

# Karen Telleen-Lawton: Santa Barbara Companies at Forefront of Telemedicine

Cross-disciplinary approach is driving innovation in helping resolve health-care challenges

By Karen Telleen-Lawton, Noozhawk Columnist | Published on 02.13.2012 8:26 p.m.



“The Robot Will See You Now: How Non-Medical Technologists Are Revolutionizing Health Care.” The provocative lecture title for a recent [MIT Enterprise Forum Central Coast](#) intrigued me about what is being called telemedicine. Santa Barbara’s business community is heavily involved, but the rest of us are just getting used to the idea.

[Wikipedia describes telemedicine](#) as helping eliminate distance barriers and improving access to medical services in distant rural communities. It makes possible immediate access to specialists who can save lives in emergencies.

An interesting aspect is the cross-disciplinary approach driving innovation. Electrical engineers and computer scientists are helping resolve health-care challenges, such as Santa Barbara-based [BioIQ](#), which uses cloud computing to collect anonymous health data, lowering health insurance costs.

[Active Life Scientific](#) is another local example of the dovetailing of various disciplines that drives telemedicine. They are incorporating technology invented by [UCSB](#) physicist [Paul Hansma](#) into devices that doctors hope will help diagnose osteoporosis and other conditions.

Robots are one of the biggest areas. Health-care organizations have experimented for more than a dozen years with providing health care at a distance. The technology — basically a rolling machine topped by a video monitor — has been used since 2010 at [Thomas Jefferson University Hospital](#) in Philadelphia. A robot from [InTouch](#) of Santa Barbara enables specialists there to perform remote consultations. Stroke patients in particular benefit, because a rapid assessment and treatment can prevent death or serious complications.

“A physician sitting in a remote location can direct the robot to go to a patient’s bedside,” according to Pamela Kolb, vice president of clinical and support services at Jefferson, in an interview with [InformationWeek Healthcare](#). “Then the off-site physician examines and communicates with the patient, their family and their on-site providers.”

Success, of course, depends on acceptance by the medical community and patients. A recent study conducted at three critical care units at university hospitals investigated the attitudes toward the use of remote consultants and nursing staffs’ perceptions about the uses of telemedicine. The results were mixed.

Overall, most respondents thought telemedicine “improved survival in the ICU,” but the contact between local and telemedical staff was low. Seventy percent reported two or fewer telemedicine-to-nurse contacts in the prior six months. An important factor seemed to be personally knowing the physician on call for telemedical consultations.

Most nurses didn’t feel the telemedicine staff was intrusive or interrupted work flow, but more than a quarter thought it decreased privacy for the patient. Almost all the nurses agreed that the telemedicine staff should let the bedside nurses know when they were “entering” the patient’s room.

Improving rural care with remote diagnosis and treatment is a promising area. Combined with on-the-ground trained medical personnel, telemedicine could go a long way toward improving health care in remote areas. But knowing the importance of “bedside manner” to health outcomes, I hope we move forward slowly and methodically, taking the time to observe the non-quantifiable costs as well as benefits.

Next time the nurse tells me “the doctor will see you now,” I hope it’s still my flesh-and-blood doctor.

— *Karen Telleen-Lawton’s column is a mélange of observations spanning sustainability from the environment to finance, economics and justice issues. She is a fee-only financial advisor ([www.DecisivePath.com](http://www.DecisivePath.com)) and a freelance writer ([www.CanyonVoices.com](http://www.CanyonVoices.com)).*