
New triage tool helps save lives in resource-limited settings



A new tool can help healthcare providers quickly identify patients at the greatest risk of death when resources are most limited. Developed by an international team of researchers, the new scoring system calculates risk based on patients' vital signs – information doctors can access without advanced medical equipment. The resulting "universal vital assessment score" (UVA score) indicates whether the patient is at low, medium or high risk.

The UVA score is useful both for assessing patients when they arrive at the hospital in resource-limited areas and as a way to identify deteriorating conditions among those already admitted, the researchers explained.

Resource-limited settings such as most of sub-Saharan Africa shoulder the highest burden of critical illness. It is estimated that up to 2.2 million cases of sepsis and 6.5 million deaths occur in the region yearly due to infection.

"Identification of patients at the highest risk for poor outcomes is important in order to provide them with early interventions that can improve survival," said researcher Christopher C. Moore, MD, of the University of Virginia School of Medicine's Division of Infectious Diseases and International Health. "However, existing clinical early warning scores were derived from patient populations in Europe and North America, which don't necessarily apply to hospitalised patient populations in Africa, which are younger and have a higher prevalence of HIV infection."

The research team developed the tool by analysing data from more than 5,500 patients in six African countries – Gabon, Malawi, Sierra Leone, Tanzania, Uganda and Zambia – where medical resources are often minimal. The tool looks at six clinical variables, such as the patient's temperature and heart rate, and whether they have HIV infection.

The team conducted tests to evaluate the effectiveness of the new scoring system. They found that patients the tool classified as medium risk had three times the odds of dying as patients in the low-risk group. Patients scored as high risk had 10 times the odds of dying.

In addition, the new tool outperformed two existing scoring systems, the modified early warning score (MEWS) and the quick sepsis-related organ failure assessment (qSOFA), in predicting patients' risk of death.

"The next step in this research is to pair the UVA score with diagnostic and therapeutic interventions," Dr. Moore said. "Patients with low UVA scores are likely to do well receiving the local standard of care. However, patients at medium to high risk may benefit from more frequent clinical evaluations and additional testing, such as blood cultures or other diagnostics. This is an active area of our research."

Source: [University of Virginia Health System](#)

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