Development of Web Services Aimed at Realizing Efficient Support for Evacuees Through Information Sharing Between Relief Workers and Evaluation from Perspective of Evacuees

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1 Introduction

Japan is subject to frequent natural disasters. Therefore, disaster management is a national priority. However, in the Great East Japan Earthquake, there were many problems with the health of evacuees, a lack of support for home evacuees and so on[1].

Therefore, University of Kochi has launched a novel information management system "COACHES" (Community Oriented Approaches for Comprehensive Healthcare in Emergency Situations). COACHES aims to provide efficient and high quality supports to evacuees by sharing the information needed for relief work between relief workers. Actually, it has been proposed to use the same system to share information between different professions in medicine field[2].

The present study developed the prototype of COACHES and used the prototype to conduct evaluation through questionnaires.

2 Design and Implementation

This system is assumed to be used by relief workers and accessed from their information terminals. The information handled within COACHES is stored for each evacuee and can be viewed and updated by scanning QR codes held by evacuee. Fig. 1 is a part of implemented screen.
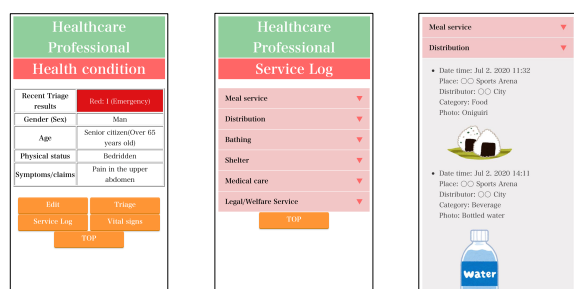

Fig. 1   Implemented screens

3 Evaluation experiment

Seventeen college students who had never experienced a large scale disaster were briefed on the system using prototype of COACHES, and a questionnaire survey from the perspective of evacuees. The questionnaire content consists of privacy, information sharing, QR codes and comprehensive evaluation.

4 Results and Discussion

When asked if they would be comfortable with their information being shared among relief workers, all respondents said "Comfortable" or "A little comfortable". However, when asked if they would like to limit the kinds of relief workers with whom information is shared and the information that is shared, some respondents said they would like to limit this. Also, the interviews with respondents revealed that they wanted to know which information was being shared and for what purpose and with whom. The results suggest that in order for COACHES to be operational in the field, there needs to be a function that allows evacuees to limit the types of relief workers and the types of information they release, as well as a system that allows evacuees to see what information is being shared and for what purpose.

When asked if they would want to use this system in disaster, all respondents answered yes or somewhat yes. From this result, I found COACHES is the system that can be used by evacuees without uncomfortable feeling.

5 Conclusion

The present study developed the prototype of web application "COACHES", which aims to support relief workers in disaster and used the prototype to conduct evaluation through questionnaires. This system will enable us to manage health and support records of all evacuees, and provide better support to them.

References

[1] Director General for Disaster Management Cabinet Office, Government of Japan. *Disaster Management in Japan*, 2015.

[2] R. Yamamoto, T. Yoshino, M. Nishibata, K. Nakai, M. Yanagimoto, and M. Irie. Evaluation of a cooperative patient information system for home care providers. *Transactions of the Information Processing Society of Japan*, 59(5):1351–1362, may 2018.