

eHealth Service Modeling for Developing Country: A Case of Emergency Medical Service for Elderly in Asia

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ABSTRACT

Healthcare service is an essential mechanism for the well-being of the elderly from physical, social and mental health. Implications of mobile technology for Electronic healthcare (eHealth) are challenges in technological management and healthcare market for developing countries. eHealth support trends of the aging population in Asia that increase at an average to 30% in 2050. There is a need to identify and develop Emergency Medical Service (EMS) with electronic healthcare for elderly. This research is aimed to develop eHealth service model through mobile technology for developing countries to face with elderly patient demands in aging societies. The authors use systematic reviews to identify component of health situation and EMS from WHO. Then they develop the eHealth service model through mobile technology on basic of value co-creation concept with feasible applications. The findings show that eHealth is a significant service platform influencing effective in Demand increasing quality of service to elderly people. Mobile technologies in eHealth are key factors to increase quality of healthcare service to elderly people.

Keywords: *Aging Society, eHealth, Emergency Medical Service, Healthcare, Service Modeling*

INTRODUCTION

Healthcare service developments for elderly in Asia are challenges by healthcare technology investment and service management to support increasing healthcare demand. Asian countries are different in health system, health policy and quality of services, they need to arrange those factors to support an increasing of the aging populations at average to 30% in 2050. Principle healthcare services for elderly involve health monitoring, Emergency Medical Service (EMS), health management plan, nursing at home and others. An essential mechanism for the well-being of the elderly is healthcare service from physical, mental and social well-being (Niehaves, 2011;

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Stockdale & MacLeod, 2013). EMS is a primary health service that supports life threatening of people in remote area on 24 hours basic. Primary healthcare service is a basic of well-being, it depends on health policy and standard in each country, that is required co-operation of providers in healthcare services and community. Implications information and communications technology (ICT) to support healthcare service for developing countries are important issues for policy maker and governments, especially in mobile technology and applications through internet (Junhua, et.al, 2013). It effects to quality and cost of service in healthcare market by support basic health monitoring and communicate to caregiver.

Advancement of mobile technology is a key factor of healthcare service management in many developed countries. It enables to provide self-service on health monitoring by patient to online medical by physician as an alternative for implication in developing country. Trends in healthcare market are expanded by adaption ICT to support consumer behavior and health demand based on limit of health resource. Electronic healthcare (eHealth) is an application of information technology in healthcare services, that communicates health information in medical team or in healthcare service system. It is an interesting topic for policy maker in developing countries to overcome lack of resource in health system (Petrovic, 2013; Kishimoto, et.al, 2013). eHealth expand from general healthcare practice to integrated healthcare communications between providers and patients. It relates in many applications from health records, radiography, picture archiving communication system (PACS), and to tele-Health.

eHealth requires to integrate ICT, skill workforces, and technical support in health service system usually to gain applied effectiveness and efficiency of healthcare systems. Although applications of eHealth applied to developed countries over 10 years, from basic information management to online health service, there has not been broadly applied in health system of Asian developing countries. It is different when comparing with e-commerce and internet-banking (Plaza, et.al, 2011; Mendonca, et.al, 2004; Liu, et.al, 2011). Challenges of eHealth for EMS in Asian countries are preparation health system with basic communication technology on limit of resources. There is a need to identify and develop eHealth model to support EMS for the elderly in developing countries. Healthcare providers and related co-operators have to develop eHealth systems on basic of quality of service and guideline from WHO. It is are essential to apply mobile technology to support health service used to interact among healthcare provider, communities, families, and elderly.

Alternatives of EMS for elderly should be prepared on reasonable price to support needs of patient and caregivers. This research is aimed to develop eHealth service model for developing countries on the basis of value co-creation concept, and to identify component of EMS system to face with elderly patient demands in Asia. We focus on EMS activities external hospital that provides healthcare service to elderly at home in remote area of hospitals. Systematic reviews were used to identify role of actors in EMS and eHealth service system to developed eHealth model with mobile technologies. eHealth service model is developed on the basis of value co-creation among patients, family, care giver, hospitals, ICT providers, and insurance providers. It increases life quality of people in community by providing primary health and EMR.

LITERATURE

eHealth

eHealth is a broaden application of information technology or health informatics in healthcare service focusing on communication in medical team or healthcare service system. It widely uses the internet, digital process and recognition for supporting medical practices or healthcare

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