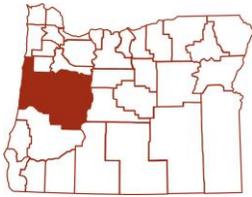


# Modernizing Public Health: Stories from the Field

## Coast-to-Valley Regional Partnership



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### Partnership with hospitals helping boost pneumococcal vaccinations

Lane County's Public Health Division had a dilemma.

It knew that adults coming through hospitals operated by PeaceHealth—the hospital system that serves much of the county—were a potentially captive audience for an effort to boost vaccinations against pneumococcal disease. The infection is the No. 1 cause of bacterial pneumonia and hospital readmission in the United States.

The problem: “We speak ‘hospital’ a little bit, but we’re not fluent in ‘hospital,’” said Patrick Luedtke, M.D., M.P.H., the county’s senior public health officer and chief medical officer.

Adults in the county, as in the rest of the country—particularly people 65 and older and those with high-risk medical conditions—are significantly under-vaccinated for pneumococcal disease. But turning awareness of the need for pneumococcal vaccinations during hospitalizations into actual practice is difficult in health care settings.

“We as a society are far more aware of the need for child immunizations than adults, with the possible exception of flu vaccine,” Luedtke says. “Very few adults know that they should get the bacterial pneumonia vaccine.”

The solution: Lane County health officials needed someone on the inside, imbedded at PeaceHealth—a system with four hospitals in Oregon, all in Lane County—who knew the health system inside and out, to help move a hospital pneumococcal vaccination program forward. And it got just that, thanks to investment by the Oregon Legislature for the state’s Public Health Modernization initiative.

“This is an opportunity that opens the door for us to work together on health improvement through prevention, while patients are inside the walls of the hospital, and to be a partner and participate in the Public Health Modernization goal,” said Susan Blane, community health director for PeaceHealth Oregon Network.

The Lane County-PeaceHealth partnership is part of a larger, regional effort to increase vaccination rates and reduce disparities in vaccine-preventable diseases. The county has teamed with Lincoln, Benton and Linn counties and Oregon State University’s Center for Health Innovation to create the Coast-to-Valley Regional Partnership, which is using part of its \$689,517 modernization grant to implement an evidence-based vaccination improvement program in health care settings.



PeaceHealth’s Angie Christianson (left), Sara Barnes and Sage Holgate

According to county calculations using federal cost data for bacterial pneumonia and local insurance claims data, the potential returns on investment of an in-hospital pneumonia vaccine campaign, in human and financial terms, are eye-popping: Vaccinating roughly eight people per week over a year could prevent 250 pneumonias; avoid 50 pneumonia-related hospitalizations; and save \$500,000 in direct hospital costs, not to mention the potential outpatient savings from doctor's visits, chest X-rays, antibiotics, and other services. The minimum return for each dollar spent is \$8.11; the maximum is \$21, a calculation that reflects the fact that vaccine for this project was donated.

Lane County and PeaceHealth appear well on their way to helping the region reap some of those benefits. During November and December 2018, an average of about 16 people per week were vaccinated. "In other words, our clinical savings is accruing at a much higher rate than our minimum estimate," Luedtke said.

Reaching this point involved a nearly year-long process that began with a survey of community health centers to get data on the region's pneumococcal vaccination rates. The assessment showed that only 38 percent of people 65 and older were vaccinated against pneumococcal; just 15 percent of 19- to 64-year-olds with high-risk medical conditions—chronic heart, liver, kidney or lung diseases, and conditions that weaken the immune system, such as HIV/AIDS or cancer—received the vaccination. Those rates fell far short of the national Healthy People 2020 goals, which calls for 90 percent of people 65 and older, and 60 percent of high-risk individuals 19 to 64 to get the pneumococcal vaccine.

Lane County and PeaceHealth had already been part of a "core" group of health experts, including University of Oregon student health center representatives, that met quarterly to discuss infectious diseases affecting the region.

"We had talked about taking advantage of captive moments in hospitals," recalls Jocelyn Warren, Ph.D., M.P.H., manager of Lane County's Public Health Division. "It kind of started there."

As the pneumococcal project took shape, Blane became the bridge between the county and the hospital system's operations leaders – nursing, infectious disease and executive leadership - helping secure matching funding and working with county partners to determine how they would all communicate, develop criteria for screening electronic health records to find patients eligible for vaccination, and educate the hospital's nursing staff about the new program.

The challenge was "getting the right system in place to make sure these vaccines become available to the correct patient," said Sage Holgate, an assistant nurse manager at PeaceHealth Sacred Heart at RiverBend in Springfield.

"Nurses are charged with doing no harm, so they may err on the side of caution and be hesitant about vaccinating a patient who's acutely ill," Holgate said. "So it's about getting education out to nurses, that we have pharmacists behind it, vetting that vaccine order."

Making that vetting easier is access, through the regional partnership, to the ALERT Immunization Information System, a statewide database that allows vaccine providers to

determine appropriate vaccinations for children and adults. Angie Christianson, pharmacy manager at RiverBend, says that after a Lane County community health analyst screens and verifies a patient's vaccine eligibility in the electronic health record, the pharmacy verifies that eligibility in the ALERT IIS before entering the vaccine order into the patient chart.

"We actually have an (ALERT) interface within our electronic health record that we can access," she says. "You have a patient come in with an illness and you can ask, 'Did they get the pneumonia vaccine?' I just think it's such a cool tool."

And just having the county health analyst available to screen patients is valuable. "That step can be extremely time-consuming to integrate into daily workflow when you're trying to attend to other acute care needs," Christianson says.

The pneumonia vaccine program has brought other benefits, too, such as providing hospital staff members a way to educate patients about other vaccines they may need.

"It creates an opportunity for dialogue and communication with the patient, not only about the pneumococcal vaccine, but vaccines in general," said Sara Barnes, another nurse manager at RiverBend. "It's a way to have that open communication, that education, and hopefully debunk the myths regarding vaccines."

That's music to the ears of PeaceHealth's partners at Lane County Public Health, which recently responded to a large outbreak of pertussis, another vaccine-preventable disease.

"People are more willing to engage in conversations they may have avoided before, and I think the community is becoming much more aware of the need to vaccinate people" who may be more vulnerable to severe illness or death from vaccine-preventable diseases, Warren said.