

C.R. HUANG, H.L. HSIEH, B.K. CHUANG, T.S. SHEU, J.Y. CHANG, Y.Y. HUANG. **Effectiveness and economic viability of a telehealth and telecare system in Taiwan.** *Gerontechnology* 2012;11(2):250; doi:10.4017/gt.2012.11.02.463.00 **Purpose** Due to the lack of customized business models, only few telehealth systems in Taiwan can be operated for a long time^{1,2}. In this study, we present a telehealth and telecare system that aims at effectiveness and economic viability. The Chu-Shang Show Chwan Hospital telehealth and telecare system serves more than 2 053 seniors with respect to health care in 11 rural communities. Measurements comprise blood pressure, weight, body temperature, glucose level, and heart rate. These vital sign data are inspected in almost real time by the service platform in the 24-hour response center (Figure 1), located in a hospital. The care manager of the response center notifies relatives and/or a doctor in case of a serious event. In addition a telecare system was installed at 382 families with which clients could send an alarm to the response center. We will demonstrate the effectiveness of the telehealth and telecare service for rural areas and to develop a business model for continuous operation in the long term. **Method** For the health care system the time course and averages of the blood pressure, glucose level and weight were computed. The frequency and relevance of alarm responses of the telecare service were also explored. **Results & Discussion** Users' mean blood pressure was reduced by a significant 8~10mmHg on average. Also glucose levels dropped significantly by 35~58mg/dl on average. In addition, the mean body weight decreased 1.3kg, this is also significant. With respect to the home telecare service, more than 845 requests were made, including 116 successful ambulance sorties over a period of 18 months. Although elderly rated both telehealth and telecare service satisfaction highly the willingness to pay for these services was low as they hoped to control their chronic diseases and did not feel treatment was urgently needed. Telehealth services are therefore only economically feasible in rural areas where many older people live independently. This is why the telehealth and telecare system operates on a triangular business model, in which non-profit organizations (NPO) cooperate with the hospital, and clients do not pay a fee for services but can donate to the NPO. This B2B2C business model can operate on the longer term and provides a complete and effective medical service delivery system.

References

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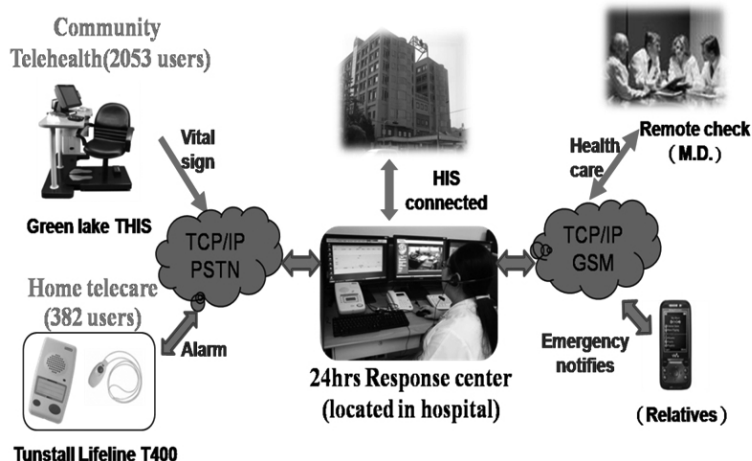


Figure 1. The infrastructure of Chu-Shang Show Chwan Hospital telehealth and telecare system