Sealed Air
Diversey Care

IPAC and EVS Together for Patient Safety

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Objectives

Look at the two roles

- EVS
- IPAC

Discuss how a symbiotic relationship can only benefit the patient

My Views

One good housekeeper can prevent more infections than a dozen doctors can cure (Rose 2012)

EVS is the backbone of preventing infections

If EVS is doing their job, IPAC looks great

Environmental Services (EVS)

Maintain a clean and safe environment for patients, visitors and staff

EVS

Functions include:

- Cleaning horizontal, vertical & specialty surfaces
- Disinfecting high touch surfaces
- Waste management & recycling (88% - US)
- Set up for events and furniture moves

EVS – Duties continued!

- Floor care & refinishing
- Pest control (Bed bugs) (73%)
- Laundry (73%)
- OR terminal clean (82%)

EVS

Hotel Clean – image or first impressions

Hospital Clean

- What are high touch surfaces that need focus?
- We know what are high touch surfaces
  - Which are high **risk** surfaces?
  - High risk of transmitting infection? (Huslage 2016)

The Environment Plays a Role in the Risk of Transmission

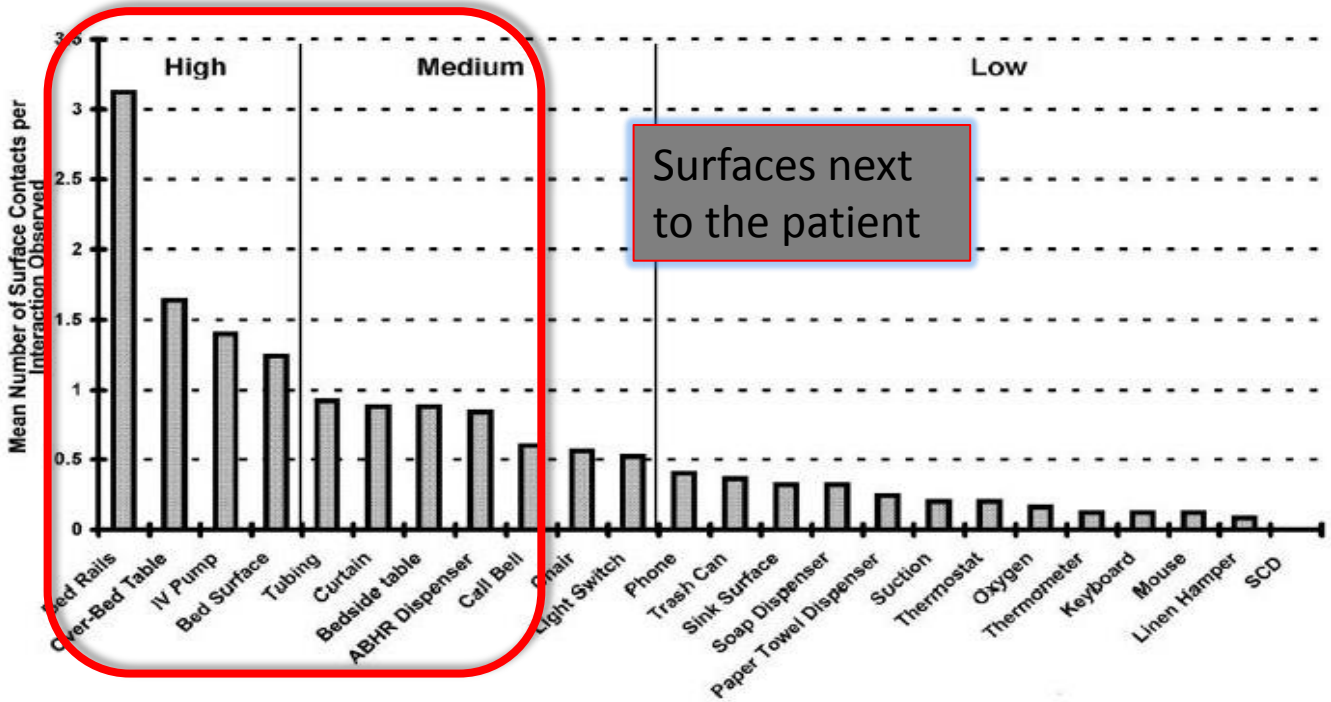

FIGURE 2. Mean frequency of healthcare worker contact for 24 surfaces on a general medical-surgical floor. ABHR, alcohol-based hand rub; IV, intravenous; SCD, sequential compression device.

Huslage 2010

Infection Prevention and Control

Prevent and control the spread of infections

Provide statistics on infections

Provide education/consultation on prevention

Audit factors (EVS, Hand Hygiene)

Product Evaluation and Review

Healthcare Associated Infections

Multifactorial problem!

Hand Hygiene can reduce infections (WHO 2009, Table 1.22.1)

The Environment plays a role in transmission (Otter 2011)

Is This a Simple Issue?

Solving the HAI Equation; Don t be Obtuse, Check all the Angles

https://www.youtube.com/watch?v=DPSZQrJhdSg

Healthcare Associated Infections

HAI(p) = PA + HH + ASP + CP + FWM + ED

Where:

HAI(p) = Healthcare Associated Infection Prevention

PA = Patient Acuity

HH = Hand Hygiene

ASP = Antibiotic Stewardship Program

CP = Clinical Practices

FWM = Fecal Waste Management

ED = Environmental Disinfection

Healthcare Associated Infections

$$HAI(p) = PA_{vent} + PA_{poe} + PA_{old} + PA_{abtic} + PA_{co\text{-}m}$$

Healthcare Associated Infections

$$HAI(p) = PA_{vent}+PA_{poe}+PA_{old}+PA_{abtic}+PA_{co\text{-}m}+$$
$$HH_{prod}+ HH_{place}+ HH_{audit}+ HH_{mom}+ HH_{champ}+ HH_{pat}+ HH_{fam/vis}$$

Patient Hand Hygiene

Assessment on admission for capability of performing hand hygiene

- Do you know what this is?
- Show me how to use it
- Signage if not able to do own HH

Healthcare Associated Infections

$$HAI(p) = PA_{vent}+PA_{poe}+PA_{old}+PA_{abtic}+PA_{co\text{-}m}+ HH_{prod}+HH_{place}+HH_{audit}+HH_{mom}+HH_{champ}+HH_{pat}+HH_{fam/vis} + ASP_{drug} +ASP_{route} +ASP_{duration} +ASP_{dose} +ASP_{restriction}$$

Healthcare Associated Infections

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$$ASP_{drug}+ASP_{route}+ASP_{duration}+ASP_{dose}+ASP_{restriction}$$
$$CP_{skinprep}+CP_{decol}+CP_{prophy}+CP_{bundle}$$

Healthcare Associated Infections

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$$ASP_{drug}+ASP_{route}+ASP_{duration}+ASP_{dose}+ASP_{restriction}$$
$$CP_{skinprep}+CP_{decol}+CP_{prophy}+CP_{bundle}+$$
$$FWM_{container}+ FWM_{ppe}+ FWM_{no\ rinse}+ FWM_{protocol}$$

Fecal Waste Management

Personal protective equipment (PPE) at point of care for any feces

Brief/diaper change protocol

- When to change gloves
- Where to place soiled articles
- What to disinfect after change

Healthcare Associated Infections

$$HAI(p) = PA_{y} + PA_{old} + PA_{co\text{-}m} + HH_{prod} + HH_{place} + HH_{champ} + HH_{pat} + HH_{fam/vis} + ASP_{drug} + ASP_{restriction} + CP_{skinprep} + CP_{decol} + CP_{bundle} + FWM_{container} + FWM_{protocol} + ED_{evs} + ED_{audit} + ED_{nurse} + ED_{other} + ED_{family} + ED_{prod} + ED_{ppe} + ED_{contact} + ED_{dilute} + ED_{compat} + ED_{resource}$$

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Responsibilities

PA = Patient Acuity

- All

HH = Hand Hygiene

- All

ASP = Antibiotic Stewardship Program

- IPAC, ID, Pharmacy, Lab

CP = Clinical Practices

- IPAC, Nursing, Physicians

FWM = Fecal Waste Management

- IPAC, Nursing, EVS

ED = Environmental Disinfection

- EVS, nursing…

How Can We Work Together?

Culture of organization

Hofstede’s Determinants (Borg 2014)

Looked at some characteristics of cultures (by country)

- Power Distance
- Uncertainty Avoidance

Power Distance

“…strict and formal hierarchies in which subordinates are less likely to be consulted or involved in the decision-making process.”

“Ownership will therefore be more difficult to obtain, since less powerful stakeholders will defer implementation and responsibility to the power-holders who make all the decisions”

Power Distance

“Instruments of accountability (such as audits) would not be popular, indeed resented, as they are regarded as targeting only the less powerful”

- Disinfection/cleaning audits
- Hierarchy of team in healthcare team

Uncertainty Avoidance

Measure of the national ability to adapt to ambiguous situations

High Uncertainty Avoidance Countries

- Poor driving practice brings high traffic accident mortality rates
- Ignored because not the driving behavior that creates uncertainty but the anxiety of not arriving on time

Uncertainty Avoidance

High UA countries hate change, hate ambiguity

- EVS staff not cleaning properly because of fear of exceeding the time allotted for an ‘average’ room?
- Clear routines, cards, charts

Borg ties this determinant to overuse of antibiotics in countries with high UA

Working Together

All staff need to appreciate what EVS is trying to do

Part of orientation

- Who are the EVS staff?
- What are they responsible for?
- How to use a disinfectant wipe
- What to use it on and when

Canadian Perspectives

- ‘Working relationships of infection prevention and control programs and environmental services and associations with antibiotic-resistant organisms in Canadian acute care hospitals’
- ‘Environmental cleaning resources and activities in Canadian acute care hospitals’

Zoutman 2014 (1&2)

Survey

Online survey

58.3% response rate (119 of 204)

Medium to large hospitals

- Mean number of acute care beds: 232, range 48-1100

Survey

Looked at ARO rates of MRSA, VRE (new colonization and infection) and *Clostridium difficile* infections

Likert scales used

- Never, Rarely, Sometimes, Often, Always
- Poor, Some, Moderate, Good, Excellent
- Disagree Strongly, Disagree, Undecided, Agree, Strongly Agree

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IPAC Results

(Zoutman 1)

Training

105 of 115 (91%) of IPAC programs provided education and training in IPAC to EVS

¾ of IPAC programs informed EVS managers of latest findings and advancements in environmental cleaning

Training

1/3 did not rate their EVS staff as adequately trained to cleaning standards

Nearly 40% did not judge their hospitals to be sufficiently clean for IPAC purposes! (62.4% felt they were sufficiently clean)

Working Relationships

20% IPAC services and EVS did not frequently collaborate on cleaning protocols

A good working relationship was associated with lower ARO rates

Working Relationship Analysis

Greater cooperation was associated with lower rates of MRSA ($p=0.02$)

Frequent collaboration had lower rates of both VRE infection ($p=0.03$) and CDI ($p<0.001$)

Working Relationships

Conclusion: Close collaboration between IPAC Programs and EVS leads to reduced ARO levels

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EVS Managers

(Zoutman 2)

Staffing

46.9% felt they had enough staff to satisfactorily clean their hospitals to the required standard (only 5.2% strongly agreed)

If felt they had sufficient staff, mean of 4 beds per FTE

If felt they did not have sufficient staff, mean of 5 beds per FTE ($p=0.02$)

Training

All but one hospital had introductory training programs

Mean 44.7h, median 37.5h, with range of 4 – 186

17% did not have ongoing training and professional development program

Collaboration

95/96 agreed that EVS and IPAC services cooperated well with each other

92/96 reported that their cleaning and disinfecting products were frequently chosen in consultation with IPAC

91/96 indicated that IPAC was consulted before making changes to cleaning procedures and technologies

American Perspective

Association for Practitioners in Infection Control and Epidemiology (APIC)

Association for the Healthcare Environment (AHE)

2000 Members surveyed and reported in 2011

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CleanSpaces HealthyPatients

A collaboration between APIC and AHE

Search Keywords

About the Project | Tools and Resources | Building Bridges series

Leaders in infection prevention and environmental services working together for better patient outcomes

A A A

APIC
Spreading knowledge. Preventing infection.®

AHE
Prevention. Education. Standards. Management.
Association for the Healthcare Environment

Clean Spaces, Healthy Patients is a collaborative between APIC and the Association for the Healthcare Environment (AHE). Together they deliver practical strategies that endorse processes to improve patient outcomes and operational efficiencies.

News and announcements:

- Learn from successful infection prevention and environmental services teams –watch the Clean Spaces, Healthy Patients collaboration videos
- Looking to educate team members? Participate in one of the Clean Spaces, Healthy Patients on-demand webinars
- Learn to make the business case for additional environmental services and infection prevention resources here

Collaborative Website

http://cleanspaces.site.apic.org/tools-and-resources/sucessful-collaborations/

Survey

51% found it difficult to locate useful resources about proper cleaning and disinfection

73% felt front line EVS were well trained but 54% felt other staff could be better educated about their role in cleaning

Survey

~60% felt educational resources were needed for C-Suite

~50% felt patients and families should be a target

~33% felt general public should be a target

Older Survey – 2008

38.5% of IPAC view the role of EVS with high value

52.6% of EVS view IPAC with high value!

Association for the Healthcare Environment (AHE)

AHE Annual Trend Data Survey

Conducted online for 5th year

Identify trends within EVS and healthcare environment

190 Members surveyed

Staff Turnover >6% per month

Year	Turnover
2013	19%
2014	35%
2015	40%

Majority of these departments have to replace at least 11% of their staff annually

Staffing

81% have both management and EVS staff in house

11% contract out just management

Vendor Expectations

Training and Education

- Viewed as most important 56%
- In top two by 80%

Follow up after purchase

- 62% in the top two services

AHE Auditing

98% visual audit

ATP – 54%

EVS self audit – 89% of facilities

IPAC and EVS – 25% of departments

IPAC alone – 19% of departments

Ah, yes, Auditing

Cannot be punitive

Problem solving

Auditing – Non EVS areas

Use EVS to covertly mark equipment they are not responsible for?

Disconnects

Silos

EVS needs to cut budget

- May cause more infections
- Still needs to find that percentage

IPAC

- Great programs in place
- Rates go up for no obvious reason

Disconnects

EVS changes floor finish – Hand sanitizer marks it up worse

IPAC changes hand sanitizer – marks floor!

Lines of Communication

Increase in diarrhea/vomiting

- Who ya gonna call?

Increase in community infectious agents (colds, flu, norovirus)

- Who ya gonna call?

Construction dust found in hallways…

- Who ya gonna call?

Suggestions for Collaboration

Have ID/IPAC do rounds for EVS

- Perhaps tie in their role
- Indicate if hand hygiene, environmental factors could have been an issue

IPAC attend EVS staff meetings

Lunch and Learns

Benefits of Good Collaboration

EVS see the entire site once per day

IPAC can see the entire site once per day (which I recommend)

All of us need to understand what is each other's responsibility

- Visible bugs – EVS
- Invisible bugs – IPAC and EVS

Communication

What processes are in place to report issues:

- Spills
- Maintenance issues
- Breaks in technique

Summary

EVS and IPAC must be ‘one’

- Must fully appreciate that a change by one can affect the other

Clear lines of communication

References

Borg MA. Cultural determinants of infection control behaviour: understanding drivers and implementing effective change. ICHE 2014;86:161-8

Huslage K, et al. A quantitative approach to defining “high touch” surfaces in hospitals. ICHE 2010;31(8):850-3

Otter JA et al. The Role Played by Contaminated Surfaces in the Transmission of Nosocomial Pathogens. ICHE 2011;32(7):687-99

References

Rose E. Environmental services and fighting health-care infections. Infection Control Today, 2012. http://www.infectioncontroltoday.com/articles/2011/04/environmental-services-and-healthcare-associated-infections.aspx Accessed on October 23, 2016

Rutala WA et al. Monitoring and improving the effectiveness of surface cleaning and disinfection. AJIC 2016;44:e69-76

References

World Alliance for Patient Safety. *WHO Guidelines on Hand Hygiene in Health Care (May 2009)*. Geneva, Switzerland: World Health Organization; 2009 [cited September 7, 2016]. Available from: http://whqlibdoc.who.int/publications/2009/9789241597906_eng.pdf.

Zoutman DE, et al. Working relationships of infection prevention and control programs and environmental services and associations with antibiotic-resistant organisms in Canadian acute care hospitals. AJIC 2014;42:349-52

Zoutman DE, et al. Environmental cleaning resources and activities in Canadian acute care hospitals. AJIC 2014;424:490-4