

A low-angle, upward-looking photograph of several modern skyscrapers with glass facades. The buildings are reflected in each other, creating a complex geometric pattern. The sky is visible through the glass panels, showing a blue color with some white clouds. A large, bright yellow oval is superimposed over the upper middle part of the image.

“Hands-on Spirometry Workshop”

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21st July 2019

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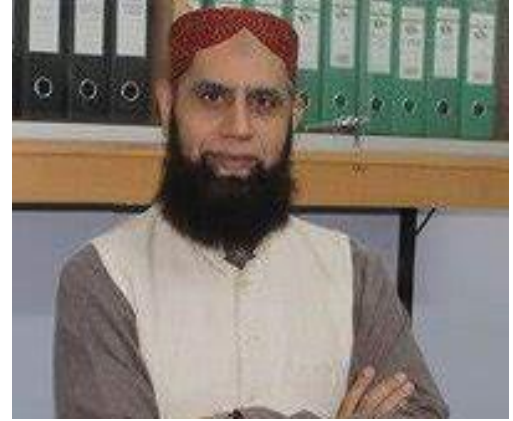
“Hands-on Spirometry Workshop”

Abstract

This report aims to explore the significance and details of a spirometry workshop conducted in the of Professor Ghulam Mustafa with the collaborations of the European Lungs Foundation and Helping Hands foundation. Spirometry techniques are still unknown to many young practitioners so, they were introduced to this test and its significance. There was an activity conducted to acquaint the young doctors with the test. To spread the message across, the event was provided media coverage and was promoted through social media as well.

About the Facilitator:

Prof. Dr. Ghulam Mustafa took the responsibility to train and educate young doctors about spirometry, the most important test in the diagnosis of Asthma. Prof. Dr. Ghulam Mustafa is one of the best Consultant Pediatrician and Pediatric Pulmonologist in Pakistan. He has been serving as Head of the Pediatric unit at Nishtar Medical University, Multan for over 30 years. He is the founder of the Helping Hands Foundation (an NGO) and a member of the Pakistan Pediatric Association, American Academy of Pediatrics, European Respiratory Society and many other prominent organizations working to protect the public from infectious diseases of lungs. He is a board member of EC Pediatrics, Pediatrics International and Pakistan Pediatric Journal. He has written extensively on the topics related to Pediatric and Pulmonary health.



Contributions:



European Lung Foundation:

In 2000, the European Respiratory Society laid the foundation of the European Lung Foundation to serve patients and the public regarding lung health. The European Lung Association aims to connect respiratory professionals and the public to promote healthy lungs and fight against gruesome respiratory diseases. ELF played a significant role in arranging the workshop on Spirometry.

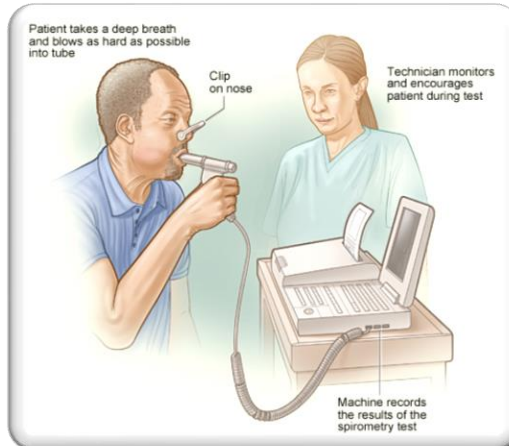


Helping Hands Foundation:

Helping Hands Foundation is a nonprofit government organization founded in 2012, striving for the betterment of community touching on every aspect that needs to be improved. From empowering women to raising awareness regarding crucial health issues, HHF has come a long way in creating a healthy community. Several projects are going on under HHF for the development of the community. It has contributed to conducting so many successful events for the advancement of society towards a healthy lifestyle. The Helping Hands Foundations was of great support in carrying out a successful event on spirometry at Children Complex Hospital, Multan.

What is spirometry?

Spirometry is a test to clinically assess lung function. It is done by calculating the total amount of air or its speed while inspiration and expiration and then comparing it to the normal value. The results are shown in the form of tables and graphs. It is the most effective test in the diagnosis of Asthma, Chronic Obstructive Pulmonary Disease (COPD) and other anomalies related to breathing.



Reasons for conducting spirometry event:

Pakistan ranks among the top 20 most polluted countries in the world where major causes of pollution are gas emissions, smoke, and soot. The pollution index of Pakistan came out to be 170 making its population more vulnerable to developing diseases and infections. Due to the rising level of air pollution, the number of patients having breathing disorders is also increased to an exponential level. In Pakistan, the South Punjab region has an increasing number of asthmatic patients with Multan having reported the greatest percentage of Asthmatic patients in Pakistan.

An increasing number of asthmatic patients call for an increased level of prevention and cure. It is a well-known fact that developing countries are lagging in the application of the latest health technologies. It is the need of the hour to raise awareness regarding the modern healthcare system in Pakistan especially underdeveloped areas of Pakistan.

Spirometry is one of the most important techniques in the diagnosis of Asthma, with the greatest number of patients suffering from Asthma in South Punjab, doctors in Multan need to employ spirometry while treating Asthma.

Due to the lack of healthcare centers in most of the regions of South Punjab, patients revert to Multan due to comparatively better health facilities. There lies more responsibility on the shoulders of practitioners in Multan to use spirometry while treating asthmatic patients.

Due to the above-mentioned reasons, it was necessary to educate young doctors in Multan about Spirometry, so the workshop was conducted at **Children's Hospital and The Institute of Child Health, Multan** on **18th July 2019**.

Objectives of the workshop:

There were two main objectives of “Hands-on Spirometry Workshop:”

- 1- Raise awareness among young professionals about spirometry and its significance in the diagnosis of Asthma.
- 2- Train the doctors about the method of doing a spirometry test, its implications and interpretation of reports.

The **first objective** was attained during the workshop by educating doctors about the importance of spirometry test, why spirometry it is important to include spirometry in the diagnosis and treatment of asthmatic patients? With the help of facts and findings of the latest researches, Dr. Ghulam Mustafa got his message across. Spirometry helps in accurately diagnosing Asthma and the extent of it. If a doctor diagnoses a patient without conducting spirometry, 30% of the classification of patients under mild and severe change and hence will affect their treatment. Due to inaccurate diagnosis patient will be left undertreated and will not recover accordingly.

One out of three patients who are asymptomatic before or after undergoing treatment, diagnose with asthma when they undergo spirometry tests.

In the case of asthma most common practice is diagnosing it with the help of peak flow meter but it is not equally effective in its diagnosis. The functionality of spirometer outpaces that of peak flow meter and improves the treatment of asthmatic patients.

In Pakistan, doctors continue to use old methods for diagnosis. It's high time that professionals at health care understand the importance of new techniques of diagnosis and treatment. The **second objective** was achieved by training the doctors about conducting spirometry tests, the implementation of graphs and tables in spirometry reports. They conducted the tests practically and then studied their reports. It encouraged them to use this technique in future practice and can identify if the test has been taken accurately. This workshop also taught them the method of dealing with patients of different age groups and what factors can lead to changing the predicted values of the spirometer.

The number of attendees:

There were about **25** young doctors who registered and actively participated in the event and showed interest in the activity conducted during the spirometry event. These participants belonged to an age group of 25-37 years which is indicative of the fact that these young professionals will include this technique in future practice for better treatment of their patients.

Type of events:

This workshop was divided into 3 sections where the first part comprised of information and training of doctors about the subject.

In the second segment constituted an **exercise event** where free testing took place to ensure that the doctors can be acquainted with this technique in practice.

In the third part, when the reports were out, each doctor was responsible for interpreting his reports. It was significant for them to understand the right method of conducting the test and the factors that could affect the right testing along with the correct interpretation of reports.

The number of tests:

The number of tests conducted during the testing and exercise event was 30. This activity helped the doctors in getting their hands on the spirometer. And then due to the instant results, they were able to check the functionality of lungs by comparing the values they got with the predicted values.

Greatest takeaways from the event:

At the beginning of the event, there were only a few doctors (who participated in the workshop) acquainted with the technique.

- This event was helpful in not only creating awareness about spirometry and its importance in the diagnosis and treatment of Asthma but also in practically training the doctors about it during testing activity.
- It also assisted in training the doctors in carrying out spirometry and interpreting the results correctly.
- As the participants of the workshop were young doctors and were enthusiastic in learning, they ensured to carry out spirometry in future practice for the betterment of healthcare in Pakistan.
- It indicates that there is a need for arranging such workshops and activities that can help create awareness among the doctors regarding new methods for the advancement and improvement of the medical industry.

Media coverage:

To raise awareness and spread the message across, media coverage was provided at the event. Reporters from Dunia news were there to cover the event. The articles related to this workshop were published on various news websites. Helping Hands Foundation also posted about this workshop. Links of the articles and pictures captured during the event are given.

<https://www.asiaurdu.com/article.php?newsid=240&q=health-children-hospital>





Conclusion:

The event was successful in creating awareness about spirometry and training the doctors regarding it. It also encouraged them to pursue further in its application. The event was a success as it fulfilled its objectives. The successful event about spirometry calls for more events that introduce modern technology to health care professionals in Pakistan. If such events continue to take place, the face of medical practice will soon change in Pakistan.