the patient. The relative improvement is important as well as the absolute. The nuances of spirometry need to be kept in context with the clinical picture.

Q 7. Should a patient's blood pressure be taken before performing spirometry?

A forced expiratory manoeuvre may worsen unstable cardiovascular status, it may worsen angina or cause changes in blood pressure. It is therefore a clinical decision and could be considered good practice to check BP before performing spirometry.

Q 8. Calibration, reproducibility criteria, contraindications.

The details for calibration reproducibility criteria and contraindications were covered in the presentation for performing spirometry. Further details are available in the ARTP Statement on Pulmonary Function Testing 2020 (Sylvester KP, Clayton N, Cliff I, *et al.* (2020) and the ART Standard Operating Procedure (SOP)

Sylvester KP, Clayton N, Cliff I, *et al.* (2020) ARTP statement on pulmonary function testing 2020. *BMJ Open Resp Res*; **7**:e000575. doi:10.1136/ bmjresp-2020-000575

https://www.artp.org.uk/resources/spirometry_sop_2023

Q 8. Process after completing Education for health portfolio and exams.

Education for Health is the training provider and ARTP focuses on the development of the spirometry certification process. For more information please visit:

https://www.artp.org.uk/training