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Turn Great
Ideas Into
Safe, Usable
Healthcare
Products

Usability Works is a usability engineering consultancy embedded within Carilion Clinic's Center for Simulation, Research and Patient Safety in Roanoke, Virginia. We help you design and validate healthcare technologies that are safe, intuitive, and ready for real-world clinical use.

Healthcare technologies live or die at the bedside. We make sure your product works for real users in real environments, including EMS and ED to ICU and in-home care.

As part of Carilion Clinic, a nationally recognized not-for-profit health system, we tap directly into frontline expertise from nurses, physicians, techs, and EMS providers. That means your design decisions are informed by the people who actually use your product.

What We Do

We provide end-to-end usability engineering support for medical device and digital health teams, including:

» **User and Workflow Insight**

Observational research, interviews, and task analysis in realistic clinical settings.

» **Formative Usability Testing**

Rapid, scenario-based evaluations to shape early concepts and prototypes.

» **Summative / Validation Testing**

IEC 62366 and FDA-aligned human factors studies that support regulatory submissions.

» **Risk and Use Error Analysis**

Identify use-related risks, root causes, and clear mitigations tied to real workflows.

» **Design and UX Recommendations**

Actionable guidance to improve interfaces, instructions, alarms, and workflows.

The Result

a cognitive and systems-based view of your product that helps you streamline workflows, reduce risk, and improve usability across the continuum of care.

Why Our Setting Matters

Usability Works is housed in a state-of-the-art, nationally accredited healthcare simulation center. That gives you:

» **Realistic Clinical Environments**

ORs, ICUs, patient rooms and EMS scenarios.

» **Full Team Simulations**

Test your product with clinicians working as they do in practice.

» **High-Fidelity Scenarios**

See how decisions are made under pressure, distraction, and time constraints.

Whether you're refining a digital platform, a surgical instrument, or a monitoring system, we create the context you need to see how it actually performs.

The Team Behind the Work

Our team blends applied cognitive science, human factors, biomechanical engineering, and interactive simulation. We look at:

- » How people think and decide under pressure
- » How teams communicate and coordinate
- » How environments, interfaces, and workflows interact

