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Cleaning and disinfection in Europe

EUNETIPS

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Background.

- * **Cleaning and disinfection has become one of the major issues in preventing spread of pathogenic microorganisms in the environment in hospitals and thereby prevention of nosocomial infections.**

Aim of the study.

- * **The aim of this study was to clarify how cleaning and disinfection was organized and controlled in hospitals in Europe.**
- * **This was done by a questionnaire which also included questions about how cleaning and disinfection was done in practice.**

The questionnaire

- * **The Questionnaire was divided in four parts:**
- * **1) National guidelines or standards.**
- * **2) Cleaning of surfaces in practice.**
- * **3) Disinfection of surfaces in practice.**
- * **4) Control of cleaning and disinfection of surfaces.**

Participating countries

- * **Austria**
- * **Belgium**
- * **Croatia**
- * **Denmark**
- * **France**
- * **Germany**
- * **Greece**
- * **Netherlands**
- * **Norway**
- * **Rumania**
- * **Spain**
- * **Sweden**
- * **England**
- * **Italy**

Part 1: Standards and guidelines for cleaning and disinfections

Overall

	No of countrys
National standards	9
Local guidelines	5

Question 1-3

Answers from 9 countries

Q1: National standards

What do national standards and guidelines include?

Cleaning of	Included in national guidelines (No)
Rooms	6
Equipment	9
Medico technical equipment	8
IT equipment	2
Disinfection of rooms	9
Disinfection of equipment	9
Disinfection of IT equipment	1

Q2: National standards

Do national guidelines also include:

Special situations	Included in national guidelines (No)
Spill of material	9
Equipment linked to patients	9
Outsourcing	3
Education of cleaning staff	6
Responsibility of cleaning and nursing staff	5

Q3: National standards

Do standards include risk assessments and plans for:

Risk assesment and plans for	Included in national guidelines (No)
Operating theaters	8
Rooms for sterile work and storage	9
Isolation rooms	8
Patient rooms	8
High risk contact points	6

Comments to Q1 – Q3 standards.

- * Only 2/3 of the European countries have national guidelines or standards.
- * Few countries include IT equipment in their guidelines.
- * Less than 75% of the countries include rules for outsourcing of cleaning and disinfection, education of cleaning staff and what is cleaning staff and what is nursing staff responsible for cleaning and disinfection.

Comments to Q1 – Q3 standards.

- * **High risk contact points was included in less of 75% of the guidelines.**
- * **Thus, there are room for improvement both concerning making national guidelines or standards and on the items that could/should be included in the guidelines/standards.**

Part 2: Cleaning practice

- * **Question 4-6.**
- * **Answers from 14 countrys**

Q4: Cleaning practice

What do you use for cleaning?

Used for cleaning	No of countrys
Cloth	11
Mops	13
Both	11
Other	5

Q5: Cleaning practice

What material do you use?

Material for cleaning	No of countrys
Cotton	9
Natural fibers	5
Synthetic fibers	10
Microfibers	10
Others	1

Q6: Cleaning practice

What methods do you use for cleaning?

Method for cleaning	No of countrys
Water and detergent (soap)	11
Water alone	3
Dry cleaning	4
Other	2

Comments to Q4 –Q6 cleaning practice.

- * The majority of countries use mobs, cloth or both with water and detergent (soap) for cleaning.
- * The material and special techniques (i.e. dry cleaning) are more unequal used. Are they equally good – evidence based?

Part 3: Disinfection practice

- * **Question 7-11.**
- * **Answers from 14 countrys**

Q7: Disinfection practice

When do you disinfect rooms?

Room disinfection	Before use	During use	After use
Operating rooms	8	5	11
Intensive care units	2	11	8
Patients rooms	2	10	11
Infection isolation	2	12	13
Protection isolation	4	9	10
Dialyse units	4	6	11
Outpatients clinics	2	4	9

Q8: Disinfection practice

When do you disinfect equipment?

Equipment disinfection	Before use	During use	After use
Operating rooms	3	0	11
Intensive care units	2	6	12
Patients rooms	1	6	12
Infection isolation	1	8	13
Protection isolation	4	6	10
Dialyse units	4	3	12
Outpatients clinics	1	1	11

Q9: Disinfection practice

How do you disinfect?

How to disinfect	No of countrys
Cloth with disinfectant	12
Disinfectant on surfaces	5
Vapor/steam/boiled water	5
H ₂ O ₂ +/- silver vapor	4
Ultraviolet light	4
Ozone	4
Other	3

Q10: Disinfection practice

What do you use for chemical disinfection?

Chemical for disinfection	No of countrys
Halogens	10
Biguanider	8
Aldehydes	6
Phenols	3
Oxidants	11
Alcohols	13
Other	5

Q11: Disinfection practice

Do you use special disinfection for:

Special use of disinfection	No of countrys
Spills of organic material	10
MRSA/ESBL/VRE	5
MDR Acinetobacter spp.	5
TB, Mycobacteria	8
C. Difficile	11
Norovirus	7
Outbreaks	7
Other	0

Comments to Q7-Q11 disinfection practice.

- * The majority of countries were using disinfection of patient rooms after use and in some areas during use. It may be a little surprising that only 30% used disinfection before protection isolation.**
- * There was great agreement on disinfection equipment after use, whereas some did it during use and few did it before use.**
- * A question that could be raised is disinfection necessary in all these cases or is cleaning well enough?**

Comments to Q7-Q11 disinfection practice.

- * Only cloth with disinfectants are used in more than 40% of the countries. Simultaneous use of detergent or the material of the cloth may decrease the effect of the active detergent.
- * Oxidants and alcohols were used in more 75% of the countries but also halogens were commonly used.
- * *C. difficile* was the only special case where more than 75% of countries used disinfection.
- * Disinfection procedures are rather ununiformed in Europe and standards might be needed.

Part 4: Control of cleaning

- * **Question 12-14**
- * **Answers from 11 countrys**

Q12: Control of cleaning

Do you control cleaning by:

Control	No of countrys
External audit	6
Internal audit	11
Random control	9
Self control	9
None	0
Other	0

Q13: Control of cleaning

How is the control done?

How to control	No of countrys
Visually	13
Protein test	2
ATP test	3
Germ count	6
None	0
Other	0

Q14: Control of cleaning

Do you do a follow up on the results?

After control	No of countrys
Follow up	11
None	0

Comments to Q12-Q14 control of cleaning and disinfection.

- * **More than 75% of countries used internal audit with a visual control and follow-up on results.**
- * **Other methods were used in special situation or experimentally.**

Conclusion

- * Even though this study only include 14 European countries, there was a great variability in hospitals in Europe concerning national guidelines/standards for cleaning and disinfection and the practice of cleaning and disinfection.**

What can be done in the future?

- * 1. An European educational program to clarify evidence based practices for cleaning and disinfection could be developed.
- * 2. National or European standards (EN standards) could be developed.