Primary Persona

Daniel Wong, MD

- 46 years old
- Completed residency in Neurosurgery at the University of Maryland
- Has privileges at Richmond Community Hospital and the VA Medical Center
- Married w/3 children, Lives in the West End of Richmond, VA
- Goal is to provide the best surgery possible under a small incision and to continue to grow his private practice.

Dr. Wong is a member of several professional medical organizations including the American Association of Neurological Surgeons, the Congress of Neurological Surgeons, and the Virginia Medical Society. In addition to serving on the Board of Director for both the Virginia Traumatic Brain Injury Trust Fund and the Spinal Injury Foundation, he still manages to spend quality time with his family and squeeze his favorite pastimes, mountain biking and racquetball, into his busy schedule.

Anyone can see that Dr. Wong is incredibly busy, splitting his time between two facilities and seeing as many patients as waking hours will allow in order to help grow his practice. This translates to more than 200 cranial and spine cases per year. In order to maximize the number of cases he completes, Dr. Wong will typically refer more complex cases to the university hospital.

After using Navigation for nearly a decade, Dr. Wong is very confident in his abilities to use the system effectively. He typically uses Navigation to get a case started and to get close to the target quickly and safely. Once he's where he needs to be, he relies on experience and observation to complete the case.

"Basically, I just use Navigation to plan my flap or burr hole and get me close to the target. I take care of it from that point based on my own observation and intuition."

In performing navigated cases at Richmond Community Hospital, Dr. Wong can generally count on the navigation system being set up and running by the time he enters the room. This is critical, as his main concern is getting cases done as quickly as possible so he can move on to the next one. Despite their competence with the navigation system, Dr. Wong occasionally has to stop what he's doing to direct the staff in manipulating the system.

"If something goes wrong, I need a way to get back on track quickly, which means that someone in the room needs to be an expert. That 'someone' usually turns out to be me."

At the VA Medical Center, however, the situation is less ideal. Due to high staff turnover, Dr. Wong often finds himself spending much of his time setting up cases on his own. This, he'll tell you, is high maintenance and takes entirely too much time.

"I spend a lot of time making sure the proper scans are ordered and get done the morning of the case. This really slows things down. Many times, I just don't bother using it. There are too many steps and not enough benefits. In general, I believe Navigation is a valuable tool to have available for surgery. I do wish it could be made less complex, and I'm certain more of my colleagues would use it if that were the case."

Secondary Persona

Sara Roemer, RN

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38 years old

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Bachelor of Science in Nursing from Loyola University

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12 Years Nursing Experience at Naperville Community Hospital

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Married w/2 kids, Lives in suburbs outside Chicago

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Goal is to use her training to deliver the best patient care

Sara is a full-time registered nurse and a full-time mom. She and her husband are forever strapped for time, running their two kids to and from soccer, karate, and gymnastics. From as long as she can remember, Sara wanted to be a nurse.

"I've always wanted to make a positive difference in people's lives, and caring for people in need allows me to do that. Being a nurse is something I hope to do for the rest of my life."

Sara spends most of her time in the OR supporting cranial and spine cases, as well as the occasional ENT surgery. Her hospital purchased a Navigation system five years ago and recently bought a second one to help support the spine surgeons. Sara was one of two nurses trained on the system, but since the other nurse left, Sara finds herself the resident Navigation "expert."

"Since the other nurse I trained with left, I've taken responsibility for helping the surgical staff work with the system. Unfortunately, they'd rather leave it to me most of the time. They don't think it's their job to set up and operate the Stealth."

Being the only nurse who knows the system seriously presses Sara's already tight schedule. In fact, sometimes she has to do double-duty and manage several surgeries simultaneously. Add to that the possibility something goes wrong with loading the patient's scan or the system not working properly, and Sara is at her wit's end.

"Sometimes I only have 15 minutes to turn over the OR and move the Stealth to the next case. I hate to keep the doctor waiting but I've got other stuff to do!"

Even though Sara knows more about the navigation system than any other OR staff member, she doesn't consider herself a computer expert. If something goes wrong with the navigation system, Sara's first inclination is to reboot and hope it starts working again.

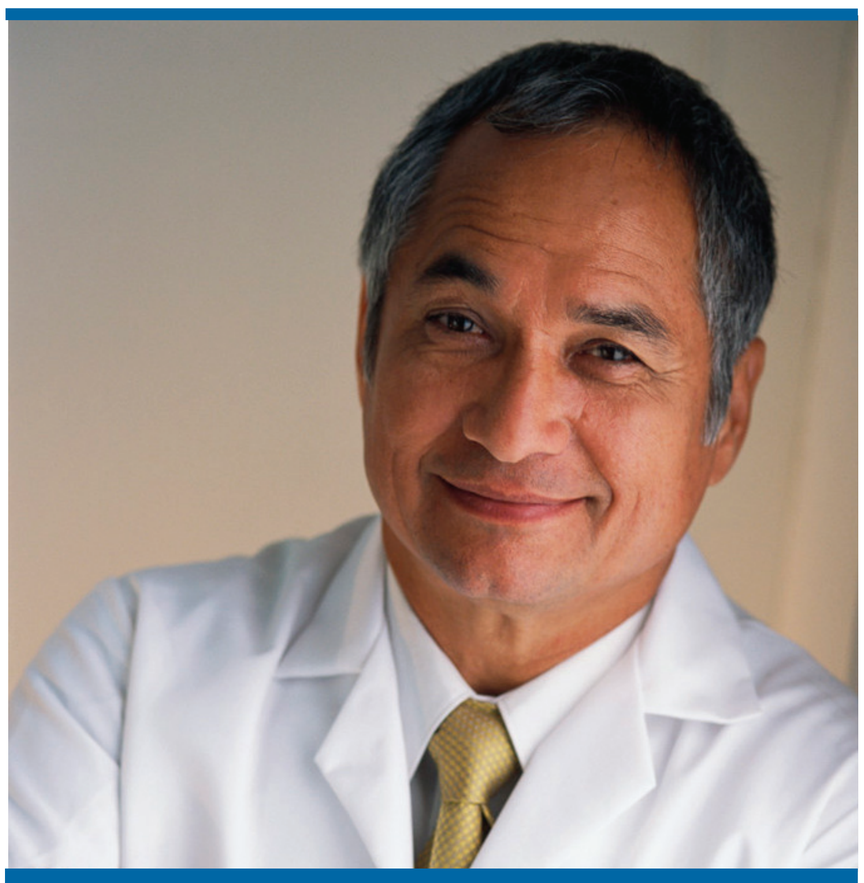
"For the most part, I'm pretty good with the Stealth, but sometimes I have to call the support number when I can't figure it out. I hate when it's something simple...I think, 'I should have tried that!'"

To complicate matters, since Sara's colleagues don't know how to use the navigation system, she's the one that surgeons bark at when the system fails or malfunctions. Sara wishes she had better aptitude with the system and that she could stay up-to-date with the new upgrades. Mostly though, Sara wishes some of the other staff would step up and learn it – maybe then she'd get fewer calls at home if a surgeon wants to use Navigation after hours. Few things frustrate her more than that scenario.

Surgeons occasionally comment that having Navigation available truly helped the case. For all of navigation's challenges, this makes Sara feel like she's doing her job in caring for patients.

"I see that the Stealth is a friend of the patient, and that's why I want to work with it."

Secondary Persona



Ian Lyons, MD, PhD

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57 years old

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Reynolds Professor of Neurosurgery at Case Western Reserve University

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Completed his residency in Neurosurgery at Stanford University and received advanced training in stereotactic surgery at Harvard Medical School.

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MD and PhD in Pharmacology from Northwestern Medical School

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Married with three grown children

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Goal is to advance the field of neurosurgery and train the next generation of neurosurgeons

Dr. Lyons is an active member of several professional societies including the American Association of Neurological Surgeon, Congress of Neurological Surgeons, American Society of Stereotactic and Functional Neurosurgery, AANS/CNS Joint Section on Tumors, and the American Association for Cancer Research. He has been a Navigation user and strong proponent for many years.

"I started using the ISG Viewing Wand, one of the first navigation systems, and had a Radionics system for a number of years before getting a Stealth."

Dr. Lyons handles the most difficult of cranial cases, but he also uses navigation for all types of surgeries, even if just to determine a minimal skin incision. He feels it enables him to be more aggressive in resecting because he has better knowledge of tumor margins and critical structures in proximity.

"I would really like to incorporate some of the new imaging modalities like Diffusion Tensor Imaging, Functional MRI and Spectroscopy with Navigation because I think it would show things that might potentially change my surgery, my trajectory, or whether I do a little bit more or a little bit less."

Dr. Lyons' department employs two technical staff members who help maintain the equipment and set up the system so it's ready when he walks in the OR. His surgical staff is very facile with the system because they are used to seeing it every day.

Dr. Lyons is constantly looking for opportunities to use the system to help his residents learn. When preparing for a surgery, Dr. Lyons goes through the educational process of, "What do you think of this, why would you want to remove this, what would be the risk and complications, how would you intervene, what would be the goals of surgery?" Sometimes he does this using the hospital PACS system, but he strongly desires some way of doing this outside the OR with an interface similar to the navigation system.

"Reviewing the surgical plan within the operating room is... well, no one likes to do it that way. I'd much prefer to be able to sit down and do it in my office, or on my laptop... possibly sitting in the staff lounge."

Although a huge proponent of navigation, Dr. Lyons is not without his criticisms. Noting how craning his neck to view the screen interrupts his workflow, or how difficult it is to get data off the system without assistance, occasionally he get's very frustrated with Navigation.

"None the less, navigation is a vital way to perform surgery. Anyone who says anything different is not contemporary."