

Models of Web-Based Support for Caregivers

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Comprehensive Health Enhancement Support System (CHESS) is one of the most extensively tested models of Web-based support for caregivers. Developed by health care and informatics experts at the University of Wisconsin,¹ this system is designed to provide information and support from experienced caregivers, gerontologists, social workers, and others. This model was tested with 106 caregivers of people with dementia; 67% indicated that they used CHESS for social or emotional support and 17% for guidance in decision making, and most caregivers said that they would continue to use CHESS and would recommend it to others.² The CHESS model has evolved since its inception. Professionals now give care advice by e-mail, conduct assessments by Web-camera, illustrate caregiving procedures through video clips, and maintain graphs of data on care recipients.^{3,4}

Virtual Nurse Caring is a program that communicates nursing expertise and advocacy via the Internet. It presents accurate, scientific-based information and anticipatory guidance using step-by-step algorithms and Web-based video scenes to guide caregivers providing home care. Preliminary outcomes included positive ratings of the Virtual Nurse Caring experience with the use of a specifically designed Web site that had numerous helpful caregiving stories.^{5,6} Virtual Nurse Caring aims to improve home care safety and management, provide family caregivers a sense of connection with health professionals, and offer a place where families feel supported to share their stories.^{7,8}

The Visiting Nurses Association (VNA) network translated decades of experience with standardized interventions into telecare protocols. Used by 900 VNA agencies, the telecare protocols have resulted in consistently fewer hospitalizations and ED visits of older adults.⁹ Effects on caregivers have not been published, but their evaluations have been positive.

Other Web-based interventions. In the Netherlands, Mol and colleagues developed a Web site with exercises for enhancing the memory of older people.¹⁰ More than 26,000 community-dwelling Dutch people used the site and evaluated it positively.

Some businesses make caregiver multimedia training programs available on workplace Internet sites.

For example, IBM has online information on caring for parents that employees can access.¹¹

Manufacturers of monitoring technologies describe successful multicomponent Web-based services as models for home care of the elderly. These services combine "smart home" monitoring, access to local professionals via telehealth Internet programs, connections to family members, and reminder devices.¹² However, there has been no formal research on these models.—Carol Smith, PhD, RN

REFERENCES

1. Gustafson DH, et al. CHESS: 10 years of research and development in consumer health informatics for broad populations, including the underserved. *Int J Med Inform* 2002; 65(3):169-77.
2. Kelly K, et al. *Technology and family caregiving: advantages and challenges for delivering education, training and support*. The Era of Global Aging: Challenges and Opportunities. 60th Annual Scientific Meeting; 2007 Nov 16-20; San Francisco, CA; 2007.
3. Glasgow RE. eHealth evaluation and dissemination research. *Am J Prev Med* 2007;32(5 Suppl):S119-S126.
4. Center for Health Enhancement Systems Studies. *What is CHESS?* University of Wisconsin-Madison. 2008. https://chess.wisc.edu/chess/projects/about_chess.aspx.
5. Smith CE, et al. Quality assurance processes for designing patient education web sites. *Comput Inform Nurs* 2002; 20(5):191-200.
6. Smith CE. *Testing virtual nurse caring of picture phones and the Internet [abstract]*. 29th Congress of ESPN; 2007; Prague, Czech Republic: European Society for Clinical Nutrition and Metabolism; 2007.
7. Sandelowski M. Visible humans, vanishing bodies, and virtual nursing: complications of life, presence, place, and identity. *ANS Adv Nurs Sci* 2002;24(3):58-70.
8. Watson J. Metaphysics of virtual caring communities. *International Journal for Human Caring* 2002;6(1):41-5.
9. Soran OZ. *Societal cost and cost to Medicare for enhanced monitoring using a computer-based telephonic monitoring system in older patients with heart failure: the Heart Failure Home Care Trial [poster]*. American College of Cardiology 57th Annual Scientific Session; 2008 Mar 29-Apr 1; Chicago; 2008. <http://www.heart.org/presenter.jhtml?identifier=3055379>.
10. Mol M, et al. An evaluation of the use of a website and telephonic information service as public education about forgetfulness. *Telemed J E Health* 2007;13(4):433-44.
11. Beauchamp N, et al. Worksite-based Internet multimedia program for family caregivers of persons with dementia. *Gerontologist* 2005;45(6):793-801.
12. Joseph Rowntree Foundation. *Introducing smart homes*. 2007. <http://www.jrf.org.uk/housingandcare/smarthomes>.