
Voice recognition systems can cut nuclear medicine report turnaround time but may lead to more transcription errors.

* Killeen T, Navalkissoor S, Buscombe J, Hall M

Nuclear Medicine Department, Royal Free Hospital, London, UK

* Corresponding author: tim.killeen@nhs.net

Voice recognition (VR) is increasingly used by radiology departments keen to reduce report turnaround time (RTT) and costs. Its application in nuclear medicine (NM) has not yet been evaluated.

In May 2009, a VR system (Soliton, UK) with a specialised NM vocabulary was introduced at a busy NM department of a London teaching hospital, replacing traditional dictation and manual transcription (DT). RTTs were retrospectively measured for October 2008 (n=346) and October 2009 (n=353); before and after the system's introduction. A random subset of 50 DT and 50 VR-transcribed reports were reviewed for mistakes in spelling/grammar. These were deemed potentially confusing errors (PCE) if they rendered part of the report ambiguous, unintelligible or misleading (e.g. vein/brain); others were termed trivial typographical errors (TTE).

Mean RTT decreased from 73.3h to 29.5h (unpaired t-test; $p < 0.0001$) following replacement of DT with VR. PCEs increased from 2% to 22% (Fisher's exact test; $p = 0.004$), with no significant difference in TTE rate (12% vs 22%; $p = \text{n.s.}$).

This retrospective survey suggests that adopting VR significantly decreases NM RTT, albeit at the expense of increased PCE rate. Anecdotally, NM physicians using VR describe significant software and reporter learning curves. Research is needed to establish if increased VR experience reduces error rates.