The Leading Source of Scientific, Professional & Consumer Information

IFH Newsheet May 2025

Please share this resource

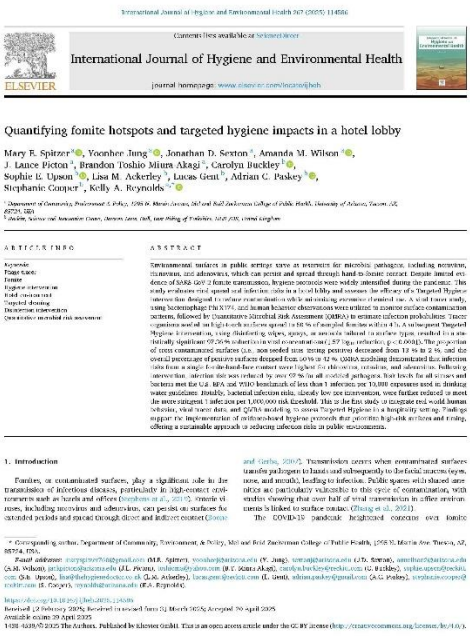
If you find this newsletter of value, please encourage your colleagues to join our mailing list. With your help we want to reach as many people as possible. Ask them to sign up here.

To get the latest news and research as it happens,
follow IFH on LinkedIn,
with the Chairman of the IFH, Sally Bloomfield

Contents

- **Using Quantitative Microbial Risk Assessment (QMRA) to estimate the impact of Targeted Hygiene on viral infection transmission in a Hotel Lobby.**
- **Launch of IFH – Pan American Targeted Hygiene (IFH-PATH) website.**

Using Quantitative Microbial Risk Assessment (QMRA) to estimate the impact of Targeted Hygiene on viral infection transmission in a hotel lobby.



International Journal of Hygiene and Environmental Health

Quantifying fomite hotspots and targeted hygiene impacts in a hotel lobby

This new study by Kelly Reynolds and her team at University of Arizona [1] is a vital step forward in validating risk management approaches for developing effective, sustainable and resilient hygiene policy for homes and everyday life settings.

Since 1997 IFH has been developing a risk management approach called Targeted Hygiene. This recognizes that the effective way to control infection risks in community settings is **not by trying to eliminate harmful germs,** by “keeping surfaces clean or “frequent handwashing”, as the public tend to believe.

Risk management works by targeting practices when and where needed to halt “*the journey of the germ”* (e.g. handwashing after using the toilet, handling raw food and touching surfaces touched by others, or before handling ready-to-eat food) thus **reducing risk of exposure and lowering infection rates**. Although health policy makers still regard hygiene as a clinical issue, where policy must validated by data from RCTs, multibarrier approaches, are fundamentally unsuited to this approach. [2]

QMRA is now challenging perceptions, by providing the means to generate quantitative data on impact of hygiene on infection rates. By contrast with RCTs, QMRA can be used to estimate separate or combined efficacy of interdependent interventions (e.g. hand and contact surface hygiene).. Importantly also, data can be generated in a timely manner to support policy development in time critical situations. As quality and quantity of input data increases, it is argued that QMRA provides an equally or more effective way to estimate relative contributions of different infection transmission routes and inform intervention strategies. This study used QMRA to model the impact of a targeted hygiene intervention applied to high frequency touch surfaces on transmission of viral infection in a hotel lobby.

In the first part of this study the effectiveness of targeted cleaning and disinfecting

high-touch surfaces, such as elevator buttons, luggage cart handles and common seating areas, for preventing spread of a harmless viral tracer (Phi X174) seeded across various surfaces. Cleaning interventions included use of disinfectant wipes on surfaces (e.g. counters, armrests), disinfectant sprays for larger areas (e.g. seating), and aerosol disinfectants for less accessible spots.

The Targeted Hygiene interventions greatly reduced the presence of the viral tracer on surfaces and impeded its spread as compared to a control seeding of the viral tracer where no interventions were applied:

- Viral concentrations on treated surfaces were reduced by 97.36% (1.57 log reduction).
- The overall proportion of contaminated surfaces decreased from 50% to 42%.

- The proportion of cross-contaminated surfaces (non-seeded surfaces testing +ve) decreased from 13% to 2%.

In the second part of the study, QMRA modelling estimated that, for harmful viruses such as rhinovirus, rotavirus and adenovirus, the intervention would produce a 97% reduction in risk of getting sick from touching a contaminated surface in a similar scenario, well below accepted health risk thresholds.

The authors believe. this is the first study to integrate real-world human behaviour, viral tracer data, and QMRA to assess Targeted Hygiene in a hospitality setting. Further they conclude the findings support implementation of evidence-based hygiene protocols that prioritize high-risk surfaces and offer a sustainable approach to reducing infection risks in public environments.

1. Reynolds KA, Spitzer ME, Jung Y, Sexton JD, Wilson AM, Picton JL, Miura-Akagi BT, Buckley C, Upson SE, Ackerley LM, Gent L. Quantifying Fomite Hotspots and Targeted Hygiene Impacts in a Hotel Lobby. https://authors.elsevier.com/c/1l0JT574PxHPdn; https://doi.org/10.1016/j.ijheh.2025.114586Get rights and content

2. The Royal Society. COVID-19: examining the effectiveness of non-pharmaceutical interventions. – Executive summary: August 2023 DES8417_2, ISBN: 978-1-78252-672-8

Launch of IFH **Pan-American Targeted Hygiene (IFH-PATH) website**

In 2023 a new division of IFH, the Pan-American Targeted Hygiene Center (IFH-PATH) was launched to expand the International Scientific Forum on Home Hygiene into the USA and across North and South America.

Recognizing that while the role of effective hygiene in mitigating infectious agents, preventing disease, and promoting health is universal, the Pan-American population comprises a diversity of cultures, races, languages, and socioeconomic groups with unique habits, attitudes, and practices that require customized strategies and messaging.

The mission of IFH-PATH is to continue the IFH commitment to applying the latest scientific understanding in developing and promoting policy for hygiene in homes and in everyday lives that are based on risk management, together with the appropriate messaging for 21st century hygiene in Pan-American homes and public spaces.

The goals are threefold:

1. Develop hygiene resiliency by working towards the establishment of a leadership structure for home and community hygiene.
2. Adopt and promote an effective and sustainable Targeted Hygiene approach for home and everyday life.

3. Improve public understanding and best habits related to how and when to engage in hygiene practices.

IFH-PATH has recent launched a website. As a priority, the website features research (including recent publications) and development work on the use of QMRA for evaluating the impact of hygiene on infection rates.

Go to IFH's website

Copyright © 2025 International Scientific Forum on Home Hygiene, All rights reserved.
You are receiving this email because you opted in via our website.
If you wish to make contact with us, please email us at secretariat@ifh-homehygiene.org

Our mailing address is:
International Scientific Forum on Home Hygiene
Old Dairy Cottage
Woodhouse Lane
Montacute, Somerset TA15 6XL
United Kingdom

Add us to your address book

Want to change how you receive these emails?
You can update your preferences or unsubscribe from this list.

INTUIT mailchimp