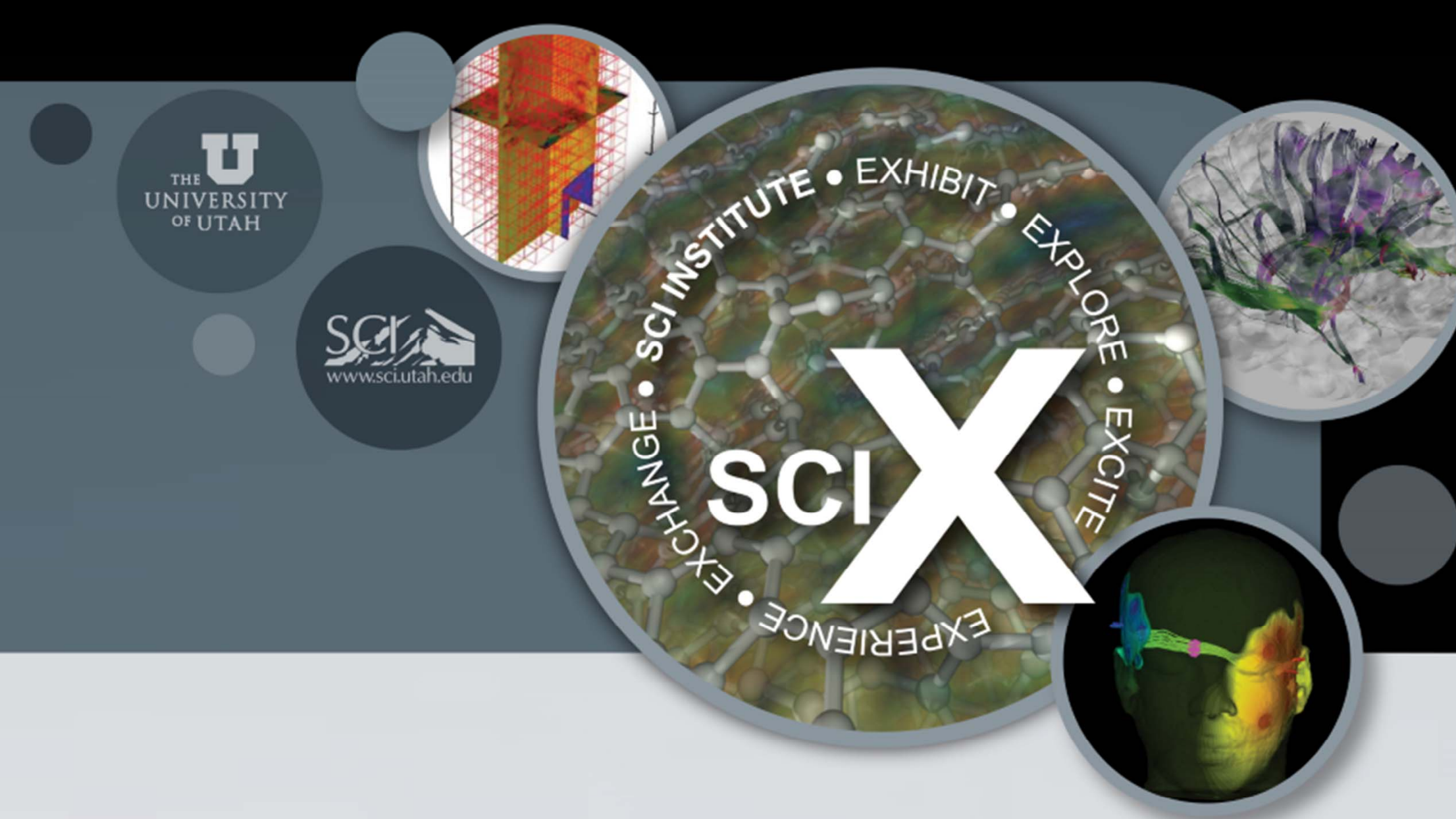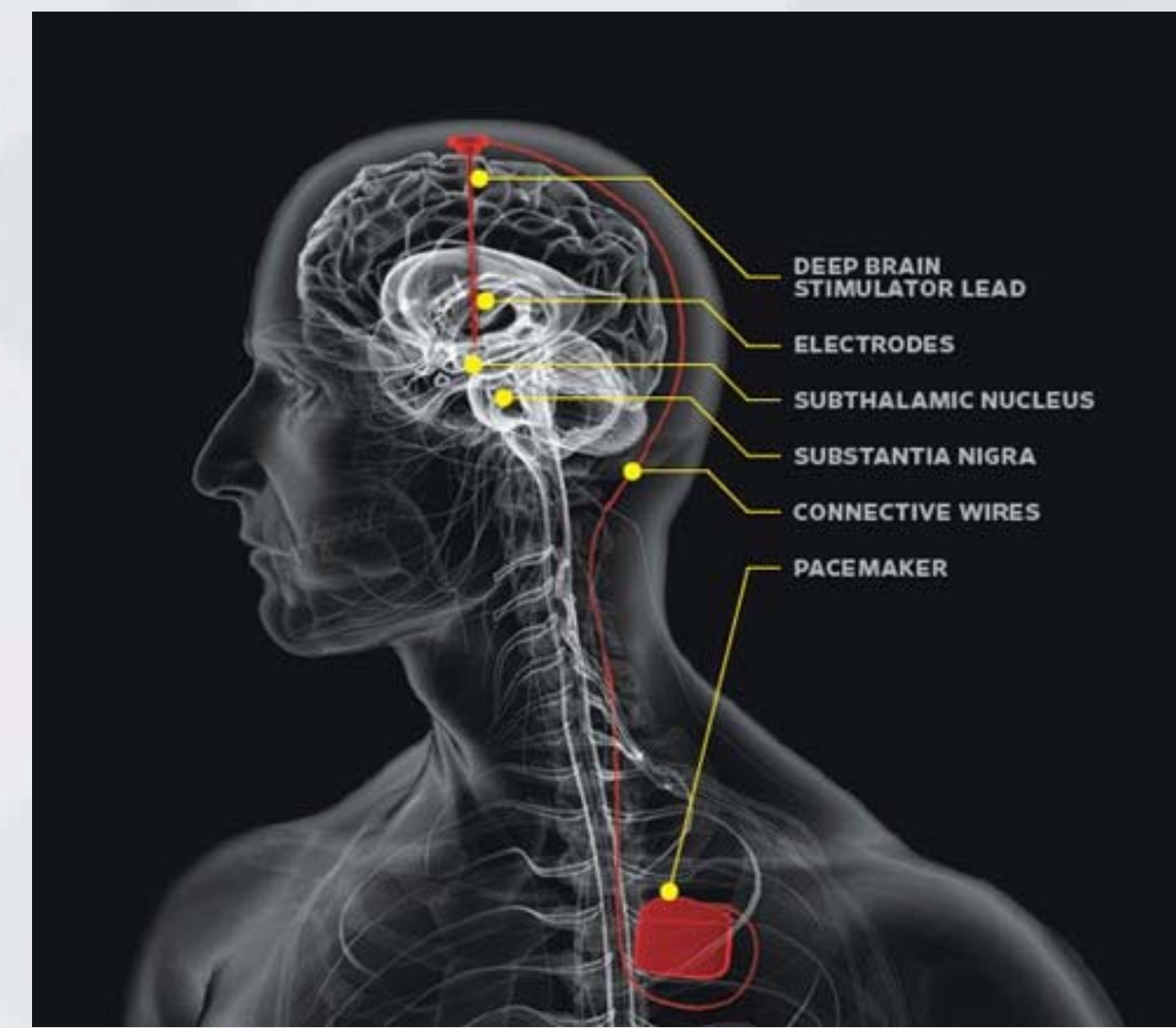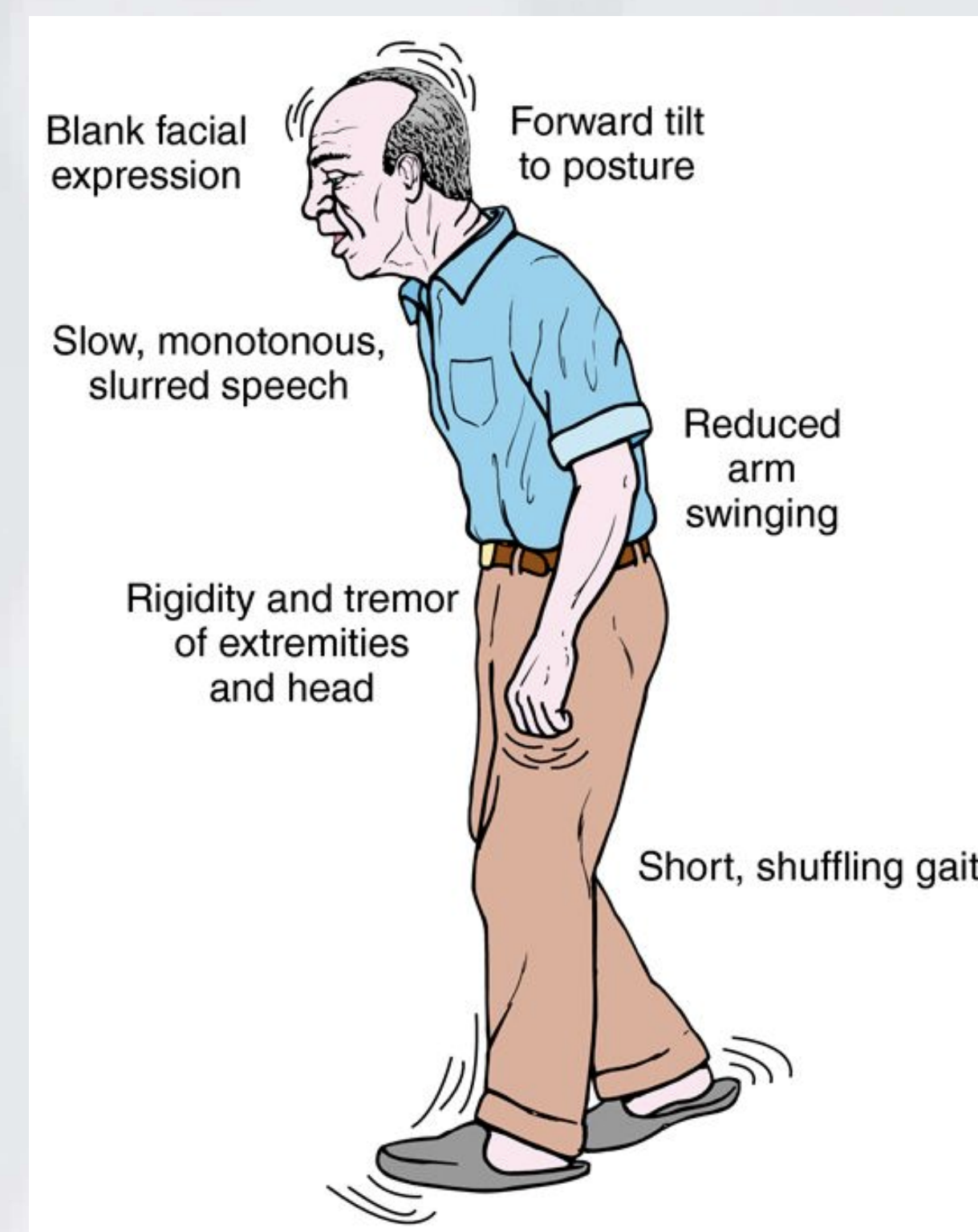# MOBILE DECISION SUPPORT SYSTEM FOR NURSE MANAGEMENT OF NEUROMODULATION THERAPY

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What is DBS?

Problem: Deep Brain Stimulation (DBS) therapy is not accessible to many patients because of the requirement of frequent programming visits and few places providing the service.

DBS is a therapy where electrodes are implanted deep in the brain to deliver electrical pulses. It is most commonly used to treat movement disorders, such as Parkinson's Disease.
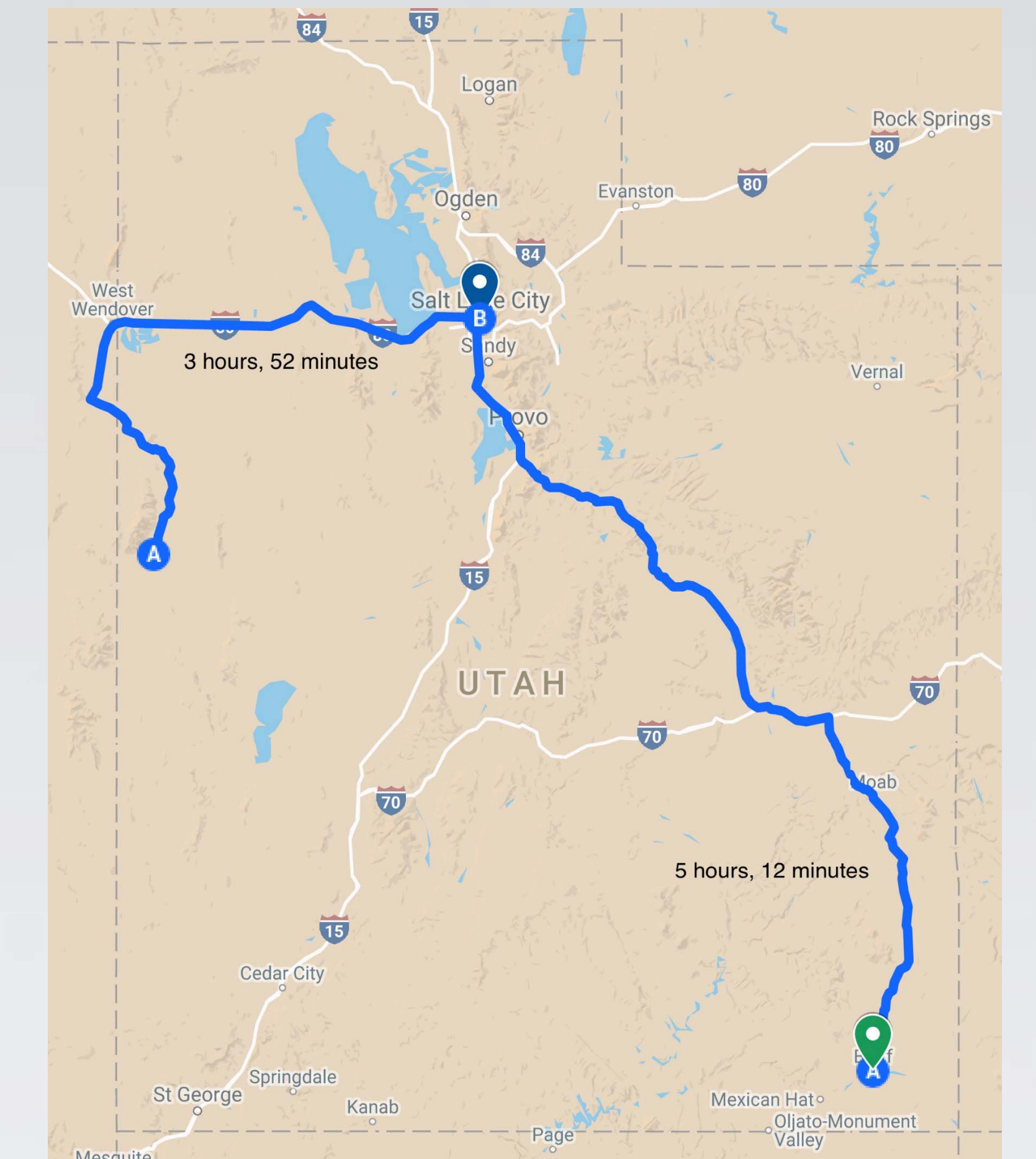
Standard Care

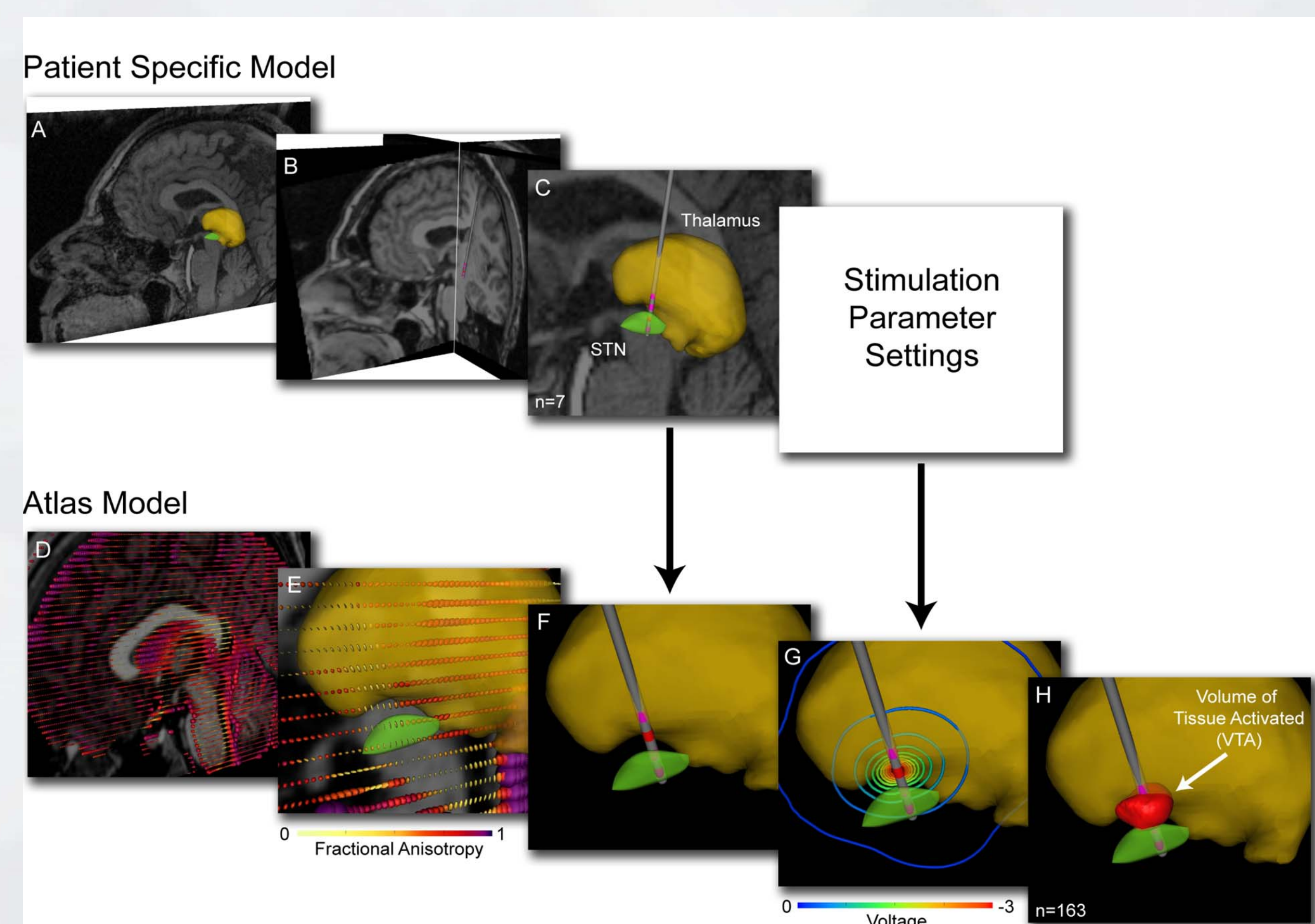Patient and caregiver travel for programming, where the electrical waveforms are changed

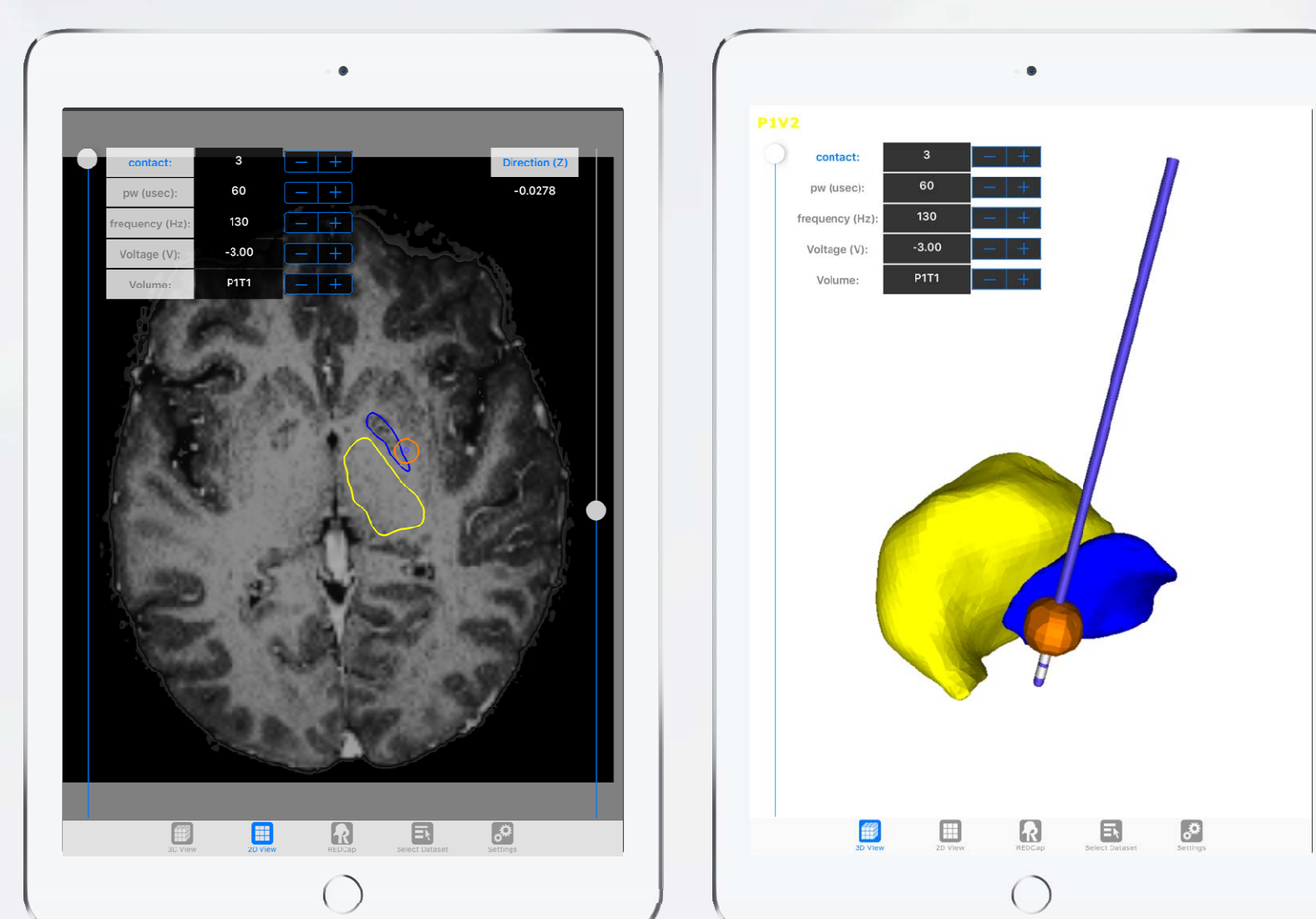3-6x in the first 6 months after surgery

In Utah, DBS programming is only available in Salt Lake City, a far drive for some Utah residents

Our Solution (currently under clinical trial)

Using patient medical imaging, we create a model of how DBS interacts with the patient's brain
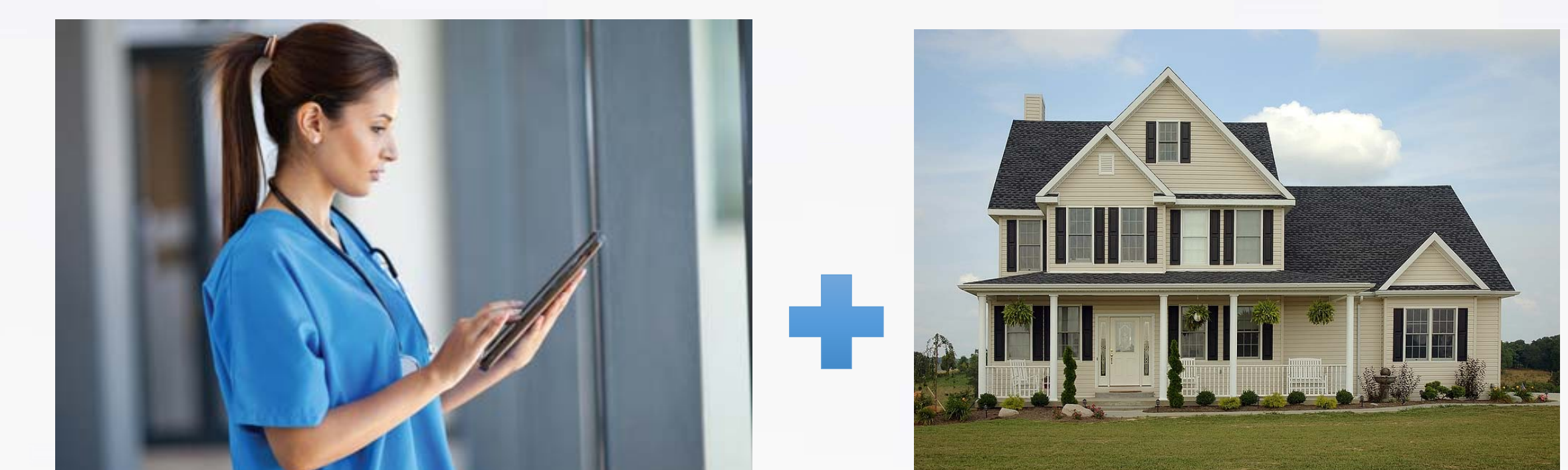

The models are transferred to an iPad to be used by the DBS programmers to aid the programming process

Phase 1: Expert DBS programmers use the models to guide programming in the clinic

Phase 2: Home health nurses take the app into patients' homes and use it to guide DBS Programming

Phase 1 Goal: Decrease time spent programming

Phase 2 Goal: Show in home programming can be effective

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