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AI Helps Multilingual Patient Communication in Radiology

A free web-based tool uses artificial intelligence to help radiologic technicians communicate with patients in various languages.

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The RadTranslate web app was developed at Massachusetts General Hospital's MESH Incubator. To use the tool, a technician should select the examination and the language they need on www.radtranslate.com. The AI algorithm then picks relevant instructions from a library of standardised medical interpreter scripts.

The tool was tested in Spanish for chest radiographs performed at a COVID-19 triage outpatient centre. During examinations of Spanish-speaking patients, technicians would switch to the app to give instructions in Spanish, including human-spoken translations of "Step up and place your chest close to the board", or "You can breathe normal". The results are reported in Journal of the American College of Radiology (Chonde et al. 2021).

According to the report, over the 63 days of the pilot study, technicians voluntarily used the app 1,267 times when examining Spanish-speaking patients. The most frequent phrases related to a general explanation of the exam (30%) and instructions to disrobe and remove any jewellery (12%). While using the app showed no significant difference in the overall imaging appointment duration between pre- and post-implementation groups, the variability in examination length was significantly reduced.

The authors conclude that the integration of RadTranslate into imaging workflows alleviated strain on interpreters and allowed to decrease discrepancies in the exam duration.

Currently, the app is available for chest radiographs, screening mammography, COVID screening, and a falls risk screen in a variety of languages. For example, the COVID screening section offers translations in Portuguese, Mandarin, Italian, Korean and Romanian, with Arabic also in development. It includes questions on general background information (e.g. about the patient's name and date of birth) and travel and symptom screening (e.g. "Have you had contact with a known or suspected case of COVID-19?" or "Do you have any of the following new symptoms?" and a list of symptoms).

Source: Journal of the American College of Radiology

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