Patients, Caregivers, and Telehome-Based Care Systems: A Case Study

Katerina G. Tsigrogianni, Western Macedonia Research Centre, Greece
Ioannis A. Tarnanas, Western Macedonia Research Centre, Greece

EXECUTIVE SUMMARY

The Personal Health Assistant Project (PHA) is a pilot system implementation sponsored by the Kozani Region Governors’ Association (KRGA) and installed in one of the two major public hospitals of the city of Kozani. PHA is intended to demonstrate how a secure, networked, multipurpose electronic health and food benefits digital signage system can transform common TV sets inside patient homes or hospital rooms into health care media players and facilitate information sharing and improve administrative efficiency among private doctors, public health care providers, informal caregivers, and nutrition program private companies, while placing individual patients firmly in control of the information at hand. This case evaluation of the PHA demonstration is intended to provide critical information to other decision makers considering implementing PHA or related digital signage technology at other institutions and public hospitals around the globe.

Keywords: caregivers; e-health; medical informatics; medical management; telehome care

ORGANIZATION BACKGROUND

Western Macedonia is located in northwestern Greece with borders on Albania and the former Yugoslav Republic of Macedonia. Western Macedonia consists of four prefectures, Grevena, Kastoria, Kozani, and Florina. Its capital is Kozani. The region has a population of 302,000, representing 2.8 percent of the country’s population and produces 2.9 percent of the gross domestic product (GDP). Kozani, the capital of the region, is 497 kilometers (km) from Athens and 135 km from Thessaloniki. Kozani, the capital of the Kozani Prefecture, is a city of about 54,000. It is 90 minutes north of
Thessaloniki, Greece, in northern Greece, which has a total population of more than 1.081 million, and it is the second most populated Greek city. The population is about 99 percent white and about 1 percent Asian.

Kozani has had two hospitals, the General Hospital of Kozani (MGHK) and the Spinaris General Hospital of Kozani (SGHK), since the spring of 2002, using electronic health (e-health) card technology. In previous participating information technology (IT) programs in health and the MGHK public hospital demonstration (eUser project, 2001), the e-health card replaced the traditional hand-written health card. The primary source of health care for most MGHK clients is public health nursing at the City-County Health Department or private providers. Many private physicians accept Medicaid and the City-County Health Department serves low-income families. Managed-care giving had not made large inroads in Kozani until 2003 (see Table 1).

The MGHK constitutes a powerful presence in the area of hospital care provision. Its excellently trained personnel and its modern medical and technological equipment in combination with its personnel contribute to the creation of another reliable and functional health organization. In the year 2004, MGHK specialization in injuries and orthopedic incidents was of vital importance and made it particularly important for secondary treatment for the Paralympic Games. This activity is seen in the Table 2.

At present, MGHK is staffed with highly trained scientific and administrative personnel who account for 1,800 employees in various positions and specialties (see Diagram 1). The 400 doctors of the hospital are to be found at the patient’s side, and are ready to give complete medical care and attention. The team consists of an additional 1,400 individuals who are part of the scientific, nursing, auxiliary, and administrative personnel of the hospital.

**SETTING THE STAGE**

Since 2001, MGHK has developed together with Western Macedonia Research Center (WMRC) a global health monitoring platform service that offers an efficient, open, scalable, and secure service environment for utilization of remote diagnostics and telemedicine services. This makes it possible to streamline the health care system and reach better efficiency monetarily as well as improve the quality of health care. At the same time, it is possible to increase business volume through a larger geographical reach for the medical service. For elderly care and chronic diseases, people can be treated at home, which increases the hospital infrastructure capacity. Patients get faster consultation in case of an acute emergency and easy-to-use solutions without ties to a place and time.

Home care is currently the fastest-growing section of the health care market in the health care leading countries, such as the United States, and is also experiencing rapid growth in other venues, such as the United Kingdom and Europe, in general (Darkins & Carey, 2000). According to the National Association for Home Care, more than 20,000 medical professionals provided home care services for acute illness, long-term health conditions, permanent disability, or terminal illness to approximately 7.6 million people in the United States (National Association of Home Care, 2001). Factors such as medical cost control and an aging population continue to seed the home health care industry (Darkins & Carey, 2000; Warner 1997).
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