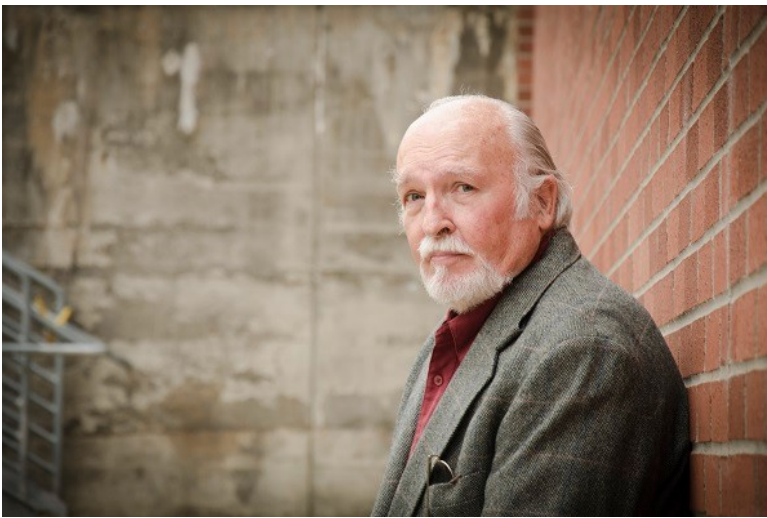


Retired nurse Russell Michaelsen found an encore career as an inventor

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Russell Michaelsen, photo by Sarah Schaub

Russell Michaelsen didn't graduate from the WSU College of Nursing until he was nearly 50, after working as a medical lab tech, logger, commercial fisherman, hunting guide, and builder.

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As a nurse, he added inventor to that list of vocations.

Michaelsen, now 78, co-founded [Hyprotek, Inc.](#) in Spokane in 1994 to develop medical devices and products that reduce the risk of patient infections. The product line grew out of his work as a nurse at a Spokane hospital. That's also where he met Dr. Patrick Tennican, a board-certified internist and infectious disease specialist in Spokane, and together, they launched Hyprotek with L. Myles Phipps, Ph.D.

"The three of us started brainstorming about things that needed to be developed," Tennican recalled. "That was kind of the start of the invention career."

Michaelsen is Hyprotek's director of regulatory affairs, Tennican is CEO, and Phipps is vice president of research and development. The company is based in the Health Education & Research Building on the WSU Spokane campus.

Many of the products were designed to prevent infections associated with IV lines, such as a port cap that cleans and disinfects the access port on an intravenous catheter line, and a syringe that allows mixing and administration of medications in a closed, sterile system. Hyprotek licensed some of the technology for the port cap to another company, and it's being sold in the U.S. and Europe.

The need for such products is clear, with thousands of cases of bloodstream infections associated with central lines and other catheters each year and a mortality rate from such infections of 12 percent to 25 percent.

For any product to work, however, it has to be used properly and consistently, by nurses in the hospital and often, by family members or caregivers at home. Tennican said one of Michaelsen's roles in the company is to test

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ease of use.

“Whatever we develop needs to be nurse-friendly,” Tennican said. “For a number of years Russ was rotating around to different wards in the hospital as part of the float pool, so he could see the problems. I may look at things in one way, but ultimately the physician isn’t going to be doing the procedure – it’s the nurse.”



Dr. Patrick Tennican and Russell Michaelsen were two of the co-founders of Hyprotek. Photo by Sarah Schaub.

Hyprotek is also working on a new type of disinfectant, in collaboration with students at Gonzaga University, and has worked in the past with students from WSU and Eastern Washington University. Other products on the horizon are a variety of antimicrobial dressings. The company holds numerous patents in the U.S. and worldwide for its work.

Michaelsen said nursing gave him much more than an encore career as an inventor, however.

“I didn’t anticipate that nursing for me would be two-edged,” Michaelsen said recently. “It was my most wonderful experience working, by far, and the most challenging by far – and that includes working on a crab

boat where your life is on the line.”

He added, “You’re dealing with people whose family members are suffering or dying. That’s being right in the middle of life. I don’t think I felt at the time that work was like an ordinary job. It was more like a privilege.”

- *Addy Hatch, WSU College of Nursing*

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