BACK TO SCHOOL

MAKING A COMMUNICABLE DISEASE SITE VISIT

1

School Nurse Reports

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

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School Overview

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

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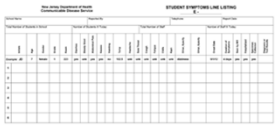
Initial Guidance

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



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Purpose of Site Visit

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

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Who might be present on your site visit?

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

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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

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In the nurses office you find:

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

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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

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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

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Recommendations

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

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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

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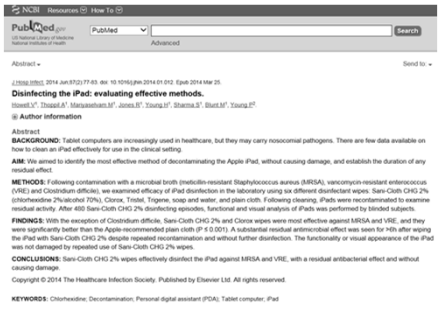
Disinfecting the iPad



Disinfecting the iPad: evaluating effective methods.

Howell V[1], Thoppil A[1], Marquesham M[1], Jones R[1], Young H[1], Sharma S[1], Blunt M[1], Young P[2].

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 >3h 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.

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

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

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In the custodian's closet you find:

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

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Recommendations

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

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Mops

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

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Using Microfiber Mops in Hospitals

Environmental Best Practices for Health Care Facilities | November 2002

JCAHO Environment of Care Standards LS.2.3.40

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.

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

Conventional Mo

VS.

Microfiber Mops

- 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

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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

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Recommendations

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

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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

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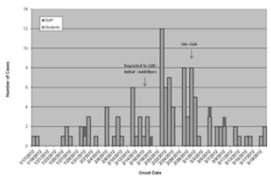
Conclusion

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



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