



Fascinating Insights From Infection Prevention Professionals: Limitations in Stethoscope Hygiene, and Emerging Solutions

Infection Prevention Experts Weigh In





Mounting published evidence establishes the **stethoscope diaphragm** as a dangerous vector of pathogen transmission

Executive Summary

THE STETHOSCOPE

Role in Infection Prevention

Stethoscopes remain one of the most frequently used, shared, and patient-contact medical devices in clinical care. Despite their ubiquitous role, they continue to represent a **persistent and under-addressed risk for cross-contamination**.

To better understand current perceptions, challenges, and real-world experiences related to stethoscope hygiene, a survey was conducted among Infection Prevention professionals across multiple healthcare settings.

Survey findings reveal strong consensus that stethoscope contamination is a meaningful infection prevention concern, coupled with widespread acknowledgment of significant limitations in existing hygiene practices. Respondents consistently identified challenges related to compliance, workflow integration, reliability, and sustainability of current approaches.

Together, these findings suggest a growing gap between policy intent and real-world execution, highlighting the need for more reliable, workflow-aligned stethoscope hygiene strategies and implementations.

Methodology

Real World Insights

From Professionals in Infection Control & Prevention

An electronic survey was distributed to Infection Control & Prevention professionals through the **Association for Professionals in Infection Control and Epidemiology (APIC)**, **National Infection Prevention Forum (NIPF)**, and direct outreach. The survey collected Likert-scale responses and feedback addressing:

- Perceived risk of stethoscope-related cross-contamination
- Real-world compliance challenges
- Confidence in existing stethoscope hygiene methods
- Practical limitations of current practices
- Evaluation methods for alternative or improved approaches

A total of 49 completed responses were received and included in the analysis.



Key Findings

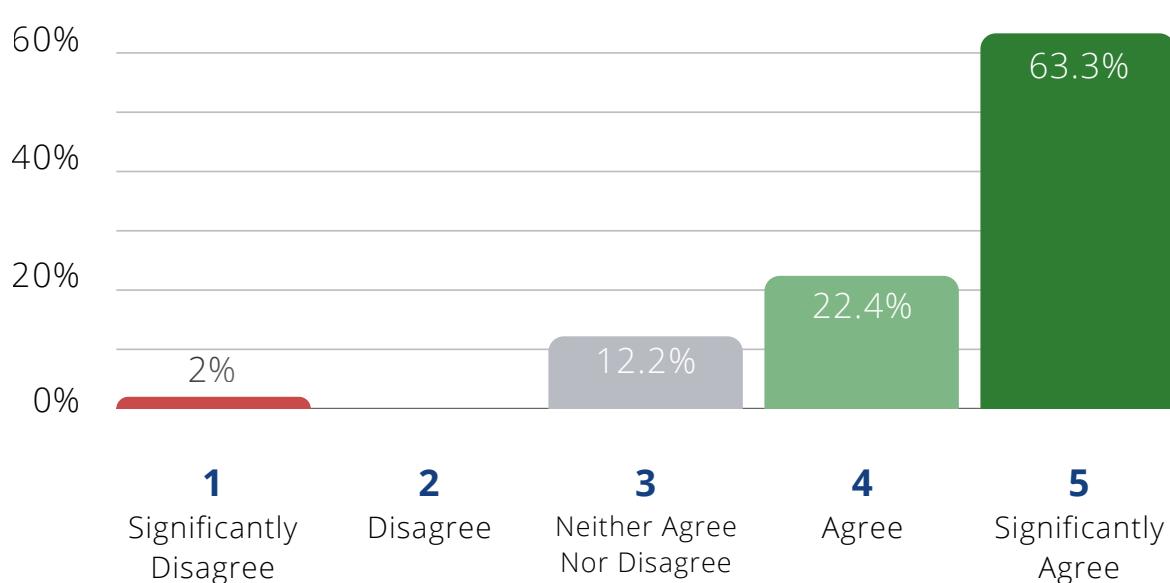
86% OF INFECTION PREVENTIONISTS Believe Stethoscopes Represent an Unaddressed Risk

A strong majority of respondents agreed that **stethoscopes represent a meaningful and under-addressed risk for cross-contamination in patient care**, and also overwhelmingly reported that achieving consistent stethoscope cleaning compliance in real clinical environments is challenging.

This finding reflects growing awareness among Infection Preventionists that stethoscope diaphragms function as high-touch, patient-to-patient contact surfaces, yet are not consistently addressed with the same rigor as other vectors of contamination.

This perception aligns with broader infection prevention trends recognizing that “non-critical” devices can play a significant role in pathogen transmission when hygiene practices are inconsistent or unreliable.

Responses: “I believe stethoscopes represent a meaningful and under-addressed risk for cross-contamination in patient care.”



Key Findings

Limited Confidence in Traditional Stethoscope Hygiene Practices

Despite high agreement that contamination risks and compliance challenges, respondents report limited confidence that traditional hygiene practices reliably mitigate these risks in real-world care.

Survey responses indicate **moderate to low confidence** that pre-existing stethoscope hygiene practices, such as cleaning & use of disposable stethoscopes, effectively and consistently reduce contamination risk. High levels of agreement across these statements indicate a lack of confidence that reflects a broader concern that existing approaches may not reliably deliver the intended infection prevention benefit in real-world conditions.

Practice Limitation	Agree/ Significantly Agree (%)	1 Significantly Disagree	2 Disagree	3 Neither Agree Nor Disagree	4 Agree	5 Significantly Agree
Compliance is Challenging "Achieving consistent stethoscope cleaning compliance in real clinical environments is challenging."	87.8% Agree	0%	2%	10.2%	24.5%	63.3%
Alcohol-Resistant Pathogens Concerning "Alcohol-resistant pathogens represent a significant concern in infection prevention."	79.6% Agree	0%	4.1%	16.3%	20.4%	59.2%
Disposable Stethoscopes Present Dangerous Trade-offs "Single-patient (disposable) stethoscopes present dangerous trade-offs related to diagnostic accuracy, staff earbud contamination, and cleaning practices between patients."	75.5% Agree	6.1%	2%	16.3%	28.6%	46.9%

Key Findings

Important Factors During Evaluation of Novel Evidence-Based Solutions

Survey responses indicate strong consensus that evaluation of infection prevention solutions must extend beyond theoretical efficacy and **address real-world implementation considerations**. Respondents emphasized the importance of solutions that are supported by **robust clinical evidence**, align with **clinician workflow**, and demonstrate meaningful value without compromising patient safety or HAI prevention priorities. Collectively, these findings suggest that adoption decisions are driven by a balance of evidence strength, usability, and sustained impact within complex care environments.

Importance of Evaluation Factors

Agree / Significantly Agree:

Evidence-Based Implementations

"Strong clinical evidence and peer-reviewed data are essential when evaluating infection prevention technologies."

91.8%
Agree

Clinician Acceptance & Compliance

"Evaluation of infection prevention tools and strategies must include assessment of clinician acceptance and compliance."

96.0%
Agree

Patient Safety Priority Over Sustainability

"I value sustainability, but patient safety and HAI prevention take priority when balancing environmental and clinical risks."

87.7%
Agree

Ease of Implementation & Workflow Compatibility

"Ease of implementation and clinician workflow compatibility are critical factors when evaluating new IP solutions."

98.0%
Agree

Return on Investment

"Infection prevention technologies should demonstrate clear cost-effectiveness or potential to reduce infection-related costs."

91.8%
Agree

Key Findings

Habit Stacking Agreed to Be An Effective Compliance Strategy

Habit Stacking is the practice of linking a new behavior to an existing routine so the established habit cues and reinforces the new action.

Hand & Stethoscope Hygiene Habit Stacking

Survey findings demonstrate strong agreement that integrating new infection-prevention practices into existing workflows, often described as “**habit stacking**”, is an effective strategy to improve staff compliance. Respondents widely supported pairing stethoscope hygiene interventions with established hand hygiene moments.

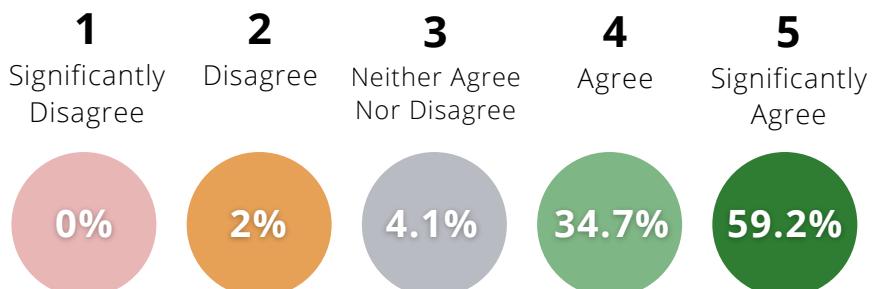
93.9%

Agree or Significantly Agree

Habit stacking is an effective strategy to improve both hand and stethoscope hygiene compliance

Survey Statement

“Integrating new infection-prevention practices into existing workflows (for example, placing stethoscope hygiene interventions near hand hygiene stations) is an effective way to support staff compliance for both the existing and new workflow.”



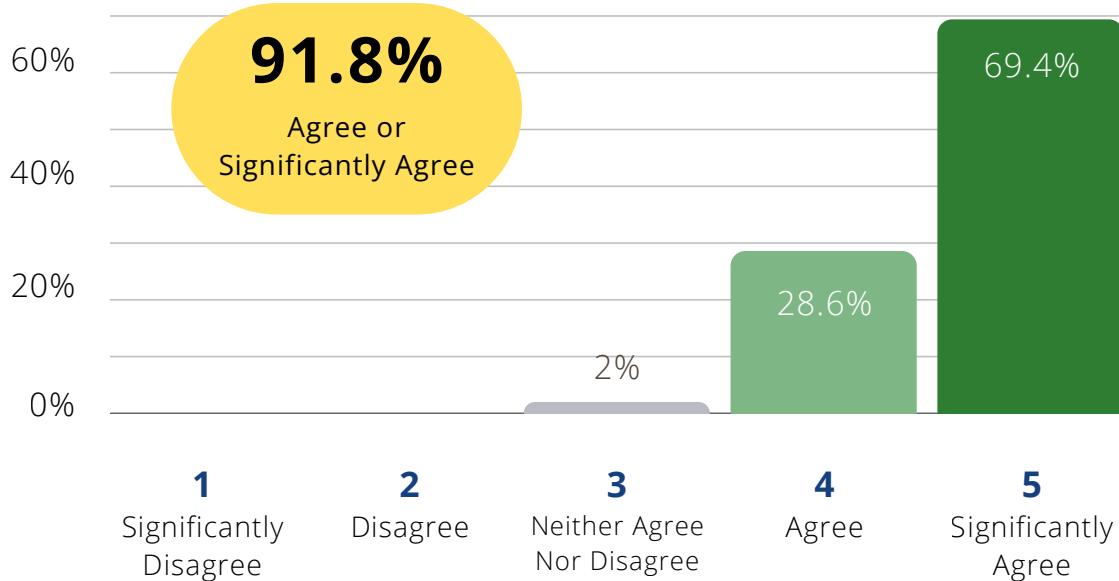
Key Findings

Visible Hygiene Practices Support Patient Safety & Experience

Transparency & Visible Hygiene Practices

Visible hygiene practices were viewed as reinforcing patient trust, supporting a culture of safety, and providing additional reassurance in settings where patients are particularly vulnerable to healthcare-associated infections.

Responses: "Visible hygiene practices (including point-of-care device hygiene) support patient trust and safety culture."



Key Findings

Immunocompromised Patients Deserve Enhanced Device Hygiene Strategies

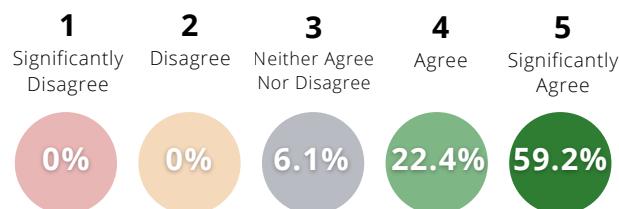
Immunocompromised Patients face significantly higher risks for Healthcare-Associated Infections (HAIs) and worse outcomes.

Enhanced Protections for Immunocompromised Patients

Respondents expressed clear consensus that high-risk and immunocompromised patient populations warrant **enhanced point-of-care device hygiene strategies** beyond standard protocols when feasible.

Survey Statement

"High-risk and immunocompromised patients warrant enhanced point-of-care device-hygiene strategies beyond standard protocols when feasible."



93.9%

Agree or Significantly Agree

Enhanced point-of-care device-hygiene strategies are warranted for immunocompromised patients

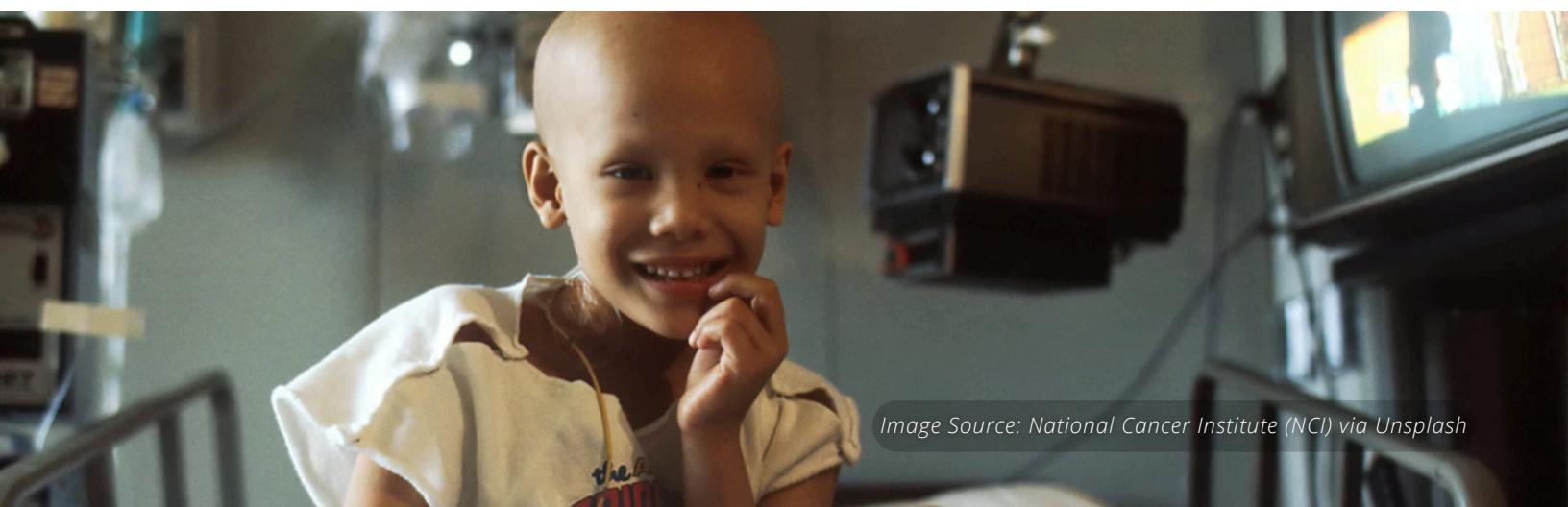


Image Source: National Cancer Institute (NCI) via Unsplash

Key Findings

Strong Support For Evaluation of a Practical, Evidence-Based Stethoscope Hygiene Approach

As a final question, the respondents were asked to give their impressions on **The DiskCover System**, a touch-free aseptic stethoscope diaphragm barrier dispensing system designed to fill the gaps of pre-existing stethoscope hygiene solutions.

Respondents expressed strong interest and curiosity about the concept, frequently describing it as interesting, novel, simple, and potentially impactful. Many recognized the importance of addressing stethoscope hygiene gaps and viewed the approach as a meaningful step beyond traditional cleaning or disposable stethoscopes.

Several respondents emphasized the potential value of this solution and believed it would improve consistency and compliance, particularly when traditional stethoscope disinfection does not reliably occur. Ease of use, point-of-care availability, and workflow integration were repeatedly cited as key factors influencing feasibility and adoption.

While some respondents noted cost considerations, deployment logistics, or the need for further information, these comments were largely framed as implementation questions rather than objections. Many expressed interest in learning more, evaluating effectiveness, or discussing the concept within their IPC committees.

Overall, these impressions reflect a broad recognition of the problem, openness to new approaches, and interest in solutions that reduce reliance on perfect human behavior while supporting safer, more reliable stethoscope hygiene practices.



***The DiskCover System** is a workflow-compatible, touch-free stethoscope diaphragm barrier dispensing system that instantly delivers an aseptic patient contact point for the stethoscope.*

Discussion

The survey findings reveal a consistent narrative among Infection Prevention professionals: while stethoscope contamination is broadly recognized as a real risk, existing hygiene practices often fall short in reliability, compliance, and practicality.

This mirrors patterns observed in other areas of infection prevention, where success increasingly depends on designing solutions that reduce reliance on perfect human behavior and instead align with clinical workflow.

As with hand hygiene, environmental cleaning, and device reprocessing, sustainable improvement in stethoscope hygiene may require approaches that are visible, standardized, and easy to execute consistently.



Diligent Hand
Hygiene Efforts are
Undermined by
Weak Stethoscope
Hygiene

Implications for Infection Prevention Programs

Healthcare organizations seeking to strengthen infection prevention performance and stethoscope hygiene practice should consider:

- Evaluating stethoscope hygiene practices with the same rigor applied to other important vectors like the clinicians' hands.
- Recognizing the gap between policy expectations and real-world compliance.
- Exploring solutions that improve reliability without adding cognitive or time burden to clinicians.
- Incorporating stethoscope hygiene into broader quality, safety, and HAI prevention strategies.

In the context of these findings, solutions that are designed to integrate into existing hand hygiene workflows, reduce reliance on manual compliance, and provide visible, point-of-care assurance may warrant further evaluation.

For example, touch-free stethoscope hygiene systems that are placed near hand hygiene stations and supported by peer-reviewed evidence may align with respondent-identified priorities related to habit stacking, clinician acceptance, and protection of high-risk patient populations.

The DiskCover System is one example of an emerging, touch-free stethoscope hygiene approach designed to align with these criteria. Its placement at the point of care and integration with hand hygiene moments reflect the workflow-based strategies highlighted by respondents in this survey.



Conclusion

Survey data in this report underscores that Infection Prevention professionals recognize the contribution of the stethoscope diaphragm to pathogen transmission and the limitations of currently available stethoscope hygiene options.

Addressing this gap will require education and the integration of evidence-based Policy and Procedures for stethoscope hygiene. Tools that are fully effective, immediate, easy to use, high compliance, and workflow compatible are critical to elevate patient safety and patient experience.

Author

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About AseptiScope

AseptiScope, Inc. is a privately funded, San Diego-based clinical innovation company founded in 2016 with a singular focus on infection prevention. The company is led by clinicians, medical researchers, and innovation specialists who work closely with Infection Prevention and clinical experts to study real-world contamination risks, compliance challenges, and workflow limitations in clinical environments. AseptiScope is grounded in market analytics and clinical research in order to identify existing practices and to advance and elevate standards for patient safety and infection control.





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