Development of home healthcare communication system

S. SASAYAMA, M. UTSUMI, H. DEKIGAI, S. NOMOTO. ***Development of patient-centered home healthcare communication system.*** *Gerontechnology 2014;13(2):276;* doi:10.4017/gt.2014.13.02.118.00 **Purpose** For effective home health care, doctors, nurses, and other health care professionals must come together from various organizations, and they are required to work as a team. However, information is often insufficiently shared among members of the health care staff. Currently in Japan, an ordinary paper notebook is used to facilitate communication among health care professionals, and sharing information with this method of communication is sometimes difficult to do in a timely fashion. The authors improved a previously developed iPad application for home health care named 'e-Renraku Notebook' (e-RN), i.e., e-Communication Notebook; 'Renraku' means 'communication' or 'contact' in Japanese[1]. eRN enables home care patients and their families to input the daily status of patients and to exchange information with the health care staff in a timely manner. The authors report the results of a study of its utility. **Method** The characteristics of the e-RN are as follows. (i) Unlike an ordinary electronic medical chart, care recipients and their families can input data and also can access all of the data. (ii) Letters are large enough for the elderly to read easily, as shown in *Figure 1*, and the operation is intuitive. (iii) The system can be accessed anywhere by using an LTE/3G wireless network. (iv) The e-RN performs speech-to-text conversion. (v) It allows sharing of photos and movies. To develop the system, the authors used cloud computing for data management. When exchanging information via the internet, the server requires authentication, and all exchanged information is encrypted. All of the user access histories are saved in the database of the server. Home care patients and health care staff were furnished e-RN-installed iPads for two months to input their schedules and their daily status, such as vital signs, and to exchange messages with each other. For evaluation of the system, the authors carried out a survey before and after usage of the system. **Results & Discussion** Twenty home care patients and their health care teams in four regions of Kyoto Prefecture participated in the trial. More than half of the information input was conducted by patients and their families, followed by nurses, and the other health care professionals. About 30% of the communications were related to daily life, excluding health information or inquiries. The communication was made primarily between patients/families and nurses, and communication between patients/families and other health care professionals was not rare. The authors developed a new system which allows home health care information to be shared by anyone, anywhere by utilizing the e-RN. The e-RN is effective for timely sharing of information, and the contents of home health care status can be visualized. The e-RN may facilitate collaboration among people in various professions. Effective usage of the e-RN has the potential to improve the quality of home health care and to bring a sense of connectedness to patients/families and their health care staff members.

Reference

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Figure 1. Even a 90-year-old care recipient can use it