IIT-I innovation to connect remote patients & city docs

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Indore: IIT Indore has come up with an innovative system through which villagers or people living in remote areas suffering from respiratory problems like asthma, chronic obstructive pulmonary disease (COPD), pneumothorax, and infections like pneumonia and tuberculosis, can be diagnosed through specialist sitting in city.

The development of an intelligent, low cost and easy to use digital auscultation based integrated diagnostic system will provide a seamless connect between patients in rural areas and specialist doctors, for early diagnosis of lung diseases, IIT Indore stated in a release.

The system has been named eRespirocare and has been recognized as best technology development of the year by the institute, it read.

> **People suffering from respiratory problems like asthma, COPD, pneumothorax and tuberculosis can be diagnosed through this new system**

An inter-disciplinary team of researchers at institute noticed that people, who reside in villages and remote areas, may not have accessibility to a specialist doctor on a continuous basis.

To reduce morbidity and mortality due to respiratory diseases, the system will help in timely detection and initiation of treatment. "In many remote areas, the bare foot doctor, an Accredited Social Health Activist (ASHA) volunteer, can use the smart device and connect patient with the specialist.

The eRespirocare uses digital auscultation coupled with information technology platform and artificial intelligence based machine to reduce subjectivity involved in conventional stethoscope based auscultation and subsequent analysis.

The device can also store auscultation data of individual patients, which can be useful in future follow-up of patients with chronic lung diseases.

ASHA workers in villages can be easily trained to capture digital auscultation through eRespirocare and share the same with a specialist medical doctor along with relevant history of illness.

Specialist medical doctors will be able to listen to auscultation data of a patient and can clinically correlate outcomes of machine learning algorithms with other symptoms recorded by ASHA worker.