

# Cystic Fibrosis Research News

**Title:**

Implementation of Standardized Cystic Fibrosis Care Algorithm to Improve The Center Data-Quality Improvement Project International Collaboration

**Lay Title:**

Improvement of Pulmonary Function After Implementation of a Standardized Cystic Fibrosis Care Algorithm

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**What was your research question?**

Can we improve the pulmonary function of people with cystic fibrosis (CF) by adapting the algorithm of another center with good performances?

**Why is this important?**

Better pulmonary function is strongly associated with improved quality of life and survival for people with CF. In comparison with European peers, Turkish people with CF are more likely to have a lower pulmonary function. The adoption of an appropriate standardized care algorithm has been shown to be successful before by University of Michigan CF Center. By implementing the same algorithm in our center with an international collaboration, we expected to increase the pulmonary function and thereby the survival of the people with CF in our center.

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## **What did you do?**

Two fishbone diagrams were created; the first was to identify potential barriers for low pulmonary function, and the second was to create potential solutions for those barriers. Team members from each discipline including physicians, nurses, dietitian and physiotherapists developed a flowchart to help address issues that were under their area of expertise. The University of Michigan nutritional algorithm was also implemented to improve the nutritional status (height, weight and body mass indexes (BMI)) as it is correlated with lung function. Weekly case reviews were done to develop individualized treatment plans. Appropriate intervention was applied and patient data were assessed at baseline and after 3, 6, 9 and 12 months.

## **What did you find?**

At the end of 12 months, there was a significant increase in pulmonary function test results. Regarding CF health related quality of life questionnaires, scores of physical functioning, eating problems and respiratory symptoms domains were significantly increased. Similarly, the BMI of the people with CF had also increased significantly which was positively correlated with lung function tests at the end of 12 months. The increase in lung function tests was sustained 1 year after the project ended.

## **What does this mean and reasons for caution?**

This quality improvement project has led to significant improvement in the lung function and BMI of people with CF. CF Centres in developing countries can easily implement such quality-improvement programs to help people with CF enhance their pulmonary function and nutrition status. Similar programs could help improve the care and life expectancy of people with CF in these countries. These results provide evidence for benefits of international collaborations to improve the care of CF globally.

## **What's next?**

We will report the significant results of this project to other CF centres in Turkey in addition to the Ministry of Health. We are working on projects involving a social worker, psychologist and respiratory therapist into the CF team as quality improvement projects may lead to better results with the support of all disciplines.

## **Original manuscript citation in PubMed**

<https://pubmed.ncbi.nlm.nih.gov/37037703/>