



Weaving a healing web

"Your child has cancer."

It's a message every doctor dreads having to deliver. But for physicians in developing countries, battling life-threatening diseases with limited resources, the burden is greater. In many cases, they know their small patients will die. Of the 300,000 children around the world who are diagnosed with cancer each year, fewer than 30 per cent have access to adequate treatment.

Systems design engineer **Yuri Quintana** (BA '88, MASC '90, PhD '95) is working to change those grim statistics. He and his team create Internet-based applications that allow health-care workers in more than 160 countries to share research, patient data, and treatment strategies – and help children with life-threatening diseases heal.

Quintana is based at St. Jude Children's Research Hospital in Memphis, Tennessee, one of the world's leading pediatric research and treatment centres. Its mission is to find cures for children with catastrophic diseases – cancer, blood disorders and HIV/AIDS. Its guiding principle is simple: "No child should die in the dawn of life... anywhere in the world, any country, any city, any village."

As director, education and informatics for St. Jude's International Outreach Program, Quintana is using the web to make that principle a promise. In 2002, he and his team launched the Cure4Kids.org network, an interactive virtual community for medical education and collaboration. Doctors, nurses, and parents around the world now have free access to online seminars and lectures, a digital reference library that includes medical journals, and multilingual web-based learning. They can consult with experts at St. Jude and other centres through the website's online meeting rooms. And a new database tool, POND4Kids, allows hospitals to create a virtual storage area for their patients' records.

The foundations of this massive resource, with more than 15,000 users to date, were laid by a team of three people. In the early days of the project, Quintana and his small team did everything from programming to recording seminars. It was the kind of entrepreneurial, innovative atmosphere that took him back to his days at University of Waterloo, where he was deeply influenced by computing pioneer Wes Graham.

"UW is still part of my community," Quintana says. Besides keeping in touch with former professors, he also collaborates with Catherine Burns, associate professor in UW's Department of Systems Design Engineering. An expert in interface design and usability, Burns has provided consultation to Cure4Kids, helping to make the system accessible to users from many countries, with different languages and varying levels of technology.

In addition, some of Burns's students had the opportunity to work on aspects of the network as part of their course work. These students gained design experience; they also saw their work change lives.

As Quintana says, "When I started at UW, I thought engineering was about numbers and bridges. Now I know it's about solving human problems. Our networks are not networks of technology. They are networks of people." TEXT: BETH BOHNERT PHOTO: ST. JUDE BIOMEDICAL COMMUNICATIONS

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