



CHAIR
Coalition For
Community & Healthcare
Acquired Infection Reduction

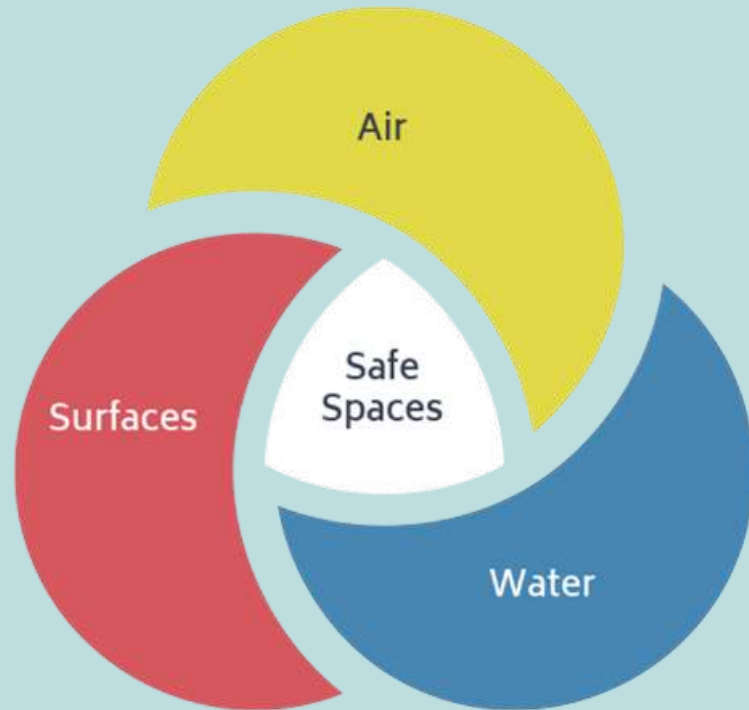
Strategic Plan 2025

Engineered Infection Prevention



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Our Mission and Vision



Our Mission

To inspire and guide the adoption of engineered solutions that protect lives and create pathogen-free environments.

Our Vision

Safe spaces, free from pathogens.

About Us



CHAIR Coalition is a network of experts, organizations, and industry leaders from Healthcare, Academia and Industry working to reduce **healthcare-acquired infections (HAIs)** through **Engineered Infection Prevention (EIP) solutions** in Air, Water, and Surfaces.



Core Goals for Infection Reduction



Knowledge Building + Awareness

Greater knowledge across sectors to apply engineered solutions to address health security.



Advocacy

CHAIR is a key voice for change in policies, legislation, regulation, and standards. Greater public awareness of engineered solutions helps drive improved health security.



Innovation + Implementation

New solutions are developed, tested, and implemented in public and health spaces.



Network Development

Members and network clusters collaborate and engage for greater impact.

Detailed Objectives

- Educate and advocate through professional organizations like CSA, CHES, CCHE, and IPAC.
- Reframe EIP as the primary means of protection rather than a secondary method of disinfection.
- Reduce exposure to airborne pathogens
- Reduce exposure to micro-organisms on high touch & high-risk surfaces
- Reduce exposure to water closet bioaerosols.
- Reduce exposure to sink & drain bioaerosols
- Facilitate adoption of UV light disinfection of air & surfaces
- Facilitate adoption of self-disinfecting surfaces such as copper
- Facilitate adoption of self-disinfecting sinks & drains
- Facilitate adoption of plasma-activated water (PAW)
- Facilitate adoption of non-toxic, environmentally cleaners that disrupt biofilm



Detailed Objectives (cont.)

- Quantify HAI reductions, cost benefit analysis and ROI.
- Support and project manage EIP trials.
- Provide EIP content to relevant CSA Standards and International standards that apply.
- Evaluate emerging EIP technologies.
- Review, analyze and share results of clinical studies that support EIP.
- Educate and advocate through professional organizations: (e.g.- CSA, CHES, CCHL, IPAC, CCGHC, CCHF).
- Promote acceptance of airborne pathogen transmission: (e.g. – COVID, Measles).
- Facilitate EIP expertise & professional qualifications
- Promote direct quantitative and qualitative measures to audit & validate disinfection processes (e.g. - ATP Testing, Culture Sampling, Image Capture Technology).
- Promote surface contamination <1.0 CFU per cm².
- Promote air contamination <10.0 CFU per m³.



Why CHAIR? (The Need for Engineered Solutions)

The Problem: Healthcare-Acquired Infections (HAIs) in Canada

- ✦ **1 in 10** Canadian patients acquires an infection in the hospital – **220,000 people per year**.
- ✦ **5% die** – That's **10,000 deaths annually** due to hospital-acquired infections.
- ✦ **The financial burden** – HAIs cost Canadians **\$4 to \$5 billion per year** in treatment expenses.

The Solution: Investing in Infection Prevention

- ◆ **Return on Investment (ROI)** – Save lives, save money.
- ◆ An **80% reduction** in HAIs could:
 - **Save 8,000 lives per year.**
 - **Prevent 160,000 infections.**
 - **Reduce costs by \$3.2 – \$4 billion annually.**

Sources: CIHI, CNISP, PHAC



HAI in Developed Nations



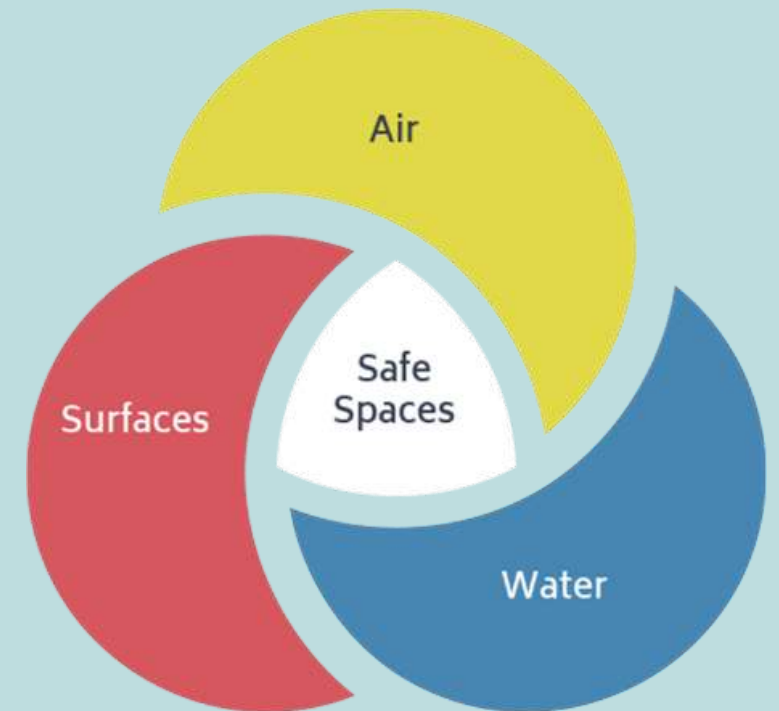
Healthcare-Acquired Infection Prevalence by Country (Source: WHO 2009)

Country	Prevalence (%)
Canada	10.5%
Switzerland	10.1%
Scotland	9.5%
Greece	8.6%
Finland	8.5%
Ireland	7.6%
United Kingdom	7.6%
France	6.7%
Norway	5.1%
Italy	4.6%
Slovenia	4.6%
United States	4.5%

Our Focus



- **Air:** Ventilation, extraction, displacement, filtration & disinfection.
- **Water:** Continuous point-of-use water & drain disinfection.
- **Surfaces:** Continuous disinfection

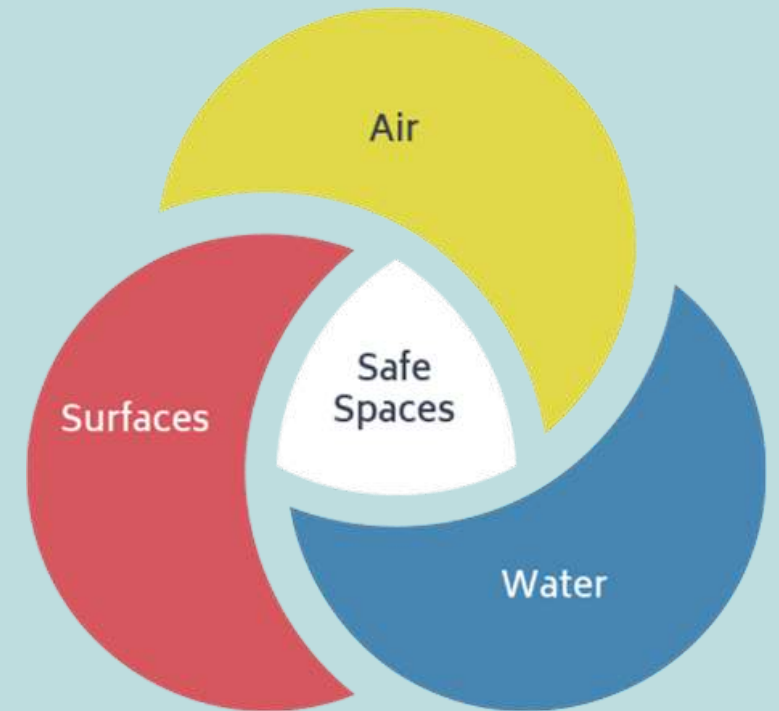
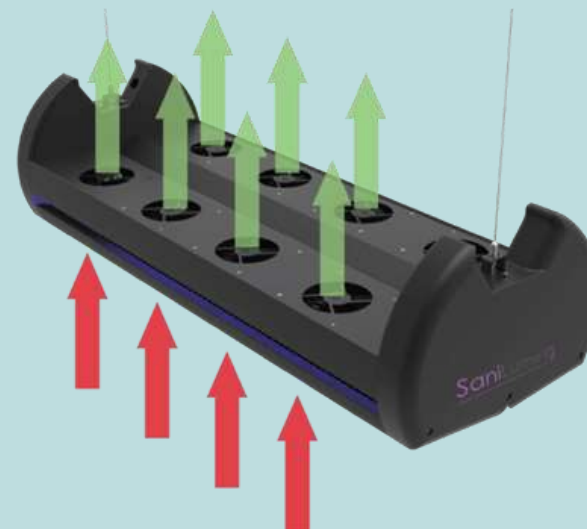


AIR



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- 100% fresh air
- HEPA filters
- >40% Relative Humidity
- Coil clean UV
- In duct UV
- Upper air UV₂₅₄
- Far UV₂₂₂
- VOC removal (NICU, Nursery, IVF)

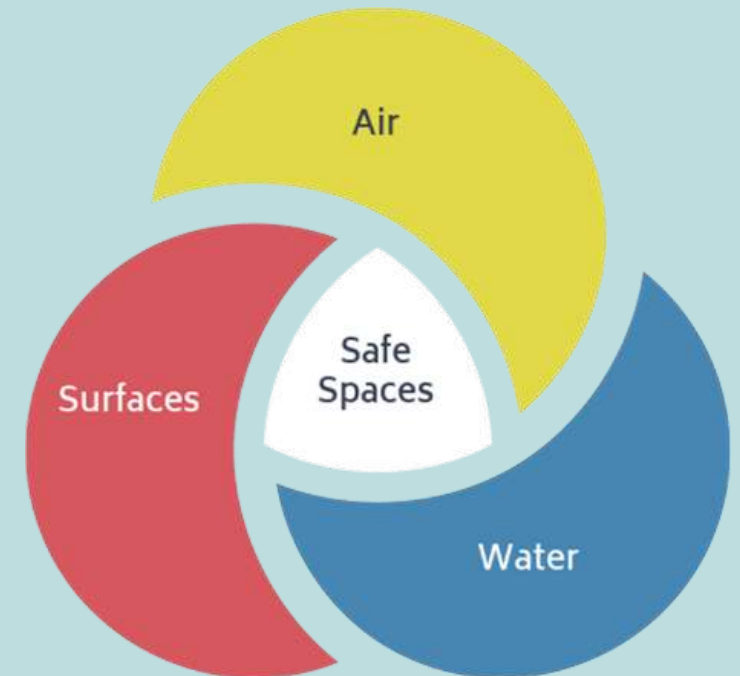


Water



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- **UV₂₅₄ disinfect hospital water supply**
- **Copper pipes**
- **Sink trap employs copper ion technology**
- **Point-of-Use Plasma Activated Water**
 - sinks, showers, toilets
- **Point-of-Use Auto-Flush**
 - Sinks



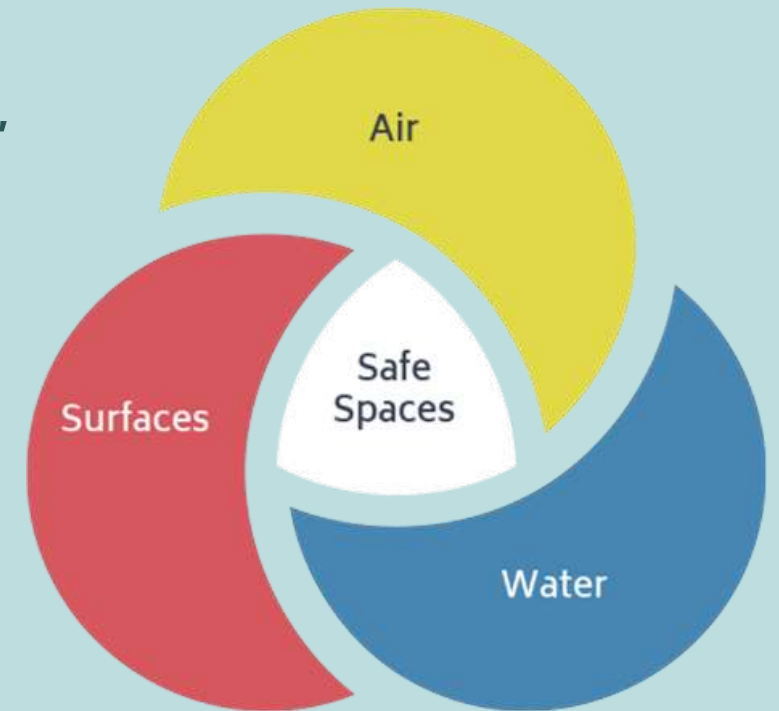
Surfaces

- Antimicrobial copper (Health Canada PMRA registered)
- Overbed Tables, Bed Rails, Handrails, Door handles, push & pull plates, Counter tops, Nursing Stations, Chair arms, IV poles

- Automatic UV₂₅₄ or UV₂₂₂



- Non-toxic, environmentally-friendly cleaners that prevent biofilms



How We Work

- ✦ Challenge Existing Norms
- ✦ Partner on Research Projects
- ✦ Provide Answers to Healthcare Industry Questions
- ✦ Participate in Standards, Conferences, Webinars & Workshops
- ✦ Social Media



Scientific Relationships

CHAIR Coalition collaborates with leading academic institutions, health organizations, and regulatory bodies to advance infection prevention research:



Our Corporate Members

Honorary Members *(Recognized for their contributions to CHAIR's mission)*



B-Mola



Circuit Edge



Clorox Pro



COMMERCIAL

Delta Commercial



EOS Surfaces



Infection Control Training Group



Teck Copper & Health



Westech

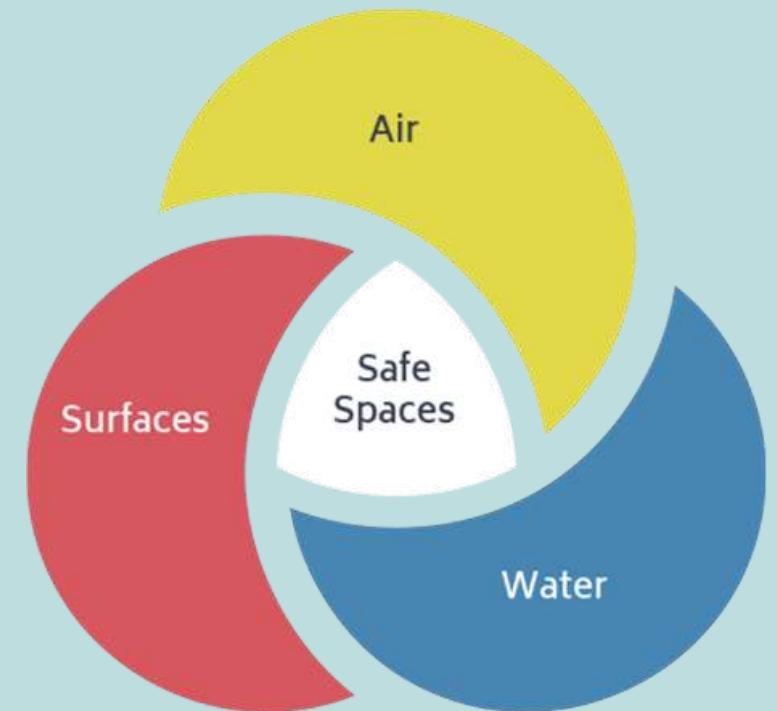
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EIP Patient Rooms



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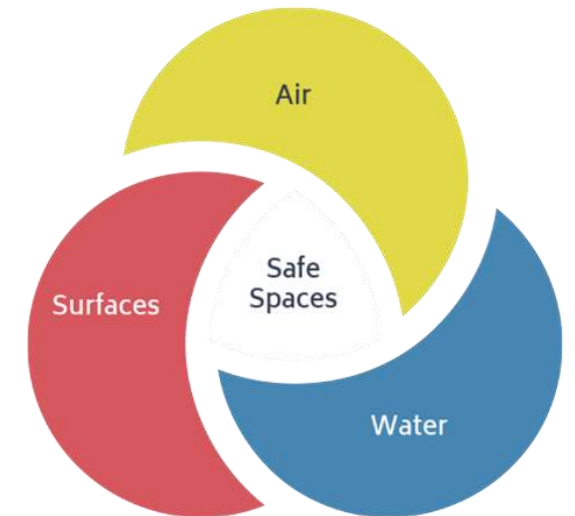
- Single patient rooms
- Self-disinfecting bathroom (AutoUV)
- Self-cleaning, auto-flush hand hygiene sinks (PAW)
- Self-cleaning p-trap (Cu ion)
- Upper Air UV disinfection (UVGI)
- Push-button whole room disinfection (Semi-AutoUV)
- Self-disinfecting high-touch surfaces (Cu)



Engineered Infection Prevention



- ✓ Recognized by the Patient Safety Movement Foundation as a 2017 Top 10 Patient Safety Innovation
- ✓ ↑ EIP Air, Water & Surfaces = ↑ Safe Spaces
- ✓ ↓ pathogens = ↓ infections = ↓ deaths
- ✓ ↑ EIP = ↑ ROI



Join CHAIR Today...It Takes a Village

Be Part of the Solution

✦ Download the Membership Application: <https://chaircoalition.org/Become-a-Member.htm>

✦ Email Us: tfriederich@chaircoalition.org

The future starts today—join us in making a lasting impact.



Membership Application



Email Us

Conclusion



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