

NIU News

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Attention: Editor

IRHNet to expand medical options for rural Illinois

SPRINGFIELD, Ill. — The United States boasts perhaps the best health care system in the world; however, those who live outside of major urban areas often find themselves with limited access to many medical services.

For people living rural in areas like those that make up most of Illinois, health care is often defined by what is available at local clinics or hospitals with 20 or fewer beds. While those facilities can provide excellent basic health care, they often must send patients to larger cities for many types of treatments and consultations. Those facilities often also lack specialists like cardiologists, oncologists, radiologists and emergency medicine physicians, among others. To get those services, patients often must travel great distances.

The Illinois Rural Health Network (IRHNet) will solve those dilemmas for millions of patients across Illinois, giving them and their doctors access to the latest medicine has to offer through telemedicine.

Telemedicine is the use of medical information exchanged from one site to another via electronic communications to improve patients' health status. With high-speed networks like IRHNet, that information can be exchanged in real time, or transmitted for later review by specialists in remote locations. While the IRHNet will be the first statewide network dedicated to telemedicine in Illinois, it has been improving the state of health care for people in other areas for decades.

Among the many applications of telemedicine are:

- **Emergency medicine:** In many rural areas, doctors must frequently treat traumatic injuries that push them to the limits of their training. The IRHNet will create the ability for those physicians to consult in real-time with experts hundreds of miles away who

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have almost instantaneous access to the patient's latest x-rays, scans, lab results and vital information.

- **Specialized Medicine**

- **Diagnosis:** Patients in need of specialized care can often undergo diagnostic tests at their local hospital and have the results sent to specialists at a larger hospital. The specialist can review those tests in real time, or at his leisure, and then make a recommendation. The current connections at most IRHNet hospitals would take days to transmit diagnostic tests like CT scans and MRIs, but the new network will handle the same task in minutes.
- **Follow-up care:** Should a patient require surgery or treatment at a distant hospital, the IRHNet may allow them to conduct follow-up visits with their doctor via video chats that could include examination of high-quality video images or photographs. In some instances, patient conditions could be transmitted continuously to the remote specialist while the patient recovers in his own home.

- **Psychiatry:** Tele-psychology is already gaining popularity in other areas of the country. Secure, private health care networks like IRHN allow physicians to treat patients in remote areas, conversing in real-time between rooms equipped with high-quality digital cameras and screens. Such services can also make psychiatrists available to people in emergency rooms, prisons or nursing homes.

- **Medical consultation:** In many areas of the state, general practitioners or nurse practitioners are often confronted with cases that push the limits of their training and experience, and the nearest consulting physician may be hours away. The IRHN will allow them to consult with physicians around the state who can provide additional resources and expertise and recommend tests, treatment options or transport to more advanced medical care.

- **Home monitoring of patients:** As broadband systems expand and improve, the potential exists to monitor at-risk patients at home. For instance, patients identified as being at risk for heart failure could have their weight, blood oxygen levels and other factors reported from home each day, immediately alerting their doctor to a potentially worsening condition. Doing so could tip off physicians to problems before they become serious, often allowing the physician to address the issue in an office visit rather than after it

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becomes severe and results in an emergency room visit. Such efforts improve the quality of life for patients and dramatically lower health care costs.

- **Electronic medical records:** A robust and widely used medical network makes the implementation of electronic medical records more practical. Such records would follow patients from doctor to doctor, keeping physicians up to date on the patient's total health status and helping to avoid dangerous drug interactions. They could include not just physicians' notes but also x-rays, CT scan results, etc.
- **Education:** Medical professionals in remote areas are faced with a dilemma when it comes to upgrading their professional skills. Often they are required to receive ongoing training; however, doing so means abandoning their patients for up to days at a time. The IRHN will allow for high-quality online training in ways that are not currently possible. It also will allow for the possibility of educational community health programs aimed at specific populations such as the elderly, diabetics, etc.
- **Public Health:** The network will allow for faster and more efficient gathering of information on diseases that pose a public health risk.
- **Disaster recovery plan:** The IRHNet will allow hospitals to create effective emergency/disaster recovery plans, such as shipping electronic versions of medical records, financial records and other key data to off-site storage (perhaps at another hospital in return for reciprocal storage) to protect that data in case of a tornado, fire or other disaster.

For more information look on the World Wide Web at <http://illinoisruralhealthnet.org/>

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