

# Enhanced UV-C Disinfector real-world effectiveness

**clinell**<sup>®</sup>  
SURFACE

## How Clinell Enhanced UV-C Disinfector, with its four detachable towers, compares to a typical vertical single-tower UV-C device in a single side-room

### The Study

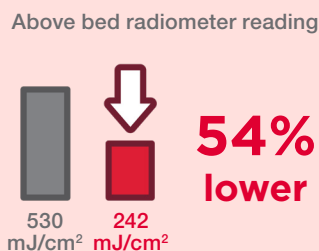
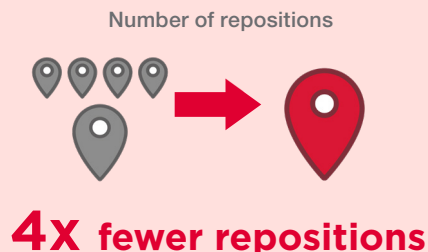
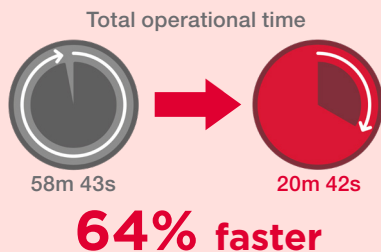
Professor Val Edwards-Jones PhD, CSci, FIBMS, an experienced independent microbiology consultant conducted a study, with the cooperation of the NHS, to test the effectiveness and efficacy of Clinell Enhanced UV-C Disinfector versus the Trust's incumbent single-tower UV-C device between 01/12/2022 and 01/03/2023.

#### The following data was collected:

- Total disinfection time, including set-up and breakdown time, and subsequent impact on labour
- Efficacy of each device on the basis of UV-C dosage delivered to 40 surfaces
- Two accurate readings of UV-C dosage (from estimated highest and lowest positions) to measure the amount of overdosing, which will result in material degradation

### The Results

The results were overwhelmingly in favour of Clinell Enhanced UV-C Disinfector:



Clinell UV-C Disinfector  
**outperformed the existing in-house solution** across the measured metrics

### Operational Cost Efficiencies

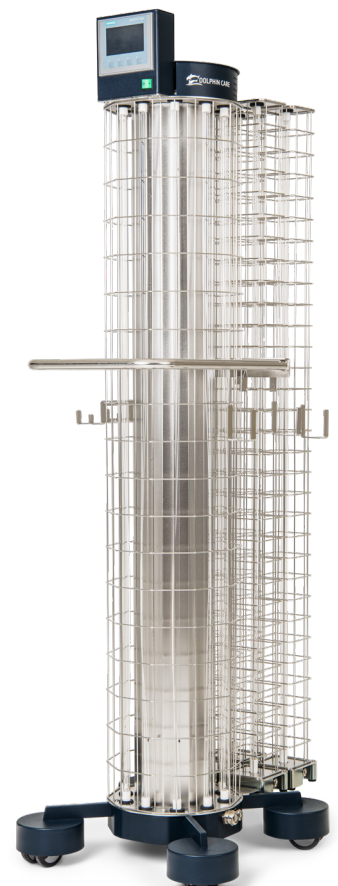
Based on the comparisons above, a switch to Clinell Enhanced UV-C Disinfector provides significant operational benefits.

**65% reduction in labour costs\***



or

**2 additional rooms cleaned**  
in the same time period



\*assumes 1 room cleaned per day at £50ph labour cost

“The Clinell Enhanced UV-C Disinfector, if operated at 15 minutes emission time, could **reduce operation time by over 50%**, and also because of flexibility of placement of the tower and satellites should increase the number of areas attaining maximum exposure compared to the in-house system.

Professor Val Edwards-Jones PhD, CSci, FIBMS

## The Results

✓ Pass (>100 mJ/cm<sup>2</sup>)

— Mid (50-75 mJ/cm<sup>2</sup>)

✗ Fail (<25 mJ/cm<sup>2</sup>)

	Existing in-house solution	Enhanced UV-C Disinfector (like for like emission time)	Enhanced UV-C Disinfector (optimised for efficiency)
<b>Operational times</b>	58mins 43secs	46mins 03secs	20mins 42secs
<b>Emission times</b>	37mins 24secs	37mins 24secs	13mins 32secs
<b>Number of cycles</b>	5	3	1
Head of bed (front)	✓	✓	—
Head of bed (rear)	✗	✓	✗
Right side of bed (front)	—	✓	✓
Right side of bed (rear)	✓	✓	✓
Bottom of bed (front & rear)	✓	✓	✓
Under the bed frame	—	✓	✓
Under the bed floor	✓	✓	✓
Top of bed	✓	✓	✓
Left of bed (top & underneath)	✓	✓	✓
Bed table top (right)	✓	✓	—
Bed table top (left)	✓	✓	✓
Bed table (underneath)	—	✓	✓
Patient cupboard (top, mid & inside)	✓	✓	✓
Chair (base)	✓	✓	✓
Chair (underneath)	✗	✓	✓
Chair (back)	✗	✓	✓
Computer	✓	✓	✓
Under the UV-C device	✗	✓	✓
Corner chair	✓	✓	✓
Corner chair (underneath)	✗	✓	✓
Cupboard shelf	✓	✓	✓
Back of TV	✗	✓	✓
Soap dispenser	✓	✓	✓
2nd chair (surface)	✓	✓	✓
2nd chair (underneath)	✗	✓	✓
2nd chair (on the floor)	✓	✓	✓
Commode (right top)	✗	✓	✓
Commode (right, underneath)	✓	✓	✓
Commode (rear)	✗	✓	✓
Commode (front)	✓	✓	✓
Commode (underneath)	—	✓	✓
Commode seat	✓	✓	✓
Floor	—	✓	✓
Bin lid	✓	✓	✓
Underneath bin	✗	✓	✓