UA-led effort seeks Valley Fever diagnoses

Online course to help doctors treat ailment that hit 12,920 in 2012

Courtney The Arizona Daily Star                                                                                                        February 27, 2013

Most doctors obtaining licenses to practice in Arizona have not been trained to diagnose Valley Fever, a vicious and potentially fatal disease.

Too often, doctors mistake the symptoms for bacterial pneumonia and end up making patients sicker instead of better.

In order to improve patients' odds, the state has teamed with the University of Arizona to create a free medical course in detecting Valley Fever, a fungal infection that is most often found in the corridor between Tucson and Phoenix and has been on the rise since 2009.

The online course is designed to help medical professionals learn to assess the epidemiology of coccidioidomycosis (Valley Fever), recognize symptoms and evaluate the tests required for correct diagnosis. The course is taught through a series of interactive online video lectures and assessments. It's available to all individuals, including people outside the medical field, at no cost.

"I would strongly recommend that all doctors take the course. It's not only up to the public to see the doctor when symptoms persist for months but also on the physicians to better diagnose," said Clarisse Tsang, an epidemiologist with the Arizona Department of Health Services. "Of course, funding is necessary for research, but an easier route to a cure is raising awareness through education."

The online instruction allows people to educate themselves from anywhere in the world - all they need is an Internet connection and an updated Flash player. The course is certified by the Accreditation Council for Continuing Medical Education for credit and was funded in conjunction with the center and the Arizona Department of Health Services.

"Since Valley Fever is the second-most-common infectious disease reported in the state, next to chlamydia, doctors trained outside Arizona may be unfamiliar with the disease and not intuitively test for it like physicians from endemic regions," Tsang said.

Indeed, each year 1,000 individuals become licensed medical doctors, but most have studied medicine outside the Southwest and are untrained in diagnosing Valley Fever, says Dr. John Galgiani, director of the Valley Fever Center for Excellence and a UA College of Medicine professor.

Valley Fever is caused by a fungus that breeds in the soil and infects the lungs with spores, which may activate immediately or remain silent in the body for decades. It is unique to the Western Hemisphere and was originally identified in San Joaquin, Calif., in the early 20th century, according to Galgiani.
"Over the past three decades, two-thirds of all U.S. infections occur within the Valley Fever corridor, the 150-mile stretch of the Interstate 10 from Phoenix to Tucson," said Galgiani.

One cubic inch of space can hold 15 million spores, and it takes just one spore for a person to get infected. The spores travel to the lungs first and can infect other organs, bones or the skin.

Doctors can't always tell Valley Fever from other diseases such as the flu, the common cold or pneumonia and therefore don't order the necessary blood test to diagnose it, said Galgiani.

And a misdiagnosis can be extremely dangerous to a patient with Valley Fever. Sharon Filip can attest to that.

In 2001, Filip, a hypnotherapist from Washington state, contracted Valley Fever while visiting her son in graduate school at the UA. Within a week of returning to her home, she became so ill she could barely lift her head off the pillow.

"It is the most virulent fungal parasite known to man," said Filip, founder of Valley Fever Survivor, an online support group and advocacy network.

She was diagnosed with a severe case of bacterial pneumonia and prescribed antibacterial medication, which only made her symptoms worse. The antibacterial medication killed off the bacteria in her body, further weakened her immune system and provided more room for the fungus to multiply.

By the time the doctors discovered Filip had Valley Fever, the fungus had cycled through her system and she began the slow road to recovery.

"So many people are misdiagnosed and given the wrong medication, which is why doctors' need to know what to look for," Filip said.

Valley Fever cases account for an average of 30 deaths each year, according to the Arizona Department of Health Services, which has recorded more than 10,000 cases per year since 2009. The number spiked to 16,473 in 2011 due to dust storms in the Phoenix area. In 2012, there were 12,920 cases, state records show.

The spread of Valley Fever could be due to shifting weather patterns, increased rainfall and population expansion, according to experts. The state's most populous counties, Maricopa, Pinal and Pima, see the highest number of cases reported, state health officials say.

Galgiani said it makes sense that Tucson, where Valley Fever is endemic and which is home to the only Arizona medical school in the region, has the first and only center of its kind in the world.

Sixty percent of Valley Fever cases have no symptoms or very mild flu-like symptoms, according to the Arizona Department of Health Services.

When present, the most common symptoms include fatigue, cough, fever, night sweats, suppressed appetite, chest pain and achiness. There is no cure, only anti-fungal treatment. Researchers at the UA
Valley Fever Center for Excellence have found a vaccine successful in mice, but more funding and testing are needed, according to Galgiani.

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For more information about the UA Valley Fever Center for Excellence and the continuing medical education course, go to http://www.vfce.arizona.edu.

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