‘It’s the next step in technology’

McKenzie-Willamette Medical Center uses new pacemaker system

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McKenzie-Willamette Medical Center in Springfield has successfully implanted the world’s first dual chamber leadless pacemaker system. BEN LONERGAN/THE REGISTER-GUARD

New technology has allowed doctors at McKenzie-Willamette Medical Center (MWMC) to start implanting smaller, more intelligent pacemakers in patients this summer.

The medical center has successfully implanted the world’s first dual chamber leadless pacemaker system, AVEIR™ DR from Abbott, after the U.S. Food and Drug Administration approved the device in June of 2023.

Pacemakers have been around since the 1950s and have seen many technological updates over the years. Typical pacemakers have a device implanted near the collarbone. The device has two wires, which go into the upper and lower valves of the heart. Instead of having two leads that connect the pacemaker to wires in the upper and lower heart valves, the new Abbott system has two separate devices, both smaller than a AAA battery, which are implanted directly into the heart to treat abnormal or slow heart rhythms.

Cardiologist Dr. Jay Chappell has been practicing medicine in Eugene-Springfield for 35 years and has been at MWMC for the past15 years or so. Chappell said the new device's elimination of those leads, or wires, can reduce the frequency of post-implant complications.

"The more recent development is to try to stay away from systems that require those two wires, require those leads, because some of the complications of pacing in the long run have to

do with the wires themselves," Chappell said. "They can potentially get infected or fracture or break."

Chappell said Dr. Mark Lawton at MWMC has implanted a handful of the AVEIR™ DR systems since June and providers have seen good patient outcomes so far. He said hundreds of devices that help regulate heartbeats are implanted annually in the community and MWMC collects battery life information and heart-tracking data for around 1,200 devices in its clinic.

Dr. Jay Chappell shows off a leadless pacemaker at the McKenzie Heart Group office on Aug. 7 in Eugene. MILES CULL/THE REGISTER-GUARD

"We were pretty excited to get access to this technology from Abbott," Chappell said. "It's the next step in technology for us and we're delighted to have it."

Chappell said part of the reason he relocated to the area from Sacramento decades ago was because of the high level of sophistication within Eugene-Springfield's medical community for the size of the area.

"The fact that this technology is available in Eugene-Springfield isn't terribly surprising because the first open heart surgery outside of Portland was done in Eugene back in the 1970s and Eugene has always kind of been very rapidly advancing with medical therapeutics and technology pretty

quickly," Chappell said. "We're lucky to live in the medical community we live in."

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Chappell said providers are typically the advocates for bringing in new technology to clinics. Eugene-Springfield struggles with a lack of access to primary care providers, who would typically refer patients to specialists. He said a paradigm of Eugene-Springfield's health care landscape is that the community has this advanced technology, but patients struggle to access the care that could connect them to it.

A leadless pacemaker eliminates the need for lead wires and is expected to reduce complications after surgery. MILES CULL/THE REGISTER-GUARD

He said, "the primary care issue is huge," as physicians have retired, fewer physicians are being trained and clinics regularly have to rely on advanced practitioners such as physician assistants or nurse practitioners to provide patient care. Though these are concerns Chappell doesn't foresee being solved anytime soon, he's hopeful advancing technology can continue to help doctors treat their patients more effectively.

"As we've seen the implants that Dr. Lawton has done and the outcomes have been so good and so exciting to see, it lowers the bar to choose these newer options the more comfortable we get with the technology," Chappell said.

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