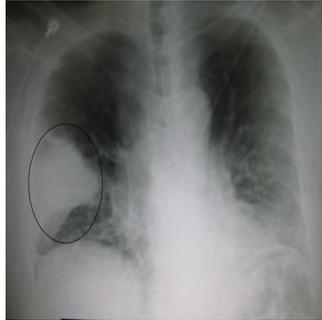# New Decision Support Tool Improves Pneumonia Care

According to a new study conducted by researchers at Intermountain Medical Center, using advanced clinical decision support tools can reduce mortality for patients who are treated for pneumonia. The findings have been published in *Annals of Emergency Medicine*.

Approximately 1.1 million patients in the US are treated for pneumonia each year. More than 50,000 Americans die from it. The new clinical tool is an advanced computer program that combines a patient's personal medical information and risk factors in real time to alert emergency department physicians if the patient could possibly have pneumonia. If pneumonia is confirmed, the program automatically provides a calculated severity assessment and management recommendations related to diagnostic testing and antibiotic selection. The program has saved up to 12 lives in hospitals where it was utilised.

Lead author Nathan Dean, MD, a pulmonologist and chief of critical care medicine at Intermountain Medical Center explains that pneumonia is fairly complex and it is often difficult to make decisions that follow current treatment recommendations. Doctors often have to rely on their unaided judgment as to how to treat their pneumonia patients. This tool could help doctors provide improved care.

"This tool doesn't take over for doctors, but it does assemble the needed information, calculates the patients' severity of illness and likelihood of infection with resistant bacteria, and presents recommendations to help doctors make better decisions. It's all about giving local doctors tools to be more consistent, objective, and focused on best practices," says Dr. Dean.

Dr. Dean also points out that the number of pneumonia patients fluctuate from year to year because of several factors such as air pollution, types of bacteria, strains of influenza etc. Doctors can usually process three to five factors at a given time and there is a risk that critical information is overlooked when treating a patient. However, computers aren't limited in scope. This screening tool uses 40 different factors in its evaluation to determine if a patient has pneumonia and if he needs to be admitted to the hospital for treatment.

The use of this tool is now increasing in emergency departments. According to Peter Lenz, MD, an emergency physician at Intermountain Healthcare's Salt Lake-area hospitals, this tool could change the way doctors practice medicine as it is very user-friendly and alerts clinicians about things that they might have overlooked.

Dr. Dean and his team are in the process of developing an improved version of the computer-tool and are also planning for a wider deployment using a commercially available electronic medical records platform.

Source: Intermountain Medical Center

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