**The efficiency of voice recognition versus transcriptionist in Radiology**

Amjad Sattar1, Mahnoor Hafeez2, Nida Rafiq3, Ummey Aymen3

**ABSTRACT**

**Objective:** To estimate comparative efficiency of voice recognition system Voice Recognition System (VRS) and Medical Transcriptionist (MT) by qualitative and quantitative assessment of errors in Radiology Reports at Cross-Sectional Imaging.

**Study Design:** Prospective cross-sectional study

**Place and Duration:** Dow Institute of Radiology, DUHS; from 1st February to 30th April 2020.

**Methodology** Total consecutive criteria 201 cross-sectional reports were included in the study, these cases dictated by Radiologists and transcribed by Medical Transcriptionist were re- phonated on Voice Recognition System (VRS); the outcome of these reports were saved on Microsoft word files. Voice Recognition USB Headset and the microphone- both systems were analyzed for the functionality of VRS. Data was further categorized into CT and MRI long and short cases; error types and frequency were recorded.

**Results:** Mean Error rate (MER) of the Reports for voice recognition system (n=201) was 15.2% +/- 12.3 (S.D.) while that for Medical Transcriptionist (n=201) was 2% +/- 1.94 (S.D.). Independent t-test showed statistically significant greater Error Rate for VRS as compared to MT; [p-value 0.000]. A linear positive correlation was seen between no. of errors and total word count. There was no statistically significant difference between no. of errors for CT category as compared to MRI category, but regarding the error rate of MT and VRS Reports for MRI reports; there was a significant association of MER in the long cases as compared to short cases. In voice recognition system Reports, syntactic errors were found in a total of 184 Reports whereas semantic errors were found in a total of 82 reports. Typographical type error was the leading error seen in 175 Reports In Medical Transcriptionist reports; Syntactic and Semantic errors were seen in only a few Reports (14); [p-value- 0.022].

**Conclusion:** Medical Transcriptionist was found to have higher efficacy as compared to Voice recognition. VR has a significantly high frequency of error rate as compared to MT, deeming it unsuitable for implementation in cross-sectional imaging.

**Keywords:** Voice recognition software, Speech recognition software, Syntax, Semantics, Medical, Transcription.

**How to Cite This:**

Sattar A, Hafeez M, Rafiq N, Aymen U. The efficiency of voice recognition versus transcriptionist in Radiology. Isra Med J. 2021; 13(3): 192-196.

This is an Open Access article distributed under the terms of the Creative Commons Attribution-Noncommercial 4.0 International License (http://creativecommons.org/licenses/by-nc/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.