



## Telemedicine Reduces Cost of Care



An UC Davis study has shown that compared to telephone, paediatric telemedicine consultations produced significant cost savings while improving quality of care. Telemedicine systems may be expensive to install and maintain, but they more than pay their way, saving an average \$4,662 per use, researchers say. The findings are reported in the journal *Medical Decision Making*.

"Our previous work showed that telemedicine was good for kids, families and providers, but we didn't really address the cost issue," says James Marcin, MD, MPH, UC Davis interim head of paediatric critical care medicine. "Now we know, not only does it improve quality, safety and satisfaction, but it also saves money."

Given its ability to both improve quality and reduce costs, Dr. Marcin believes telemedicine should play a larger role in healthcare.

In previous studies, health economists sought to determine the actual costs of a telemedicine consult, as well as the potential savings. On one side of the ledger, hospitals must invest in equipment, software and IT support. In addition, urban hospitals must pay to have subspecialists on call to assist their rural colleagues. These and other costs averaged out to \$3,641 per consultation.

As the new UC Davis study found out, however, the value of these consultations far exceeded these expenses. In many cases, cost savings accrued from reduced transfers between hospitals. In particular, moving patients by air ambulance can dramatically increase the cost of care. Telemedicine consults reduced the number of patients being transferred by 31 percent.

For this study, Dr. Marcin and colleagues reviewed the Paediatric Critical Care Telemedicine Programme at UC Davis, tracking its interactions with eight rural emergency departments between 2003 and 2009. They gathered detailed information on the costs of implementing and maintaining the telemedicine programme and weighed those against the transfer logs at the eight hospitals, as well as the costs of ED visits. The team focused on five conditions: asthma, dehydration, fever, bronchiolitis and pneumonia. These diagnoses stand out because, with appropriate guidance, they can be treated at the rural hospitals.

The UC Davis team will continue to study the relationship between telemedicine and patient costs and are excited to share this information with payers, hospital administrators, physicians' groups and other interested parties.

"In California, physicians get paid for telemedicine consultations, but in many states they don't," Dr. Marcin points out. "Given its ability to reduce medication errors and increase patient, family and physician satisfaction,

as well as lowering costs, I think it makes sense to actually pay physicians a little more for this service to incentivise the model."

Source: [UC Davis Health System](#)

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