

The use of mobile phone technology for early detection of pulmonary exacerbation of cystic fibrosis (CF) – A time to be precise.

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Background:

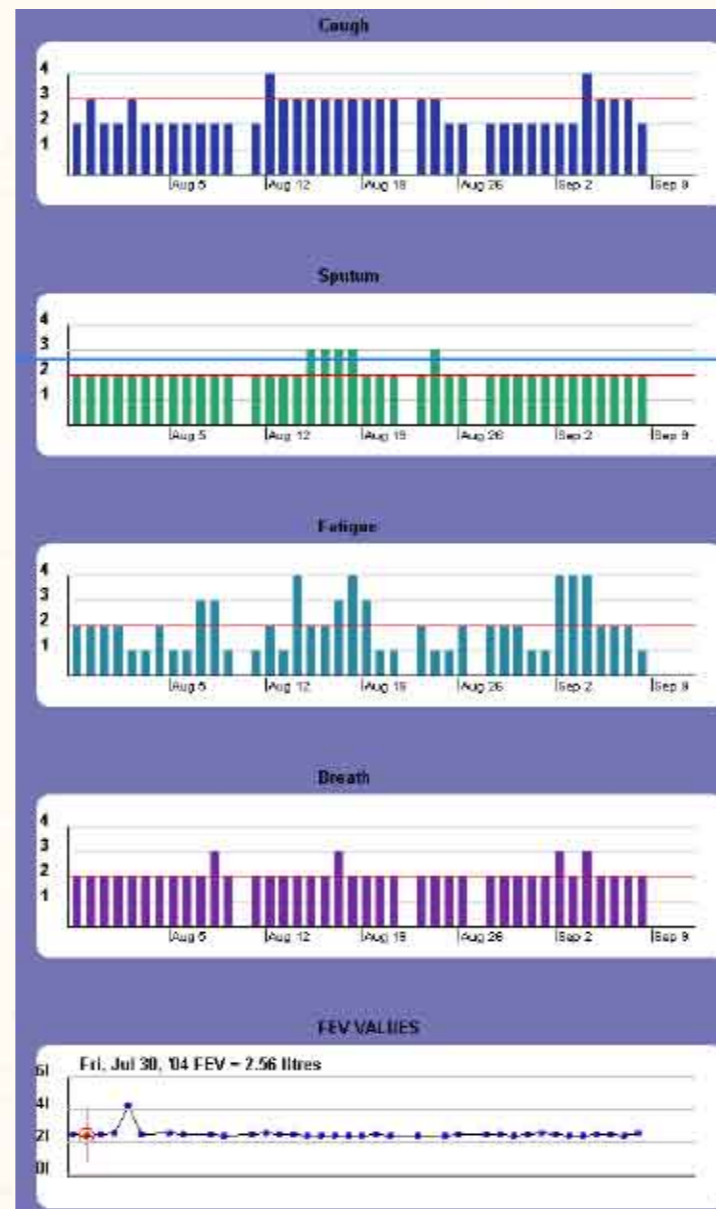
Pulmonary exacerbation is an important clinical feature in the course of disease in adult CF patients and is an important end point of many clinical trials. The criteria for pulmonary exacerbations vary widely between physicians

Aims:

The purpose of this study is to investigate a novel method for delineation of pulmonary exacerbation using the combination of mobile phone technology and a portable spirometer to enable real time gathering of lung function and patient symptom data.

Method

An electronic spirometer (Vitalograph) is connected to an XDA2 mobile phone. Patients scored their cough, sputum production, breathlessness, and fatigue on a score (1-4) and measured their FEV₁ once daily. Data is viewed by a research Registrar on a daily basis.



Conclusions

Positively accepted by patients, the system is showing itself to be an effective means of providing clinicians with rapid access to both subjective and objective measurements of patients' conditions. Potentially, an automated tool to provide notification of non-compliance and exacerbation.

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