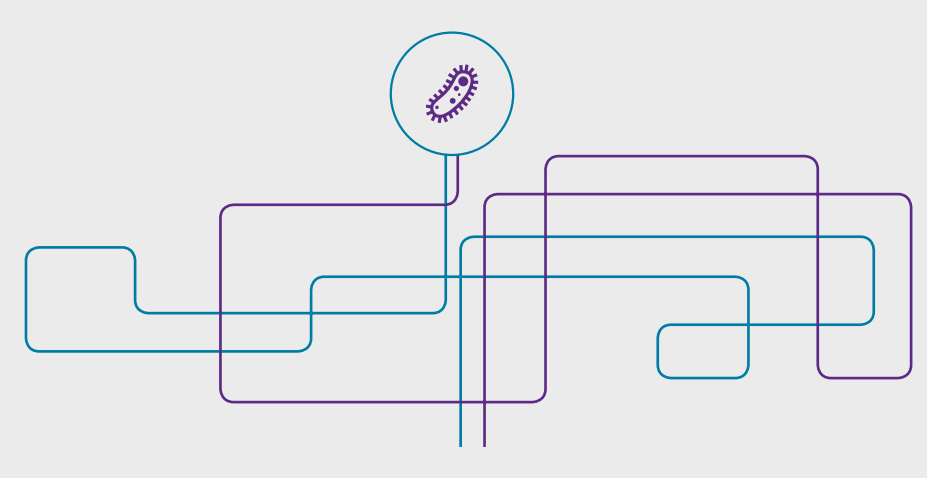
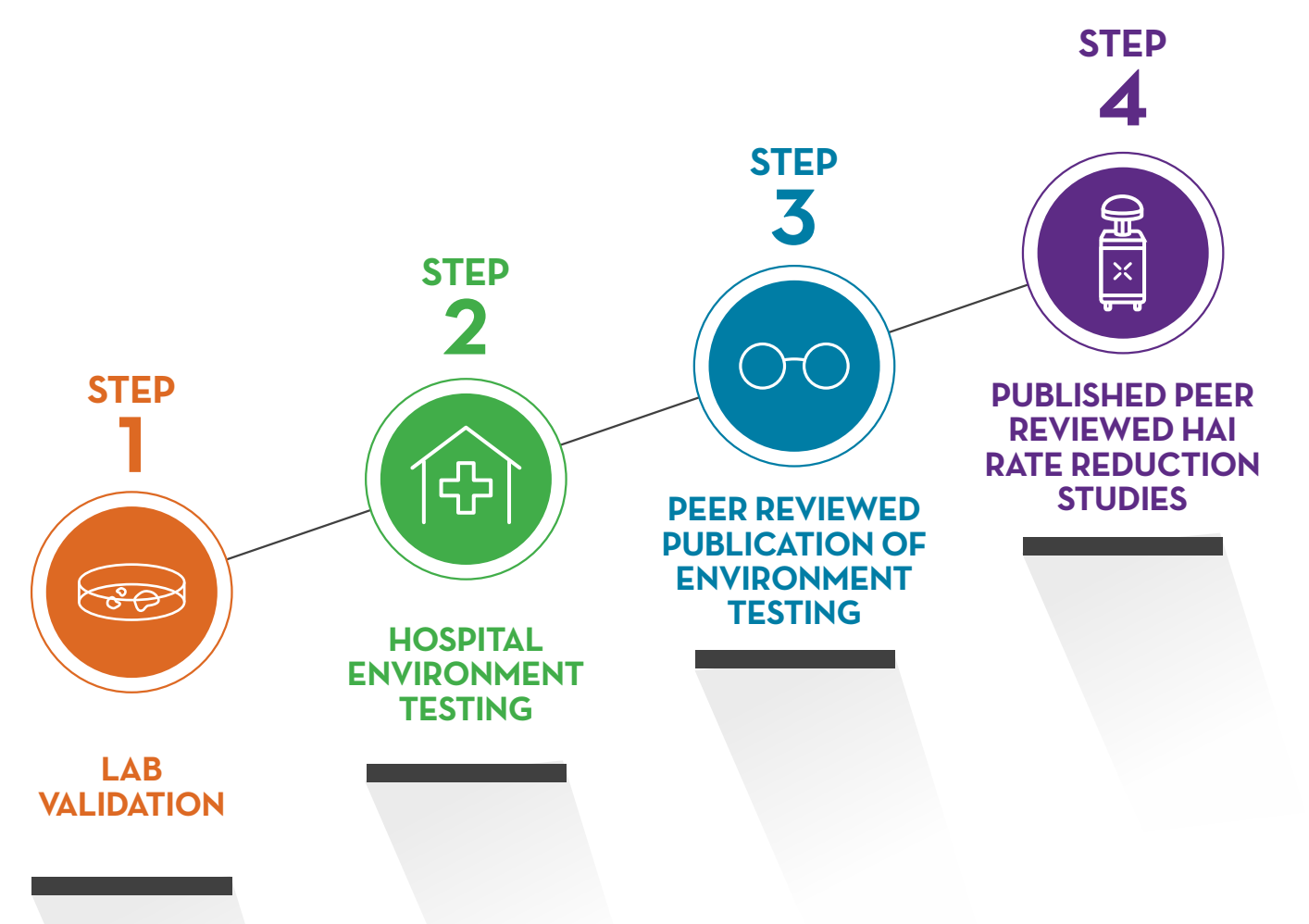
THE 4 MUST-FOLLOW STEPS TO VALIDATE TECHNOLOGY



Navigating the maze of evidence that exists about disinfection science can be challenging. Knowing how to ask the right questions about research on new technology allows us to make evidence based decisions.

Different types of evidence are considered progressively better proof that disinfection technology will have an impact. Think of these types as a ladder to climb.



STEP 1

LAB VALIDATION (AKA LAB "STUDIES")

- Validated in an independent, 3rd party, GLP-certified microbiology laboratory.
- Results are presented as a % reduction in the pathogen or as a "log reduction".
- Uses the technology in the manner intended by the manufacturer to confirm.
- Results have to be consistent across a large number of tests.

At an independent lab, we've validated **Xenex's efficacy on over 2200 samples** of the most common hospital pathogens, including *C. diff* and MRSA.

STEP 2

HOSPITAL ENVIRONMENT TESTING

- Involves an actual room with a known infection, to evaluate the disinfection technology on true pathogen load.
- Expands on lab results by incorporating the challenges of the real world.
- Clear sampling protocols: consistent collection methods, number of samples, analysis process.
- A test for statistical significance, or a p-value, tells us that we can assume that the results can be attributed to the disinfection technology, and not due to chance.

STEP 3

PEER REVIEWED PUBLICATION OF ENVIRONMENTAL TESTING

- Requires multiple, highly qualified, impartial scientists (peers) to review new findings before they are considered truly valid.
- Currently conducted by journals with teams of specialists to examine submitted studies and complete the "peer review" process.
- Strict adherence to ethical guidelines.
- Research methods must be thorough and repeatable.
- Surviving peer review and getting published is the process that takes your theory, testing, and results and establishes them as scientific fact.
- No expression of opinions, only facts.

Our VRE study at MD Anderson established that Xenex was able to reduce hospital room contamination **20 times better than standard cleaning**, and that it completely eliminated VRE from VRE isolation rooms. It was published in Infection Control and Hospital Epidemiology.

READ STUDY

STEP 4

THE GOLD STANDARD OF DISINFECTION SCIENCE: PUBLISHED PEER REVIEWED HAI RATE REDUCTION STUDIES

This step is achieved when disinfection technology can actually achieve a measurable, statistically significant **HAI rate reduction**.

To achieve this, the results from a study are examined through the same lens as Step 3, as well as:

- HAI rates – not just numbers of infections but the frequency of infections per patient days.
- Other interventions – were there any other programs or tools being used that may actually be responsible for the improved outcomes, like hand-washing initiatives?

While many disinfection technologies have achieved steps 1 and 2, and a few have even achieved publication, Xenex remains the **only UV disinfection system with several published outcome studies in multiple peer reviewed journals.**

Peer reviewed published outcome studies often take a long time to assess, just like Westchester Medical Center's 22-month study recently published in the American Journal of Infection Control.

READ STUDY

FOR USEFUL TOOLS, RESOURCES AND BLOGS ON UV DISINFECTION AND INFECTION PREVENTION, VISIT XENEX.COM

FIND OUT MORE