# New tool guides clinicians to identify and treat patients at risk for monkeypox virus

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Monkeypox was rarely seen outside West and Central Africa until the current 2022 global outbreak, and clinicians are now on alert to identify, isolate, and treat individuals infected with the virus that causes it. A

team led by investigators at Massachusetts General Hospital (MGH) recently developed and implemented a clinical decision support system to help with this effort.

As described in a study published in the *Journal of the American Medical Informatics Association*, the Monkeypox Clinical Decision Support Tool (MPX-CDSS) is embedded in the electronic health record to guide frontline clinicians who can access it by typing ".MONKEYPOX" in any inpatient or outpatient note.

Clinicians are presented with a structured set of screening questions adapted from the U.S. Centers for Disease Control and Prevention, and depending on clinicians' answers, a second set of questions may ask for more data on individualized risk for each patient.

Clinicians are also prompted to upload images of the patient's rash into the electronic health record to be reviewed by infectious disease and public health officials. The tool includes directions regarding immediate infection control protocols.

In June 2022, MPX-CDSS was launched across Mass General Brigham, a large integrated health care system in Massachusetts and New Hampshire that includes MGH, 8 acute care hospitals, 2 specialty hospitals, and a broad network of postacute care, community health, and primary care centers. Over the first 6 weeks, the tool was used 55 times for evaluating monkeypox infection throughout the health care system.

During that time, several updates were made to capture evolving definitions, collect information, and make the tool easier to use. "The decision support tool was rapidly implemented and enabled frequent iterations with the input of subject matter experts based on evolving epidemiological risk factors and testing strategies to improve the efficiency of diagnostic evaluation," says senior author Erica S. Shenoy,

MD, Ph.D., associate chief of MGH's Infection Control Unit and an assistant professor of Medicine at Harvard Medical School.

Lead author John Albin, MD, Ph.D., an instructor in infectious diseases at MGH adds that tools such as the MPX-CDSS can be quickly adapted to changing circumstances, allowing frontline providers to use the best available information to manage patients in an evolving outbreak. "My hope is that similar tools may assist in scaling the response to future emerging infectious diseases, and in promoting structured assessments that lend themselves to the systematic evaluation and improvement of clinical care."

In their study, Albin and colleagues describe the development, implementation, and early usage patterns of MPX-CDSS. They did not evaluate its sensitivity or specificity for accurately identifying monkeypox cases, however, and additional large-scale analyses will be needed to determine its value during the monkeypox outbreak, and for similar approaches during other infectious disease outbreaks.

"Decision support is a powerful tool that can support patient care in the setting of an emerging infectious disease outbreak. Since publication, further improvements of the tool have been made to support documentation of resolution of infection for confirmed monkeypox patients in order to release individuals from isolation," says Shenoy.

**More information:** John S Albin et al, Development and implementation of a clinical decision support system tool for the evaluation of suspected monkeypox infection, *Journal of the American Medical Informatics Association* (2022). DOI: 10.1093/jamia/ocac151

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