Study Reveals Technology Advancements Improve Nursing Productivity and Retention Rates

According to results from a recent study by the Pennsylvania Homecare Association (PHA) and Penn State University (PSU), home care patients’ use of telehealth technologies can increase nurses’ productivity while maintaining established quality of care levels.

Funded by a Congressional Appropriation sponsored by Sen. Arlen Specter (R-PA), the study’s main purpose is to evaluate telehealth as one possible remedy to the growing nurse shortage.

For the purposes of this study, “telehealth” refers to communications systems that connect individuals receiving care in their homes with their health care providers. By using equipment that transmits data over telephone lines, home health care providers are able to assess, counsel, and monitor patients remotely, thus increasing patient access to necessary services when they need them.

Thirty-four home health agencies from 48 counties throughout Pennsylvania participated in this project, 23 of which use telehealth systems, the remaining 11 serving as a control group. Dr. Kathryn Dansky, an associate professor for PSU’s Department of Health Policy and Administration, is leading the study.

The most recent data generated by the study’s researchers demonstrate that using telehealth tools within home care settings helps agencies maximize resources by allowing them to “see” more patients. Agencies using telehealth have an average registered nurse ratio of 15:1, while non-telehealth agencies have an 11:1 ratio. Agencies with sicker patients who require more significant amounts of travel time on the part of home care nurses are able to see up to 75 percent more patients when using telehealth technologies.

“Home health care agencies are trailblazers in the world of 21st century health care, on the leading edge of discovering how technology can be used to provide health care services more effectively,” says Vicki Hoak, executive director of the Pennsylvania Homecare Association. “The empirical results generated from this project will enable home health agencies to make informed decisions that will benefit their workforce as well as their patients.”

PHA received three consecutive appropriations from Sen. Specter of $250,000 each. During the first year, researchers focused on gathering nursing recruitment and retention data. The second year, they continued to examine nursing recruitment and retention, also factoring in productivity. This year, study researchers are concentrating on the financial impact of telehealth technologies on home health care agencies. Researchers will also continue evaluating nursing recruitment and retention, ultimately generating three years’ of job satisfaction and turnover data. Final results will be available in September 2005.

In addition to evaluating agency workloads, researchers are assessing home health nurses’ attitudes regarding their jobs and their responses to using telehealth to monitor patients. A survey conducted over the past two years measured overall job satisfaction, individual participation in telehealth activities, perceived usefulness of the technology, organizational support for telehealth, intention to leave one’s home health agency or to retire, and personal characteristics of respondents.

Study directors distributed over 1,200 surveys to home health employees from 34 participating agencies. Nearly 630 were returned, a response rate of over 50 percent. On a scale from 1 (low) to 5 (high), survey results showed that:

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With an average score of 4.18, job satisfaction remains high.

Nurses’ involvement in telehealth activities is low, with an average score of 1.9. The majority of nurses report that they perform telehealth activities less than once a week. This could be attributed to the fact that many agencies use a small core group of nurses to perform telehealth activities.

The average score for perceived usefulness of telehealth technologies is 3.57. The longer a home health agency uses telehealth, the more useful nurses perceive it to be.

Overall, nurses indicate that organizational support for telehealth is in the mid-range, with an average score of 3.76.

Voluntary turnover rates for RNs in this sample of home health agencies decreased from 17% (Year 1) to 13.4% (Year 2).

Estimated at 11 percent per year, the lowest turnover rates were found in home health agencies that have implemented telehealth programs, compared to almost 19 percent for home health agencies that do not use telehealth technologies.

Combining results from the survey’s analysis and turnover data, researchers conclude that telehealth does appear to have an effect, if an indirect one, on nurses remaining on the job.

For more information regarding the PHA telehealth project, please visit www.pacareathome.org, or call 800/382-1211.