



The importance of cleaning throughout the hospital

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18th September 2019

SECURING PATIENT SAFETY THROUGH PROFESSIONAL CLEANING & HYGIENE SOLUTIONS IN THE HEALTHCARE SECTOR



Lets focus on Environmental Hygiene

**“Every infection prevented means
fewer antibiotics used”**

IFH, 2018



Survival of transmissible pathogens in the environment



- Lifetimes measured in days, weeks, months and even years
- The most epidemiologically relevant pathogens survive for months on surfaces
- Lower temperatures and higher humidity are associated with longer survival times

Ages!

Kramer A, "How long do nosocomial pathogens persist on inanimate surfaces? A systematic review", BMC Infect Dis, 2006; 130 (6): 1-8.



Concerns with microbial content of reusable laundered fabrics



- Cloths were sampled from 10 different hospitals
- 8 hospitals used cotton, 2 microfiber cloths
- Microfiber towels had higher numbers of bacteria than cotton cloths
- 9/10 hospitals were using a quat disinfectant, 1 used bleach.
- 2/10 used a commercial laundry, 8/10 laundered in house.

93% contaminated

Previous patient illness can affect risk for next patient

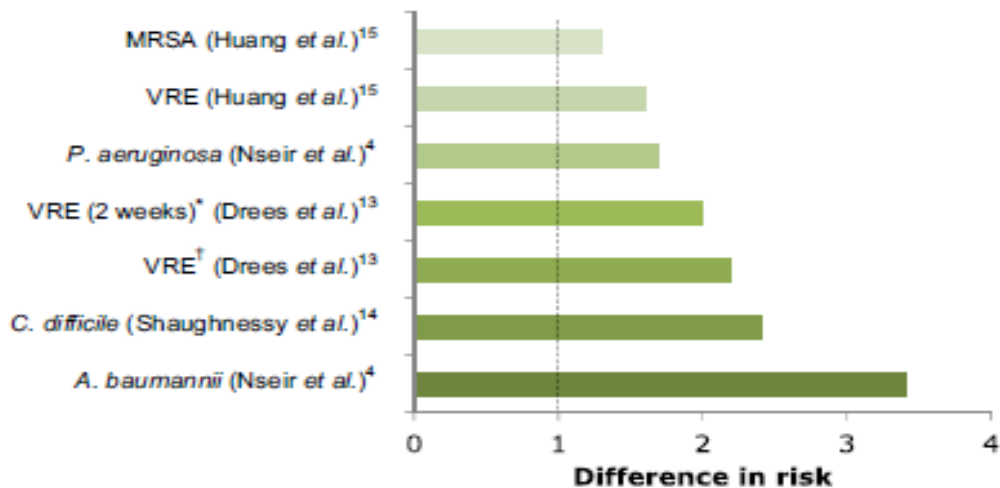
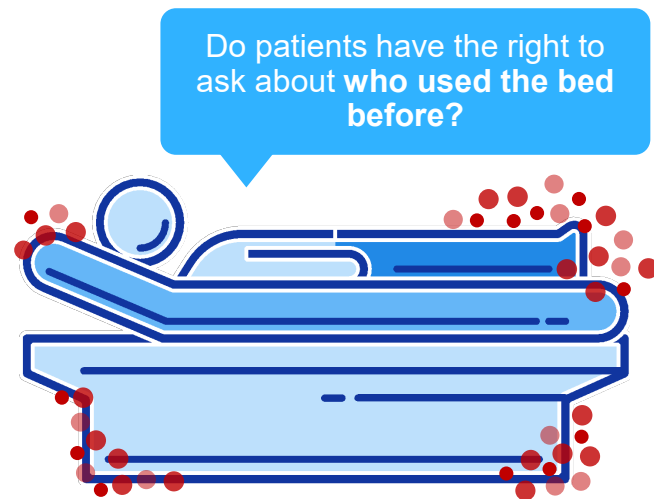


Fig 1. Chart showing the increased risk associated with the prior room occupant. The figures of difference in risk are unadjusted based on raw data. Several of the studies included adjusted measures of risk, but these were not included because of differences in study design. * Any patient infected or colonized with VRE in the two weeks prior to admission. † The immediate prior room occupant was known to be infected or colonized with VRE.



Otter, et al, "Evidence that contaminated surfaces contribute to the transmission of hospital pathogens and an overview of strategies to address contaminated surfaces in hospital settings", *Am J Infect Control*, 2013; 41: S6-S11.

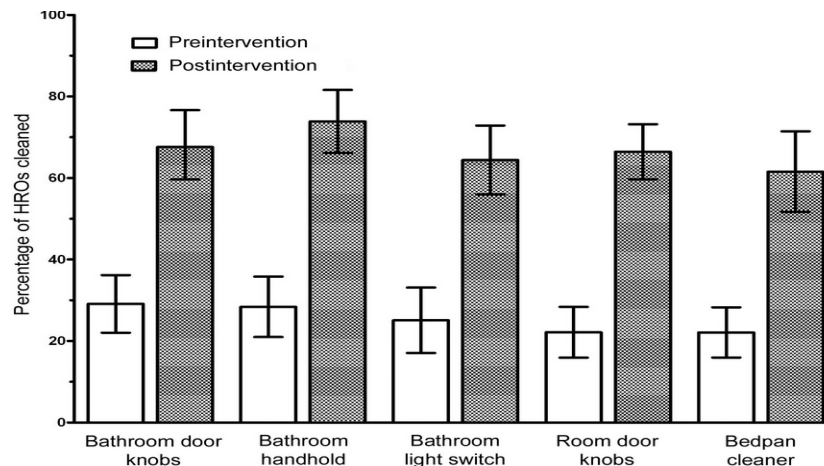


Improved Cleaning Can Decrease the Risk of Pathogen Transmission

High touch surfaces are not always well cleaned

Improved environmental cleaning contributed to the control of outbreaks and transmission

Cleaning outcomes can be improved with programmatic intervention including education and training and objective performance feedback



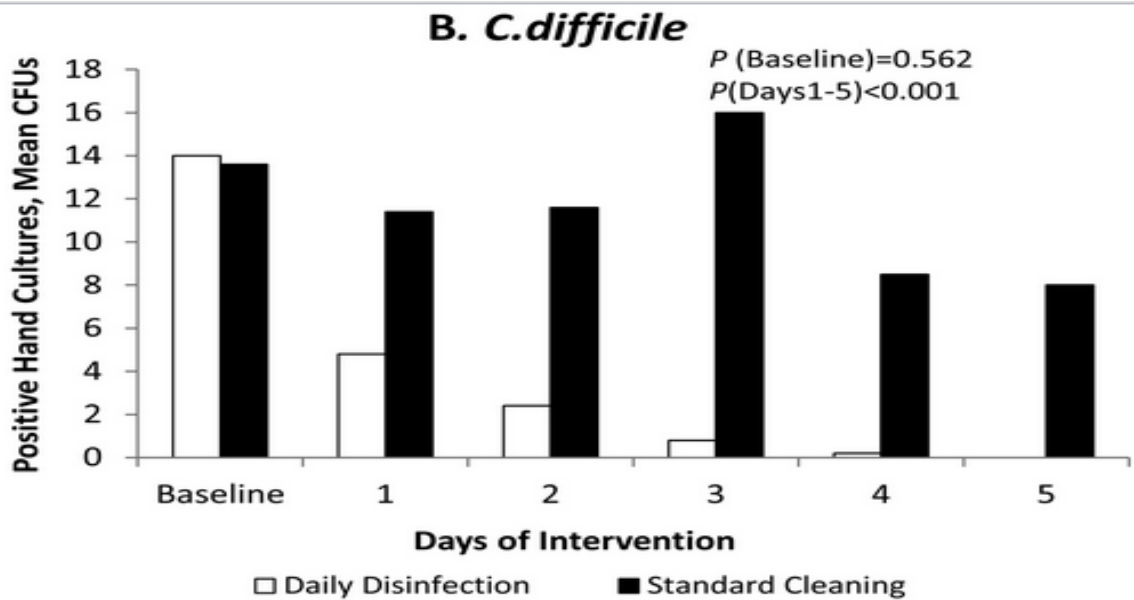
Carling PC, Parry MM, Rupp ME, Po JL, Dick B, Von Beheren S; Healthcare Environmental Hygiene Study Group. Improving cleaning of the environment surrounding patients in 36 acute care hospitals. *Infect Control Hosp Epidemiol.* 2008 Nov;29(11):1035-41.

Eckstein BC, Adams DA, Eckstein EC, Rao A, Sethi AK, Yadavalli GK, Donskey CJ. Reduction of *Clostridium difficile* and vancomycin resistant enterococcus contamination of environmental surfaces after an intervention to improve cleaning methods. *BMC Infect Dis.* 2007 Jun 21;7:61

Daily Cleaning is Critical

Rigorous Environmental Cleaning is Essential

Improved and more frequent cleaning decreases environmental contamination and decreases pathogen acquisition





The value of ready-to-use disinfectant wipes: Compliance, employee time, and costs



- the use of pre-wetted disposable wipes as an alternative to a cloth and bucket method of disinfecting for operating rooms was studied in US hospitals.
- A covert fluorescent marker was used to assess cleaning compliance
- Pre-wetted wipes compared to cloth and bucket

**23% faster
easier to use**

Wiemken TL, et. al. "The value of ready-to-use disinfectant wipes: Compliance, employee time, and costs". Am J of Infect Cont, 2014; 21: 329-330.



Cleaning compliance of patient room surfaces not at acceptable levels



- cleaning compliance across 23 acute care facilities were assessed
- high touch surfaces were not routinely cleaned during discharge (terminal) cleaning of patient rooms.
- Cleaning compliance varied significantly by surface (bathroom light switch = 20%, sink = 82%).

High variability between hospitals

**only 49%
actually cleaned**





Properties of an Ideal Disinfectant

Updated HICPAC/CDC Guidance for Selection of an Ideal Disinfectant - <i>Infection Control and Hospital Epidemiology</i> (Vol. 35, No.7 (July 2014), pp. 855-865)
Kill Claims for the most prevalent healthcare pathogens
Fast Kill times and acceptable wet contact time to ensure proper disinfection of non-critical surfaces and patient care equipment
Safety
Ease of Use
Other Factors - manufacturer support; overall cost

1. **Broad spectrum**
2. **Fast acting**
3. **Remains wet**
4. **Unaffected by environmental factors**
5. **Non-toxic and non-irritating to the user**
6. **Compatible with surfaces**
7. **Persistence**
8. **Easy to**
9. **Acceptable odor**
10. **Economical**
11. **Soluble in water**
12. **Stable**
13. **Cleaner**
14. **Nonflammable**



All disinfectant technologies come with trade-offs

 Best
 Does not meet standard

Key Properties	Disinfectant Technologies							
	IHP*	Chlorine	PAA	Quat	Quat/Alcohol	Quat/Solvent	Alcohol	Phenolic
Broad spectrum	●	●	●	●	●	●	●	●
Fast acting	●	●	●	●	●	●	●	●
Remains wet	●	●	●	●	●	●	●	●
Not affected by environmental factors	●	●	●	●	●	●	●	●
Non-toxic	●	●	●	●	●	●	●	●
Surface compatibility	●	●	●	●	●	●	●	●
Persistence	●	●	●	●	●	●	●	●
Easy to use	●	●	●	●	●	●	●	●
Acceptable odor	●	●	●	●	●	●	●	●
Economical	●	●	●	●	●	●	●	●
Solubility	●	●	●	●	●	●	●	●
Stability	●	●	●	●	●	●	●	●
Cleaner	●	●	●	●	●	●	●	●
Non-flammable	●	●	●	●	●	●	●	●

* IHP = Improved Hydrogen Peroxide disinfectants

- All disinfectants have some gaps in performance versus the Rutala criteria.
- What disinfectant is the best fit for a facility depends largely on the properties most valued.



Improved cleaning compliance and disinfection lowered C. diff infections



- the impact of improved cleaning compliance and more consistent usage of disinfectants on HAI rates for MRSA, VRE, and C. diff. was assessed
- They implemented a cleaning validation program to improve cleaning compliance above 80%
- implemented the use of a hydrogen peroxide daily disinfectant instead of a non-disinfectant cleaner.

By 20%

Alfa, MJ "Use of a daily disinfectant cleaner instead of a daily cleaner reduced hospital-acquired infection rates". Am J of Infect Control, 2015;43:141-146



Convenience = Compliance



Diversey™

A·I·S·E

What are medical devices

Including the cleaner/disinfectant
since the medical device regulation



Diversey

A · I · S · E



Oxivir® Sporicide Wipe

Diversey Europe Operations B.V.

UFI:COX2-906U-800G-V855

Maarssebroeksedijk 2, 3542 DN Utrecht, The Netherlands. www.diversey.com

⊗ **Achtung.** Verursacht Haut- und schwere Augenreizung. Beachten Sie das Sicherheitsdatenblatt für Handhabung und Anweisungen zur sicheren Anwendung. Weitere Informationen entnehmen Sie bitte dem Produktinformationsblatt für gewerbliche Anwender.

Mallaustrasse, 8000 Tuberkulozidie, B. Öffnen Sie die Packung, schließen Sie die Packung, stellen Sie sicher, dass die Fläche für die vorgeschriebene Zeit feucht ist. **Wichtig:** Nicht in Verbindung mit anderen Produkten verwenden. (CH) ☎ 071 969 2727. Eschlikonerstrasse, 9542 Münschwilen. Zulassungsnummer: CHZN4675. Wirkstoffe (g/100 g): 7.0 g/100g Wasserstoffperoxid, 0.98 g/100g Glykolsäure. Entsorgung des Inhalts / des Behälters gemäß den örtlichen Vorschriften.

⊗ **Attention.** Provoque une irritation cutanée et une sévère irritation des yeux. Consulter la fiche de données de sécurité pour la manipulation et les instructions de sécurité. Pour plus d'informations, voir la fiche technique. **Uniquement pour usage professionnel.** (FR) ☎ 01 45 14 76 76. 201, rue Carnot - 94120 Fontenay sous Bois. Sporicide, Tuberculocide, Bactéricide, Virucide, Levuricide, Fongicide. 1. Ouvrir le paquet de lingettes, prendre une seule lingette et rabattre l'opercule. 2. Essuyer la surface, s'assurer que toute la surface est humidifiée, laisser sécher. 3. S'assurer que la surface reste humide pour le temps de contact. **Important:** Ne pas mélanger avec d'autres produits! (CH) ☎ 071 969 2727. Eschlikonerstrasse, 9542 Münschwilen. Numéro de registration: CHZN4675. Substance active (g/100 g): 7.0 g/100g de Peroxyde d'hydrogene, 0.98 g/100g De l'acide glycolique. Éliminer le contenu/réceptacle conformément à la réglementation locale.

Biocidal
Product

⊗ **Desinfektionsreiniger für nicht poröse Oberflächen**

Pro 100g: 6,99 g Wasserstoffperoxid, 1,505 g Glykolsäure. Gebinde nur restentleert zur Gebindeentsorgung geben. Produktreste der geordneten Abfallentsorgung zuführen. **BAuA RegNr.: N-72809.**

⊗ **Détergent et désinfectant pour les surfaces non poreuses**

Substance(s) active(s): peroxyde d'hydrogène (CAS# 7722-84-1) 6,99%, acide glycolique (CAS # 79-14-1) 1,505%. (local required text) **Date de production:** voir l'impression sur le bidon/carton (AA-JJJ). **Date d'expiration:** se référer à la date imprimée sur le contenant. En cas d'ingestion contacter le centre anti-poisons.



⊗ **Desinfektionsreiniger für nicht-invasive Medizinprodukte**

Das Produkt ist ungeeignet für invasive Medizinprodukte. Das Produkt ist nicht zur Anwendung auf porösen oder säureempfindlichen Oberflächen vorgesehen.

⊗ **Détergent et désinfectant pour les dispositifs médicaux non invasifs**

Ce produit n'est pas conforme pour les dispositifs médicaux invasifs. Ne pas utiliser ce produit sur des surfaces poreuses ou sensibles aux acides.

Medical
Device

CE
0088

SKU: 100941885



7 615400 759125

AL11114619W05

MADE IN UK - FABRIQUÉ EN UK

12 x 80pc



The Patient's Environment

**Environmental Services
(EVS) Cleans 1x per day...
What happens the other
23.5 hrs?**



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Who came in room?

- 45% = Nursing staff**
- 23% = Personal visitors**
- 17% = Medical staff**
- 8% = Nonclinical staff**
- 4% = Other clinical staff**





What do they touch while in the room?

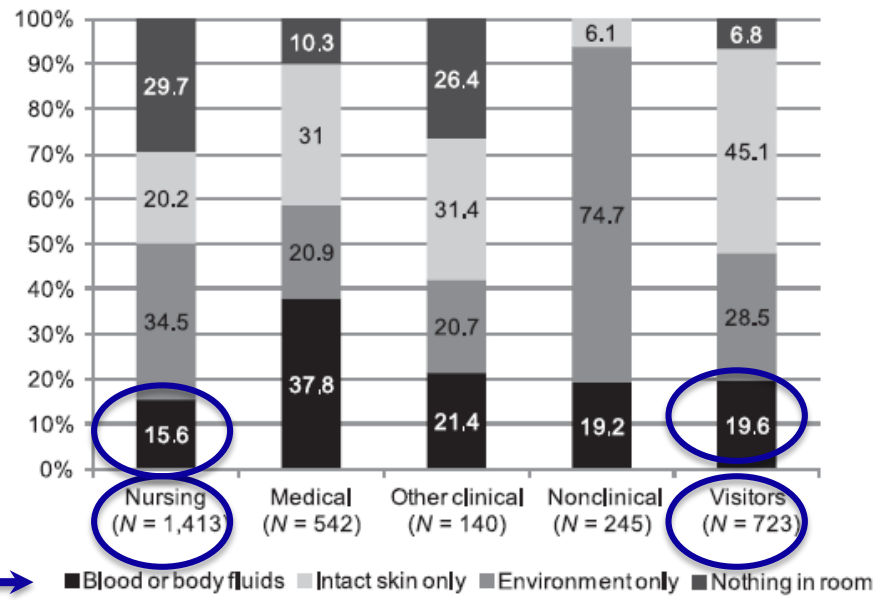
33.5% = contact with the environment only
 Most common level of touch

27.1% = patient's intact skin

17.8% = blood or body fluids

16.0% = the person touched nothing in the room

Percentage of Visits Achieving Each Maximum Level of Touch by Care Role

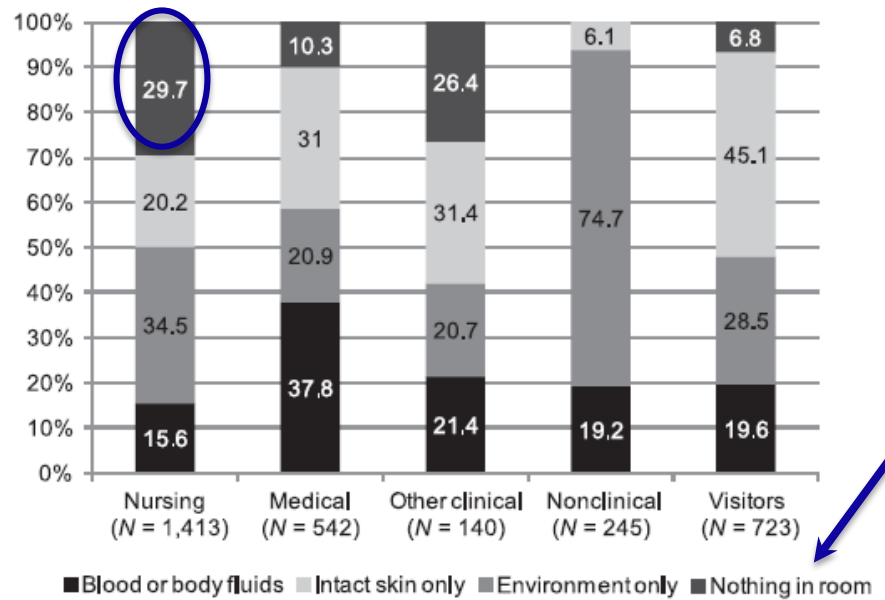




What do they touch while in the room?

- Staff frequently enter a room and either touch nothing or only touch the environment.
- This may help explain low hand hygiene rates.

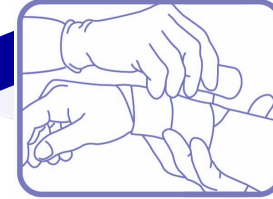
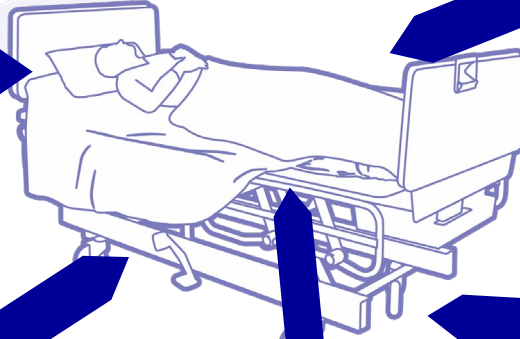
Percentage of Visits Achieving Each Maximum Level of Touch by Care Role



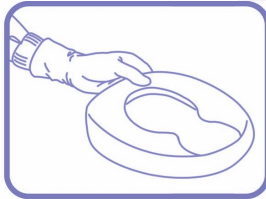
Targeted Moments of Environmental Disinfection (TMED™)



1. Before placing food or drink



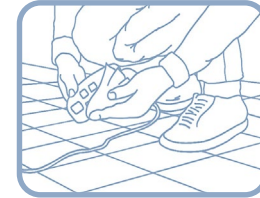
2. Before and After aseptic procedure(s)



3. After any procedure involving feces/respiratory secretions



4. After bathing within bed space



5. After any object used on/by a patient/resident touches the floor

Any Patient Contact

Patient Area



★ These areas in the patient care zone require special attention.

★ Bedside table, inside drawer and drawer pulls

★ Telephone

★ Patient bed rails and controls

★ Call button/TV remote

★ Overbed tray table

★ IV pole grab area

Staff training cards

Based on what they touch during a Moment



Therapy Staff Touch it, Wipe it

Many people see patients each day, and each visit may increase the risk of pathogens being transferred in the environment of care. Patient Zone items (generally within 3 feet of the patient) should be disinfected to help reduce the risk.

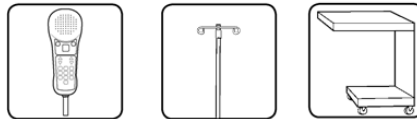
Do your part. Disinfect hard surfaces when seeing patients.



Clinical Staff Touch it, Wipe it

Many people see patients each day, and each visit may increase the risk of pathogens being transferred in the environment of care. Patient Zone items (generally within 3 feet of the patient) should be disinfected to help reduce the risk.

Do your part. Disinfect hard surfaces when seeing patients.



Food Service Staff Touch it, Wipe it

Many people see patients each day, and each visit may increase the risk of pathogens being transferred in the environment of care. Patient Zone items (generally within 3 feet of the patient) should be disinfected to help reduce the risk.

Do your part. Disinfect hard surfaces when seeing patients.



Diversey™

A·I·S·E

Working to Zero



Clean hands and
wiped surfaces work like
magic to reduce HAIs.



Do your part
when you
see a patient.



You Touch It, Clean It!

Moments of Environmental Disinfection



Hand hygiene.
Disinfected surfaces.
Music to my ears!



Do your part
when you
see a patient.



You Touch It, Clean It!

Moments of Environmental Disinfection