

Advance Practice Provider–run implantable loop recorder implant/explant program



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Advance Practice Providers (APP) play a vital role in the growth and efficiency of electrophysiology (EP) services. Programmatic development is a role that must be accentuated in APP practices. The development of an APP-run implantable loop recorder (ILR) implant/explant practice is such an example.

The practice model of an APP ILR implant service that we developed at our institution has proven to be beneficial by (1) allowing APPs to maximize their procedural expertise, (2) removing ILR implant procedures from the EP laboratory, and (3) freeing EP physicians to perform other, more complex procedures. For the patient, the development of an APP-driven ILR implant/explant service allows ease of access and timely follow up.

The development of an APP-run ILR implant program includes training the APP for the implant procedure performed in both outpatient and inpatient settings. It also requires a dedicated registered nurse (RN) team engaged in the process, which includes patient scheduling. It is essential to develop a pathway for communication between general cardiology, referring cardiologists, and specifically the neurology team. This pathway assures appropriate and timely scheduling of procedures. Once scheduled, the patient has the option to do a brief clinic visit with the APP or undergo a brief history and physical the morning of the procedure. The patients are well informed prior to meeting with us, because they receive education from the referring physician, who has access to our patient education material.

The RN team calls the patient the evening prior to their procedure to review arrival time and instructions, including post-procedure care. On the procedural day, the RN greets and prepares the patient. The APP reviews the procedure in detail, including benefits and risks, prior to acquiring consent. A targeted history and physical, medication reconciliation, and allergy review are completed. The procedure is done in a clinic-based room associated with the EP laboratory. Continuous monitoring for heart rhythm, pulse oximetry, and blood pressure is performed either for an inpatient or outpatient procedure. Inpatients are typically a direct referral from neurology. The benefit of inpatient procedures is that the diagnosis related group is changed from a medical to surgical admission,

increasing reimbursement to the hospital; this also avoids any gaps in monitoring.

It is unnecessary for patients to discontinue anticoagulation. The patient is instructed to have a light breakfast and there is no need for an intravenous line or sedation. The procedure is performed under sterile technique after a time-out is performed. The patient is placed in a supine position with head slightly elevated. The insertion site is marked with a surgical marker. The APP prepares the field and preps the patient with chlorhexidine. Local anesthetic is injected with adequate time given to take effect. An incision is made using the manufacturer's tools, and the ILR is inserted. Hemostasis is achieved and the incision is closed with wound closure strips, and a dry sterile occlusive dressing applied with pressure. If there is concern for bleeding, other techniques used are surgical staples or skin glue for wound closure.

Following implant, the RN reviews discharge instructions and enrolls the patient into remote monitoring. The patient returns to clinic in 1 week for wound assessment and review of remote follow-up. Patients are remotely monitored every 31 days, with symptoms, or with alert events. All ILR reports are interpreted by the APP to provide rapid communication and follow-through of actionable events to appropriate providers. Sensing issues are minimized by reprogramming to avoid continuous false alerts. Once the battery has reached end of service the patient is scheduled for explantation using the same process. Explants require a specialized surgical tray with small extraction instruments.

Although there is a 15% loss of professional revenue with some insurers by using the APP ILR implant/explant program, this does not affect hospital compensation, which has the greater benefit. This program creates a robust cardiac monitoring program with excellent communication to patients and their referring providers. Downstream benefits include monthly billable report interpretations, prompt results leading to improved patient care, and increased generation of other EP procedures such as pacemaker, implantable cardioverter-defibrillator, left atrial appendage closure implants, and ablation procedures. This demonstrates the benefit of an APP-run ILR program, which all contributes to APP job satisfaction.

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