



# Disinfectants in healthcare: a need for safer solutions

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# Outline



- Introduction to disinfectants in healthcare
- Hospital disinfection - why do we need safer disinfectants?
- Introduction to SAICM 2.0 project and the WIDES database
- Procurement of disinfectants within healthcare organisations across the globe (a survey)
- Summary of the HCWH report (2020) and learning outcomes
- Future outlook

# Introduction to disinfectants in healthcare



**Cleaning** removes dirt deposited on inanimate surfaces by mechanical (friction), physical (temperature), or chemical means for a certain length of time.

It is considered an essential step prior to any disinfection process.

**Disinfection** is a physical or chemical process in which vegetative microorganisms are removed from inanimate objects but without the assurance that bacterial spores have been removed.

[Basic Recommendations on the Prevention and Control of Healthcare Associated Infections.](#)  
WHO and Pan American Health Organization, 2017

# Introduction to disinfectants in healthcare

- Disinfectant categories
- Active substances used for disinfection
- Fields of application
- Disinfection practices in human healthcare settings
- Chemical disinfection from the perspective of emerging and newly identified health risks
- Alternatives to chemical disinfection



[Chemical disinfection in healthcare settings: critical aspects for the development of global strategies](#). GMS Hyg Infect Control. 2020

# Disinfectants in healthcare - why do we need them?

On any given day:



1 / 15

hospital patients have at least one HAI.

98 000

patients have at least one HAI.



1 / 26

long-term care facilities residents have at least one HAI.

130 000

residents have at least one HAI.

**Antimicrobial resistance (AMR)** and **healthcare-associated infections (HAI)** are among the most serious public health problems, globally and in Europe. ECDC estimated that approximately 4 million patients acquire a HAI each year in all European Union Member States and that approximately 37,000 deaths directly result from these infections

# Hospital disinfection - why do we need safer disinfectants?

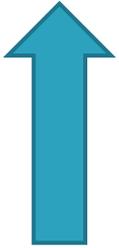
## PROS

Disinfectants in healthcare settings **are essential** to prevent cross contamination, outbreak of diseases, and hospital-acquired infections (HAI)

## CONS

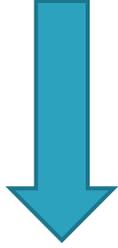
Biocidal active substances present in disinfectants **pose potential occupational health hazards, environmental threats, and can contribute to the spread of antimicrobial resistance (AMR)**

# Disinfectants- what matters

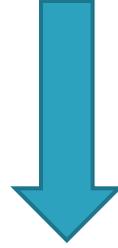


Antimicrobial efficacy

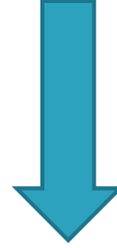
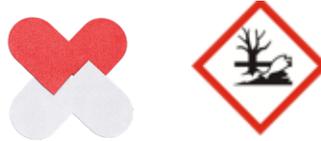
EN 1500  
EN 12791  
EN 14476



Occupational Health impact



Environmental impact



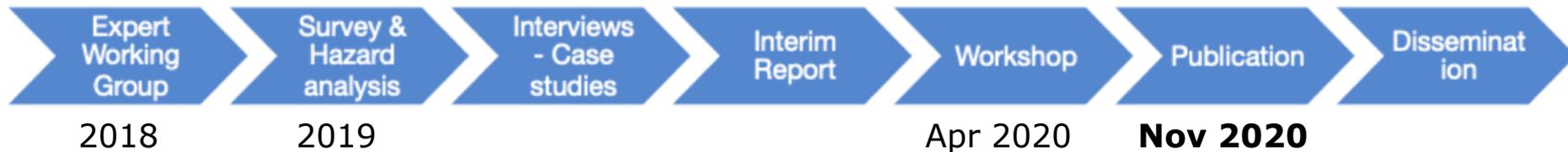
Price/cost

# Introduction to SAICM 2.0 project

## SAICM 2.0 project (2018-2020)

Addresses the health and environmental problems related to disinfectants used in healthcare at local, regional, and national levels by engaging a broad range of stakeholders in hospitals and nursing homes

**Aim:** Promote the use of safer and more environmentally friendly disinfectants without compromising hygienic and occupational health standards



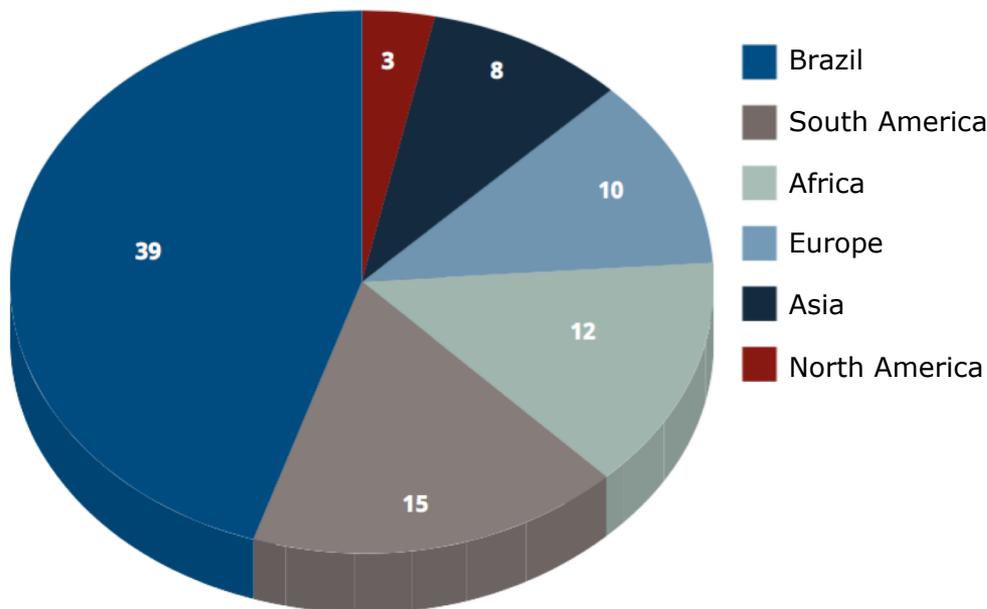
# Introduction to the WIDES database

Hazard analysis and product benchmarking SAICM 2.0 project builds upon the **Viennese Database for Disinfectants (WIDES)**



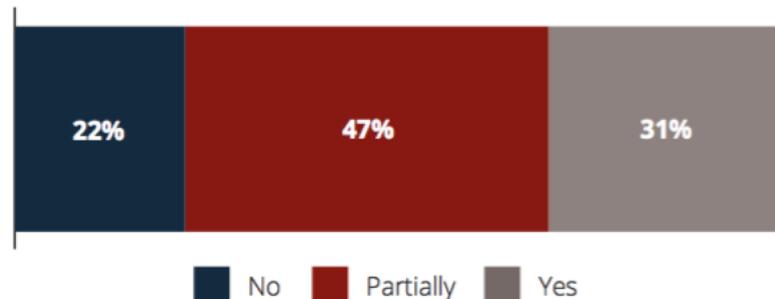
- ✓ A user-friendly database on the established effects of commercially available disinfectants and their ingredients as well as the properties of these products that are of relevance for occupational safety and environmental protection
- ✓ Human- and ecotoxicological data on > 200 ingredients of disinfectants
- ✓ Data regarding the composition, spectrum of activity, applications and material compatibility of > 300 products
- ✓ An evaluation scheme to compare human- and ecotoxicological properties of the ingredients of the most important disinfectants available on the Austrian market
- ✓ German and English Training Videos and Flyers

# A survey on the procurement of disinfectants in the healthcare settings



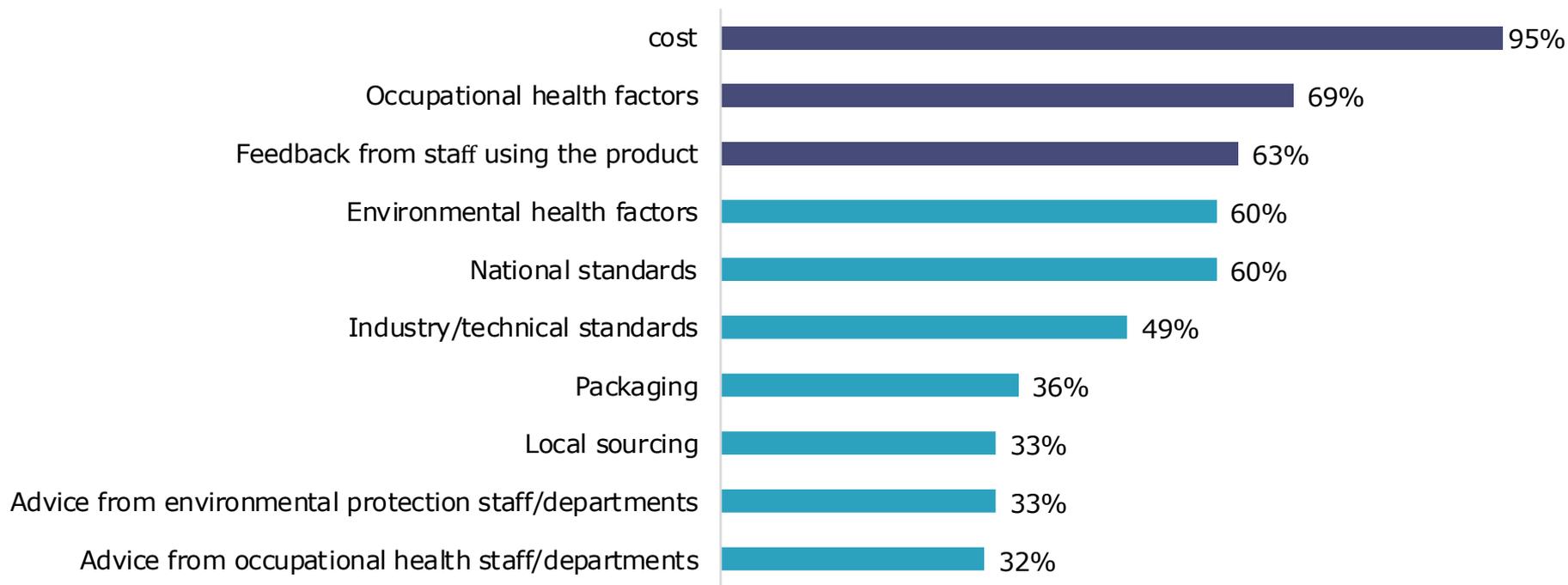
- Total: 87 organisations from 19 countries across the globe
- Responders role: environmental protection (26%), infection prevention & control (22%) and procurement (16%)

Do you believe the use of disinfectants in your organisation poses a hazard to human health and/or the environment?



# A survey on the procurement of disinfectants in the healthcare settings

## Factors taken into considerations when procuring disinfectants



# Workflow

## Survey

172 products; ingredients identified via the SDSs by means of CAS numbers

## Product hazard analysis

Ingredient hazard information complemented by the hazard statements provided in the WIDES database; ABC categorisation

## Interview - Case studies

9 hospitals selected for tailored support to identify less hazardous disinfectant alternatives; 106 products (out of 172 identified during the survey) analysed

## Product benchmarking

6 case studies

## Interim report - Public consultation

Each case study is presented as follows:

1. Conclusions on the outcomes of the first hazard analysis
2. Products recommended for substitution
3. Identification and assessment of potential alternatives
4. Product benchmarking
5. Learning outcomes

## Final report

# Summary of the HCWH report



Promoting  
**safer disinfectants**  
in the **healthcare sector**

SAICM 2.0  
**FINAL  
REPORT**



## SUGGESTIONS FOR PRODUCT SELECTION STRATEGY (BASED ON THE WIDES DATABASE)

- Manual instrument disinfectants
- Hand disinfectants
- Surface disinfectants

## CASE STUDIES

## NON-CHEMICAL ALTERNATIVE SOLUTIONS AND INNOVATION IN THE FIELD OF SUSTAINABLE DISINFECTION PRACTICES

## RECOMMENDATIONS

# Summary of the HCWH report: learning outcomes



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## **Hazard communication**

Different hazard disclosure practices observed among countries emphasise the need for harmonised regulations to guarantee better access to information.

## **Testing and information disclosure**

Globally, there are still biocides and disinfectants on the market that have not yet been sufficiently investigated.

## **Sustainable use**

Of the utmost importance is adherence to best practices in the use of biocides - the overall aim of sustainable use is that biocides are only used where deemed truly necessary.

# Summary of the HCWH report: learning outcomes



Promoting  
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SAICM 2.0  
**FINAL  
REPORT**



**The best practice from the City of Vienna** shows that access to information, improved regulation, and setting sustainability criteria for public procurement has changed the market for disinfectant products.

The results of the SAICM 2.0 Project highlight **areas of improvements and actions to be taken at both hospital, governmental and industry level:**

1. Address the need of hospitals and procurers to identify safer alternatives
2. Improve the current regulatory and policy framework
3. Promote sustainable procurement practices
4. Encourage responsible business practices
5. Foster innovation in the field of sustainable disinfection practices

<https://noharm-europe.org/>

# Future outlook



SK @Pixabay

## **Sustainable Health in Procurement Project - SHiPP**

HCWH Europe new initiative **Healthcare Market Transformation Network** aiming at:

- ✓ Development of harmonised sustainable procurement criteria
- ✓ Facilitation of dialogue amongst procurers, health professionals, and suppliers

**Working Group & a Reference Group** on disinfectants

<https://noharm-europe.org/healthcare-market-transformation-network>

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Bundesministerium  
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Thank you!

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