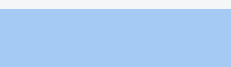
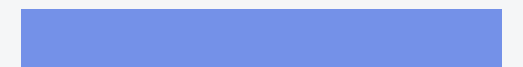
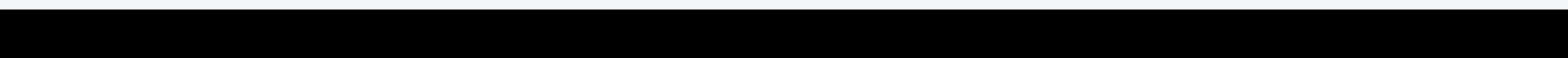
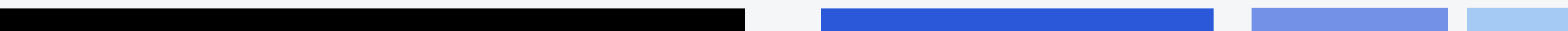


Breaking the Biofilm Loop



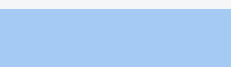
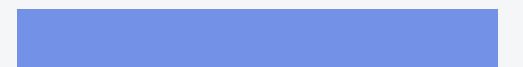
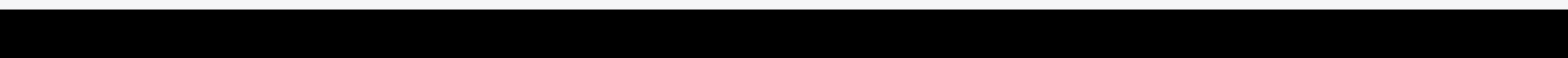
-
1. The Biofilm Problem
 2. Solutions and Strategies
 3. Implementation and Takeaways

Agenda



03.

The Biofilm Problem



The Invisible Crisis



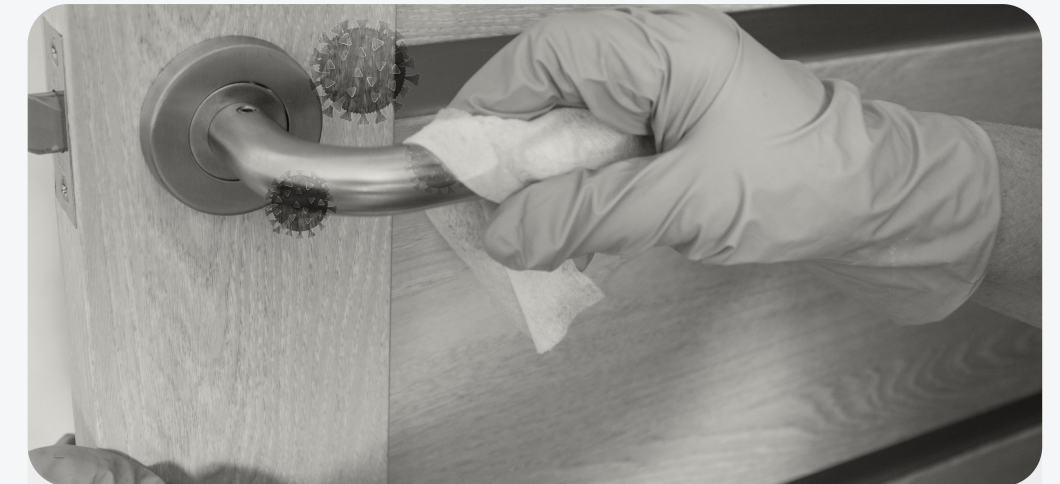
Hidden Biofilms on Hospital Surfaces

- Up to **95%** of surfaces harbor persistent, invisible dry surface biofilms.



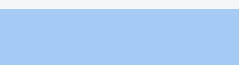
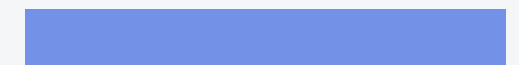
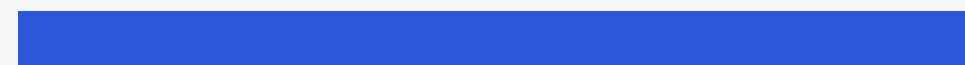
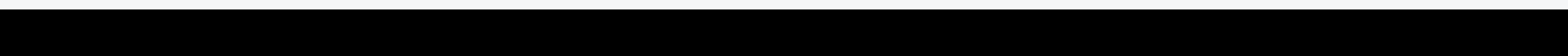
Clean Appearance, Ongoing Risk

- Surfaces that look clean can still transfer dangerous pathogens to patients.



Traditional Cleaning Methods Fall Short

- Routine disinfectant wiping may actually worsen the biofilm problem.



Why Wipes Aren't Enough



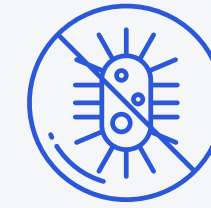
Low-Level Kill Rates Leave Gaps

- Traditional wipes only achieve a **1.5 to 3-log reduction** in real-world cleaning.
- Up to **1,000 pathogens** can survive on every million after wiping.



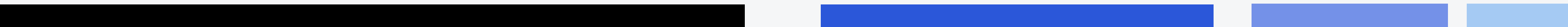
Survivors Become Stronger

- Chemical exposure triggers bacteria to activate biofilm-forming genes.
- Surviving microbes build protective layers, making future cleaning less effective.



Routine Wiping Fuels Biofilm Growth

- Daily disinfectant use acts as a stressor, encouraging the evolution of **resilient superbugs**.



How Cleaning Fuels Biofilms

Chemical Stress Triggers Defense

- Sub-lethal disinfectants act as environmental stressors, activating biofilm-forming genes.

Survivors Build Protective Barriers

- Resilient bacteria respond by producing a defensive **slime layer** (EPS matrix).

Biofilm Armor Reinforced by Debris

- Dead bacteria and organic material are recycled to strengthen the biofilm shield.



How Cleaning Fuels Superbugs



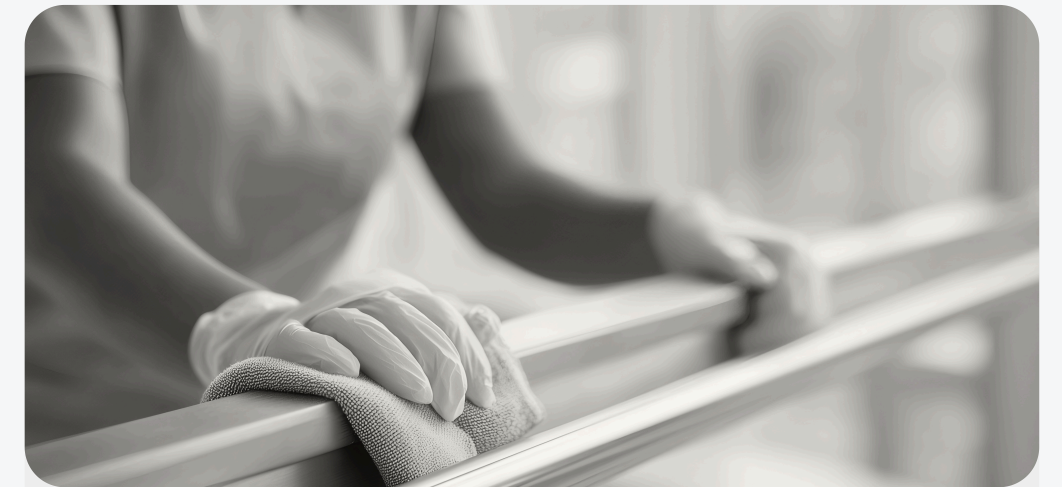
Invisible Layers Build Up

- Routine chemical wiping causes organic debris to accumulate and harden on surfaces.



Biofilm Shields Block Disinfectants

- Dry biofilm matrices act as a barrier, neutralizing disinfectants before they reach pathogens.

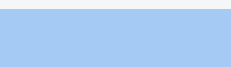
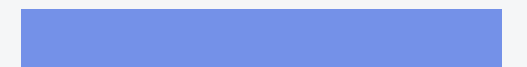
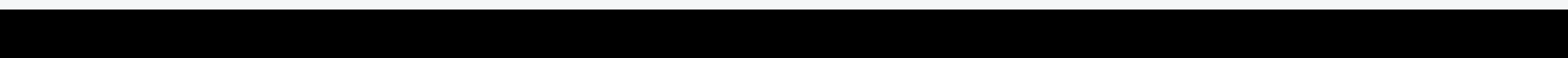


Protocols Fuel Superbug Survival

- Current cleaning methods unintentionally promote the persistence and spread of **multi-drug resistant organisms**.

08.

Solutions and Strategies



Dual-Protocol Biofilm Eradication

Targeted Cleaning for Every Setting

Non-critical areas shift to daily mechanical wiping with Cogent One Health, eliminating routine chemical disinfectants.

Enhanced Protocols in Critical Care

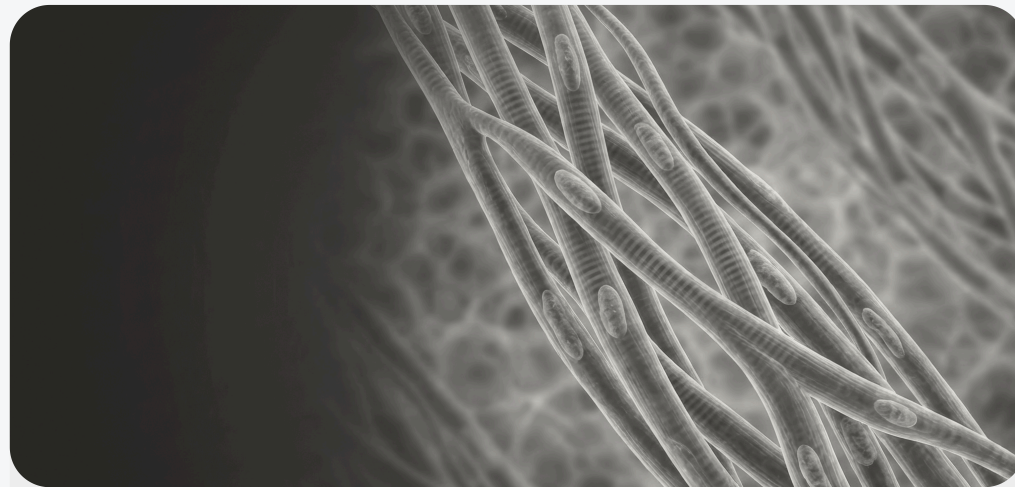
Critical units adopt a two-step process: pre-clean with Cogent, then apply disinfectant for maximum pathogen removal.

Disrupt and Eliminate Biofilms

This dual approach physically removes biofilm matrices and prevents regrowth, improving patient safety.



How the Dual Strategy Works



Stops Biofilm Formation at the Source

- Eliminating routine chemical disinfectants removes the **genetic trigger** for bacteria to produce protective biofilm layers.



Physically Removes Biofilm Foundations

- Cogent One Health technology encapsulates and lifts away biological debris, proteins, and lysed cells—stripping the raw materials needed for biofilm construction.



Maximizes Disinfection in Critical Areas

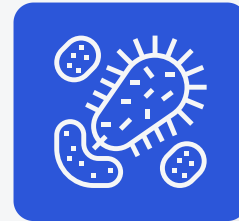
- Pre-cleaning with Cogent shatters the biofilm shield, exposing bacteria so disinfectants can achieve a **high-log kill rate**.

Global Evidence: Detergent Cleaning



International Best Practices

UK, Netherlands, and Nordic countries prioritize detergent-based cleaning in non-critical hospital areas.



Reduced Chemical Use, Lower Superbug Rates

Limiting routine disinfectant use is linked to some of the lowest rates of hospital-acquired MRSA globally.

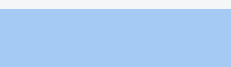
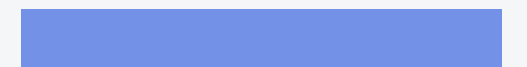
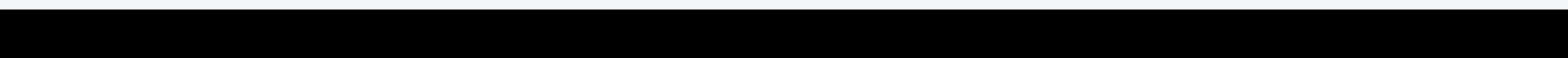


Evidence-Driven Policy Shifts

Long-standing public health guidelines support moving away from daily chemical disinfectants in standard wards.

12.

Implementation and Takeaways



Next Steps & Implementation



Facility-Wide Dual-Protocol Launch

- Transition non-critical areas to daily Cogent One Health mechanical wiping.
- Implement mandatory two-step pre-clean and disinfect protocol in critical care units.



Tactile Self-Auditing for Compliance

- Train staff to detect and re-wipe any surface that feels rough or sticky until perfectly smooth.
- Supervisors can audit entire rooms in under 60 seconds using tactile checks.



Ongoing HAI Data Monitoring

- Establish baseline rates for C. diff, MRSA, and VRE.
- Track infection rates for **6 to 12 months** to measure the impact of biofilm eradication.

Key Takeaways



Traditional Cleaning Fuels Biofilms

- Routine disinfectant wipes can trigger **biofilm formation** and select for superbugs.



Dual-Protocol Strategy Disrupts Cycle

- Mechanical wiping in non-critical areas and a two-step protocol in critical care **eradicate biofilms**.



Proven Impact on Patient Safety

- Evidence-based methods align with global best practices and reduce **HAI rates**.