

A service design of a user-based tele-healthcare system

T-C. CHEN, P-C. TUAN, Y-F. SHIH, J-Y. WU. **A service design of a user-based tele-healthcare system for seniors.** *Gerontechnology* 2014;13(2):185; doi:10.4017/gt.2014. 13.02.046.00 **Purpose** In 2017, Taiwan will officially become an aged society¹. Aging, combined with the effects of a decreased birth rate, will create a serious work force shortage limiting options for providing senior citizen care. Consequently, the need for a tele-healthcare system will rapidly increase. A system must be developed that meets the needs of seniors, is easy to use and provides comfort to seniors. The design of such a system and process is therefore particularly important. **Method** This study uses Service Experience Engineering (SEE) to design a tele-healthcare model and identify hidden needs through service experiences². The designers of the study invited 20 tele-healthcare experts to brainstorm and note customers' needs, either known or potential; their analyses were then integrated into the model. The rationale is to use customer expectations as the impetus and thereby allow customers to participate in the design process. If deployment is carried out properly with attention to quality, customer needs will be met efficiently. By using the opinions of experts, the deployment and deployment matrix of the service function, a well-developed model for a senior citizen tele-healthcare system will be produced. **Results & Discussion** This study identified 40 client service needs, which are further divided into five categories by means of an affinity diagram. The five categories are: mental and physical senses, added services, health management, facilities, and, environment. Based on these customer needs, the experts brainstormed and devised 20 service functions, divided into four categories: system design, customer service, marketing management, and facility management. *Table 1* lists the results by planned service function and *Table 2* provides the design of the corresponding service flow. The overall result of our study is a product model for a senior citizen tele-healthcare system as well as the basis for a service plan, staff training, and software and hardware development.

References

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Table 1. Service functions of tele-healthcare system

Service	Description
System design	Development of multi-purpose and amount of the measurement system can be expanded Identity: phone, fingerprint identification Voice alerts, abnormal physiological signals Video, data transfer function Windows graphical interface and zoom
Customer service	Tunnel sphygmomanometers Volunteer recruitment training Kin tube to provide professional services division Recreational facilities Interactive networking event organized by the community
Marketing management	Organizing health, keep in good health, health talks Transportation Telecare system function publicity, set suggestion box Incentives to improve attendance utilization Fundraising events
Facility management	Seek sponsorships or grants Measurement center site selection Convenient parking Center for measurement equipment placement and line planning Measurement center site layout and safety facilities

Table 2. Service system processes

Process	Description
Design	System requirements provided Site selection Site planning Volunteer groups
Promotion	Volunteer advocacy visit Events Awards publicity
Use	Volunteer services division Health services division tube Activity arrangements Comments received, improving Award in recognition of Find resources