A B C D E F G Children's Health

"Telemedicine" Connects Patients With Doctors

by Marcie Roth

(NAPSA)—Doctors in the U.S. are using technology to treat patients as far away as Iraq—without leaving their office. Now that same technology will treat patients here at home.

Called telemedicine and telerehabilitation, it helped save the life of 12-year-old Ma'rwa Ahteemi, a little girl whose sisters and brothers were killed when an errant mortar crashed into the corner of their clay-walled home in Iraq. As she ran from the blast, shrapnel struck Ma'rwa in the spinal cord; she fell into a mud puddle and was electrocuted by fallen wires.

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In critical condition, Ma'rwa was taken to an ill-equipped local hospital where she developed a potentially life-threatening pressure sore. From there, she was sent to a U.S. field hospital in Iraq. However, the army doctors had little experience treating children, chronic injuries or pressure sores. With the help of the National Spinal Cord Injury Association (NSCIA), a doctor used telemedicine technology to consult with specialists at the National Rehabilitation Hospital in Washington, D.C.

Ma'rwa Ahteemi

Marcie Roth
Treatment From Afar

Telemedicine is a type of "longdistance" medicine, which uses telecommunications to provide off-site health care services to patients in remote locations. Similarly, telerehabilitation is the delivery of rehabilitation services primarily over the Internet. Some common modes of the treatments are Webcams, videophones, e-mailed photographs and Internet applications.

Telemedicine let an Iraq-stationed pediatrician use real-time communication to assess and treat Ma'rwa. The pediatrician e-mailed photos of the pressure sore to specialists in Washington, D.C. The specialists suggested ongoing treatment based on updated photos that were e-mailed every few days.

During the next two months, arrangements were made for Ma'rwa to receive treatment and rehabilitation in the United States, enabling her to return to her family. With telemedicine, the pressure sore was nearly healed by the time Ma'rwa arrived in America.

A Growing Trend

The NSCIA, which facilitated Ma'rwa's treatment, supports telemedicine and telerehabilitation, which are commonly used in the fields of neuropsychology, speech-language pathology, audiology, occupational therapy and physical therapy. Telemedicine is also used to demonstrate and teach self care—for instance, how to transfer from a bed to a wheelchair. Telemedicine and telerehabilitation patients are unable to receive these services for various reasons including mobility impairments, lack of qualified professionals in a given area and distance from a medical facility.

Improving U.S. Health Care

Telemedicine is critical to the U.S. health care system because it bridges the gap for patients who do not have access to top-notch health care facilities. These services provide underserved patients faster, more frequent medical attention and greater follow-up care after discharge resulting in the prevention of further complications.

Since telemedicine and telerehabilitation are delivered largely over the Internet, they rely heavily on broadband capacity. To realize their benefits, we need significant new investments in network capacity to transmit the exaflood of medical data—the explosion of content straining the Internet's capacity. Consider this; capacity is being consumed by bandwidth-intensive video applications such as YouTube, which uses as much bandwidth today as the entire Internet consumed in the year 2000.

Smart Solutions

Continued investment in broadband is critical to this vital medical technology. We can prepare for the coming exaflood by promoting network investment, protecting consumers, maximizing competition and limiting government control.

I was appointed Ma'rwa's legal guardian and with her father's permission, I hoped to have Ma'rwa live with me in Maryland to continue medical treatment and experience a childhood free of war. However, I was unable to obtain a Visa, so the NSCIA provided Ma'rwa's family with a satellite phone to stay in touch.

Almost immediately, the phone was stolen or perhaps sold for food. It has been nearly a year since I have spoken with Ma'rwa or learned if she needs medical supplies. If she had Internet access we could maintain communication, and she could even continue her treatment through telerehabilitation.

Marcie Roth is executive director and chief executive officer of the National Spinal Cord Injury Association, an organization dedicated to improving the quality of life for hundreds of thousands of Americans living with the results of spinal cord injury and disease and their families. The NSCIA is a member of the Internet Innovation Alliance.