

Telemedicine Readiness Among Visitors of Government Hospital in Selangor, Malaysia during Covid 19 Pandemic

Siti Sabrina Kamarudin, MPH¹, Nor Azizah Mohamad Nazri, MBS¹, Nurizati, Mat Ghani, MBS¹, Rabihtul Adawiyah Egar, MBS¹, Nor Fariza Ngah, MSOphth¹

¹Clinical Research Center, Hospital Shah Alam, Ministry of Health Malaysia

ABSTRACT

Introduction: Technology such as telemedicine has been instrumental in delivering care, especially during the COVID-19 pandemic. Visitors who accompany patients play an integral part in moderating access to care of patients. However, readiness towards acceptance of telemedicine among these family members remains to be explored. Exploration of readiness towards telemedicine among visitors of urban government hospital in Selangor was carried out. **Methods:** A cross-sectional study utilizing questionnaire adapted from Hossain 2019 was conducted from November to December 2020 across 400 respondents. **Results:** A total of 234 females (48%) and 166 males (35%), with 267(66%) constitutes the age group of 21-30years-old who were studied. In all 322(84%) of respondents had tertiary education with a minimum of diploma holders. 183(38%) had a monthly income less than RM3000, and 112(23%) had an income of RM3000-6000. 369(76.9%) of respondents reported skill readiness for telemedicine, whereas 31(6.5%) reported poor skill readiness for telemedicine. Age, education, and household income were associated with telemedicine readiness skills with $p=0.001$; $p<0.001$ and $p=0.018$, respectively. The majority, 340(70%) of respondents, reported behavioural readiness for telemedicine. A total of 375(93.8%) reported good access to telemedicine with a minimum of at least four accessibilities of the following: smartphone, internet, computers, social-media account, file management, and communication. High favorable readiness of telemedicine is reported. However, most respondents were from the age group of 21-30 years old. These visitors who had accompanied their family members for appointments despite belonging to low-middle income-group; showed favorable technological and behaviour readiness for the usage of telemedicine. Visitors should be considered as integral elements when providing telemedicine services. **Conclusion:** Favourable usage of telemedicine among the visitors indicated promising utilization of telemedicine in overcoming barriers for patient's care.

PP-147

Automated Detection of Medical Abbreviations

Ismat Mohd Sulaiman, MD¹, Awang Bulgiba, PhD², Sameem Abdul Kareem, PhD³

¹Health Informatics Centre, Planning Division, Ministry of Health, Putrajaya, Malaysia, ²Centre for Epidemiology and Evidence-based Practice, Department of Social and Preventive Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia, ³Department of Artificial Intelligence, Faculty of Computer Science and Information Technology, University of Malaya, Kuala Lumpur, Malaysia.

ABSTRACT

Introduction: Misinterpreted medical abbreviations has been shown to cause patient harm. Abbreviations in electronic clinical notes are pervasive and ambiguous. The use of abbreviations and misinterpretation will only lead to inaccurate decisions as electronic clinical notes are being reused for research and policy-making. Using Malaysian Cardiology discharge summaries written in English, we compared the results of machine learning approaches to detect abbreviations using rule-based features versus state-of-the-art word embeddings. **Method:** Three datasets were created, each containing 178,451 word-tokens where 23,539 (13.2%) were abbreviations. The first dataset used rule-based features based on word morphology; the second uses FastText vectors as features, and the third uses word embeddings self-trained from Malaysian discharge summaries. The detection model was trained and tested using the decision tree and support vector machine. **Results:** The domain-specific word embedding gave the best result compared to the FastText and rule-base. **Conclusion:** Despite FastText containing more vocabulary and dimensions, the discharge summary embedding with domain-specific vocabulary and smaller dimensions is adequate to detect abbreviations in a semi-supervised machine learning approach. An automated abbreviation detection can alert healthcare providers to improve the quality of clinical documentation, prevent patient harm, and allow a more accurate information extraction for research and policy-making.