

BACK TO SCHOOL

MAKING A COMMUNICABLE DISEASE SITE VISIT



School Nurse Reports

- Increase in GI illness
 - Nausea
 - Sudden onset of vomiting
 - Diarrhea
- 40 students, 1 staff



School Overview

- Student population of 304
- Pre-K through 1st grade
 - Special needs program
 - Extended care



Initial Guidance

- Link to NJ outbreak guidance
- Control measures
 - Handwashing
 - Cleaning
- Line list
- Exclusion
- Surveillance



New Jersey Department of Health
Communicable Disease Service

STUDENT SYMPTOMS LINE LISTING
E -

School Name		Reported By		Telephone		Report Date																			
Total Number of Students in School				Number of Students Ill Today				Total Number of Staff				Number of Staff Ill Today													
Initials	Age	Gender	Grade	Room	Dizziness	Bloody Stool	Abdominal Pain	Nausea	Vomiting	Temp	Headache	Sore Throat	Cough	Fatigue	Chills	Rash	Other, Specify	Other, Specify	Onset Date	Duration of Symptoms	Seen by MD	Hospitalized	Specimen Collected	Program or Test Results	
Example: JD	7	female	1	223	yes	unk	yes	yes	no	102.5	unk	unk	unk	unk	unk	unk	dizziness		9/1/12	4 days	yes	yes	yes		
1																									
2																									
3																									
4																									
5																									
6																									

Purpose of Site Visit

- Identify transmission
- Education and support
- Assess control measures
- Communication

Who might be present on your site visit?

- Epidemiologist/public health investigator
- School nurse
- Custodian
- Principal or other administration
- REHS

On your walk through you should visit

- Cafeteria
- Gymnasium or other common gathering areas
- Student and staff bathrooms
- Nurse's office
- Custodian's utility room
- Classrooms



Discussion on hand hygiene:

- Handwashing routine
 - Children washed hands with soap and water prior to lunch and snack time
- Observe children and staff
 - Multiple children were observed using proper hand washing techniques
- Interview staff
 - Knowledgeable about infection prevention measures
 - Teachers expressed concerns about monitoring handwashing

In the nurses office you find:

- Multiple sick kids present
- Healthy children stopping by to use the bathroom
- Nurse concerned about exclusion compliance



Recommendations

- Healthy children should not use the nurse's bathroom during a GI outbreak
- Consider use of a return to school form to increase compliance to exclusion periods

In the bathrooms you see that:

- All bathrooms had soap, paper towels and working faucets
- Hand hygiene posters on doors
- Bathrooms were cleaned once a day after children were dismissed



Recommendations

- Increase frequency of cleaning and disinfecting bathroom surfaces
 - Toilet handles, paper towel dispenser, sinks, doorknobs
- Reinforce good hand hygiene

In the classrooms you find:

- Hand sanitizer pump
- Routine cleaning
 - Keyboards, storage bins and other surfaces end of day
 - “green cleaner” used to wipe down surfaces during the day
- iPad’s shared between students
 - No routine cleaning procedures



Recommendations

- Suspend use of hand sanitizer
- Use wipes containing bleach during the day in the classroom
- Suspend use of iPads during outbreak
- Wash hands before and after iPad use

Disinfecting the iPad

NCBI Resources How To

PubMed.gov
US National Library of Medicine
National Institutes of Health

PubMed

Advanced

Abstract

Send to:

J Hosp Infect. 2014 Jun;87(2):77-83. doi: 10.1016/j.jhin.2014.01.012. Epub 2014 Mar 25.

Disinfecting the iPad: evaluating effective methods.

Howell V¹, Thoppil A¹, Mariyaselvam M¹, Jones R¹, Young H¹, Sharma S¹, Blunt M¹, Young P².

Author information

Abstract

BACKGROUND: Tablet computers are increasingly used in healthcare, but they may carry nosocomial pathogens. There are few data available on how to clean an iPad effectively for use in the clinical setting.

AIM: We aimed to identify the most effective method of decontaminating the Apple iPad, without causing damage, and establish the duration of any residual effect.

METHODS: Following contamination with a microbial broth (meticillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant enterococcus (VRE) and *Clostridium difficile*), we examined efficacy of iPad disinfection in the laboratory using six different disinfectant wipes: Sani-Cloth CHG 2% (chlorhexidine 2%/alcohol 70%), Clorox, Tristel, Trigene, soap and water, and plain cloth. Following cleaning, iPads were recontaminated to examine residual activity. After 480 Sani-Cloth CHG 2% disinfecting episodes, functional and visual analysis of iPads was performed by blinded subjects.

FINDINGS: With the exception of *Clostridium difficile*, Sani-Cloth CHG 2% and Clorox wipes were most effective against MRSA and VRE, and they were significantly better than the Apple-recommended plain cloth ($P \leq 0.001$). A substantial residual antimicrobial effect was seen for >6h after wiping the iPad with Sani-Cloth CHG 2% despite repeated recontamination and without further disinfection. The functionality or visual appearance of the iPad was not damaged by repeated use of Sani-Cloth CHG 2% wipes.

CONCLUSIONS: Sani-Cloth CHG 2% wipes effectively disinfect the iPad against MRSA and VRE, with a residual antibacterial effect and without causing damage.

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KEYWORDS: Chlorhexidine; Decontamination; Personal digital assistant (PDA); Tablet computer; iPad

<http://www.ncbi.nlm.nih.gov/pubmed/24746231>

In the custodian's closet you find:

- Germicidal agents
- Green cleaner
- No diluted bleach solutions
- Cleaning schedule reviewed



Recommendations

- Increase frequency of cleaning
 - High touch surfaces
 - Germicidal or fresh bleach solution
- Suspend use of green cleaner
 - During GI outbreak

Mops

- Change mop heads after
 - New solution
 - Cleaning emesis or feces
- Use microfiber cloths and mops
 - Captures microbes
 - Reduces staff injuries





Using Microfiber Mops in Hospitals

Environmental Best Practices for Health Care Facilities | November 2002

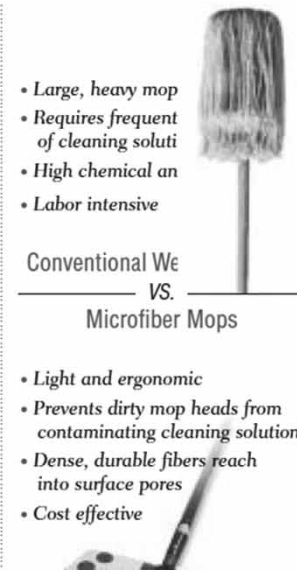
JCAHO Environment of Care Standards 1.3, 2.3, 4.0

Why Consider Alternative Mopping Techniques?

Using conventional loop mops for wet mopping of patient care areas has long been the standard in floor cleaning for janitorial operations in hospitals. However, the health care industry has taken a recent interest in evaluating hard floor maintenance techniques in terms of employee, patient, and environmental health. Many floor cleaners used in hospitals contain harsh chemicals such as quaternary ammonium chlorides and butoxyethanol, which can be harmful to human health and the environment. To reduce the risk of cross-contamination for patients, conventional mopping techniques require janitors to change the cleaning solution after mopping every two or three rooms—meaning that cleaning solutions (including both chemicals and several gallons of water) are constantly being disposed of and replenished.

Some facilities have begun using a new mopping technique involving microfiber materials to clean floors. Microfibers are densely constructed, polyester and polyamide (nylon) fibers that are approximately 1/16 the thickness of a human hair. The density of the material enables it to hold six times its weight in water, making it more absorbent than a conventional, cotton loop mop. Also, the positively charged microfibers attract dust (which has a negative charge), and the tiny fibers are able to penetrate the microscopic surface pores of most flooring materials. These characteristics make microfiber an effective mopping material; the following case study provides detailed information to help your hospital evaluate the possibility of using microfiber mops.

Case Study: Mopping the Surface of HC Devices



Conventional We
VS.
Microfiber Mops

- Large, heavy mop
- Requires frequent of cleaning soluti
- High chemical an
- Labor intensive

- Light and ergonomic
- Prevents dirty mop heads from contaminating cleaning solution
- Dense, durable fibers reach into surface pores
- Cost effective

<http://www3.epa.gov/region09/waste/p2/projects/hospital/mops.pdf>

In the cafeteria you discover:

- Green cleaner used tables
- Germicidal wipes used in the kitchen
- No ill cafeteria staff
- Policy for exclusion of ill foodhandlers



Recommendations

- Suspend use of green cleaner
- Use germicidal wipes on tables
- Increase cleaning frequency
- Adhere to exclusion policy

Areas of Concern Identified

- Student population
- iPads and iPad cart
- Nurses office
- Parents not following exclusion
- Green cleaner
- Frequency of cleaning
- Reliance on hand sanitizer

Conclusion

- Source not determined
- Outbreak over two weeks after the site visit.
- 97/304 or 32% students met case definition

