## Utilization of Online Clinic, AI, and Robot in the Digital Transformation of Telemedicine

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## **Abstract**

New developments have been emerging in telemedicine in accordance with the development of ICTs. ICTs make it much easier to collect, accumulate, and share health and medical data among medical professionals and patients than ever before. Smartphones and sensors to measure and transmit health data by patients at home to clinic became available among patients and clinics. These are termed by online clinic and the new guideline in Japan on online clinic was issued in 2018, which was recognized as parts of implementing diagnosis, medical question, and dosage. Using online clinic, medical and health data of patients at home can be easily collected, utilized for treatment, and shared among not only medical institutions but also nursing homes and pharmacies. The utilization of health and medical data can be considered in the process of collecting, accumulating, sharing, analyzing, and applying for implementation. This paper aims to examine the followings: (i) how and in what purpose these data will be obtained and utilized; and (ii) what policies promote online clinic in the age of AI and digital transformation to solve problems such as an increase in medical expenditures related to chronic diseases, reduction of medical resources in less populated regions, overwork of medical staff, and so on. In the industry and business, the utilization of ICT such as cloud computing, big data, AI has been proceeding in a much wider and speedy way and creating new innovations aiming at Industry 4.0. Why medicine is lagged behind? When will Telemedicine 3.0 be realized?

## **Biography**

Professor Masatsugu Tsuji Ph.D. Faculty of Economics, Kobe International University, and Professor Emeritus of Osaka University. Received B.A. from Kyoto University in 1965; M.A. from Osaka University in 1967; and Ph.D. in Economics from Stanford University, US. in 1976. He is currently professor of Kobe International University. His serves include visiting professors of Carnegie Mellon University, US and National Cheng Kung University, Taiwan; Board of Director, International Telecommunications Society; Editorial Board, Journal of International Society of Telemedicine and eHealth,

and Smart Homecare Technology and TeleHealth; coordinator of e-Health Economics, ISfTeH. He has over 200 publications. Current research focuses on economic evaluation of telemedicine and e-Health using econometric methods, and the applications of ICT such as 5G mobile, AI and robot for innovation in medicine, telecommunications, and other industry. He has been consulting the Japanese Government and local governments for implementing telemedicine projects.

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## Abstract Citation:

Masatsugu Tsuji, Utilization of Online Clinic, AI, and Robot in the Digital Transformation of Telemedicine, Primary Healthcare 2021, International Conference on Primary Healthcare and Pain Management, June 29,2020 Page No-07

Journal name : Journal of Health Education Research & Development