

Faith Regional Health Services

Evaluating Environmental Cleaning

Laura Hoogestraat,
RN-Infection Control

Monica Emory, Director of
Nutrition and Environmental
Services



Evaluating Environmental Cleaning



- **Objective Methods for Evaluating Environmental Hygiene**

- Direct Practice Observation
- Swab Cultures
- Agar Slide Cultures
- Fluorescent Markers
- ATP Bioluminescence

No matter which approach is chosen by the hospital, it is important that the monitoring be performed by hospital epidemiologists, infection preventionists or their designees who are not part of the actual ES cleaning program. Such an approach assures the validity of the information collected and provides an opportunity for the Infection Control to independently champion the value of well performed disinfection cleaning.

Source: CDC Toolkit Evaluating Environmental Cleaning

High Touch Areas in Patient Rooms



CDC Environmental Checklist for Monitoring Terminal Cleaning

Evaluate the following priority sites for each patient room:

High-touch Room Surfaces ¹	Cleaned	Not Cleaned	Not Present in Room
Bed rails / controls			
Tray table			
IV pole (grab area)			
Call box / button			
Telephone			
Bedside table handle			
Chair			
Room sink			
Room light switch			
Room inner door knob			
Bathroom inner door knob / plate			
Bathroom light switch			
Bathroom handrails by toilet			
Bathroom sink			
Toilet seat			
Toilet flush handle			
Toilet bedpan cleaner			

Evaluate the following additional sites if these equipment are present in the room:

High-touch Room Surfaces ¹	Cleaned	Not Cleaned	Not Present in Room
IV pump control			
Multi-module monitor controls			
Multi-module monitor touch screen			
Multi-module monitor cables			
Ventilator control panel			

Instructions for Evaluating the Cleaning of Objects in the Patient Zone



- **Bed rails** – If the bed rail incorporates bed controls, evaluate the control area (on the patient side) slightly away from the control buttons. If the rails do not contain the new style control areas, the rails are best evaluated on the smooth inner surface in an area easily accessible to cleaning.
- **Tray table** – The top of the tray table should be evaluated in one corner.
- **Call boxes** – Evaluation is done on the back mid portion of the call box in an area easily accessible to cleaning. If tiny call buttons are used, mark the separate TV control box instead if feasible.
- **Telephones** – Evaluation is best done on the back side of the hand-held portion of the telephone near the top of the phone, away from the end that is attached to the phone wire.
- **Bedside tables** – The drawer pull is evaluated.
- **Patient chair** – Evaluation is done in the center of the seat of the chair close to the rear of the cushion. If the cushion is covered in textured fabric, evaluate the arm of the chair.
- **IV pole** – For hanging IV poles, the shaft of the pole just above the textured grab area should be evaluated. For standing IV poles, the chest-high portion where hand contact is most common should be evaluated.

Toilet Area

- **Sinks** – If using a targeting system, the best place to mark the sink rim is towards the rear in order to avoid water splash interference with evaluation of the target. If direct evaluation is used, the faucet handle should be evaluated.
- **Bathroom and patient room light switches** – When using a targeting method, a target is placed on the plate portion of the light switch. When using a direct evaluation system, the switch or plate should be evaluated because of its relatively large surface area.



Bed Control



Phone and Call Button





What is ATP Monitoring

- ATP monitoring is a rapid testing method used to quickly assess the cleanliness of surfaces. Adenosine Triphosphate (ATP) is present in all organic material and is the universal unit of energy used in all living cells.
- ATP swabs use bioluminescence to detect residual ATP as an indicator of surface cleanliness. The presence of ATP on a surface indicates improper cleaning and the presence of contamination, including food residue, allergens and/or bacteria. This implies a potential for the surface to harbor and support bacterial growth.

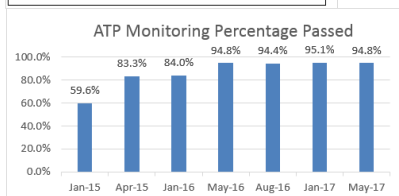
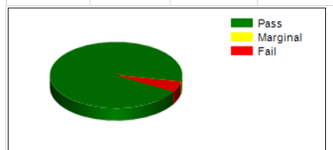
Source: Hygiene

Inpatient Room Results



Inpatient Terminal Cleans

Total	Pass	Marginal	Fail
287	272	0	15
100.0%	94.8%	0.0%	%




IV Pump Biofilm ATP Testing

Test 1	60038
Test 2	13883
Test 3	14834
Test 4	19602
Test 5	6692
Test 6	485
Test 7	1732
Test 8	563
Test 9	21

Surgery and C-Section



 Every patient
  Every patient, if used
  Enhanced
  If soiled

Reprinted with permission from Perioperative Standards and Recommended Practices.
 Copyright © 2014, AORN, Inc. 2170 S. Parker Road, Suite 400, Denver, CO 80231. All rights reserved.

AORN Environmental Cleaning Tool Kit

Surgery High Touch Areas



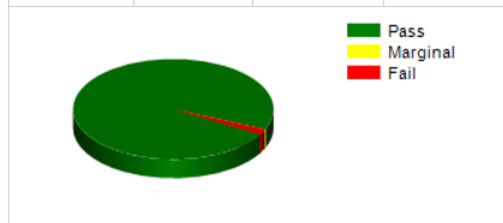
- Anesthesia Monitor
- Anesthesia Cart
- OR Mattress
- OR Table
- Table Strap
- Bed Control
- Arm Boards
- Patient Transfer Device
- SCD Tubing
- May Stand
- Anesthesia Infusion Pump
- Inside Door Handle

Surgery ATP Monitoring Results



Surgery Department In-Between Cleans 4/13/17

Total	Pass	Marginal	Fail
56	55	0	1
100.0%	98.2%	0.0%	1.8%



C-Section High Touch Areas



- OR Table
- Anesthesia Cart
- Mayo Stand
- Anesthesia Monitor
- OR Mattress
- Table Strap
- Bed Control
- Arm Boards
- Patient Transfer Device
- Infant Warmer

C-Section ATP Monitoring Data



ATP Testing C-Section Rooms

Date Collected 2/28/18 C-Sections

Site	Room#	Result
OR Table	Room A	Fail
Anes Cart	Room A	Pass
Mayo Stand	Room A	Pass
Anes Monitor	Room A	Pass
OR Mattress	Room A	Fail
Table Strap	Room A	Pass
Bed Control	Room A	Pass
Arm Boards	Room A	Pass
PI Trans Dev	Room A	Pass
SCD Tubing	Room A	Pass
Anes Inf Pum	Room A	Pass
In Door Hand	Room A	Pass
OR Table	Room B	Pass
Anes Cart	Room B	Fail
Mayo Stand	Room B	Fail
Anes Monitor	Room B	Pass
OR Mattress	Room B	Pass
Table Strap	Room B	Pass
Bed Control	Room B	Pass
Arm Boards	Room B	Pass
PI Trans Dev	Room B	Pass
SCD Tubing	Room B	Pass
Anes Inf Pum	Room B	Pass
In Door Hand	Room B	Pass
		83% Pass Rate
2/28/2018	83%	
1/29/2018	46%	
1/12/2018	38%	
12/7/2018	33%	

Cause of Biofilm Investigation



- Tested ES & OR chemical dispensers
- Transitioned to one chemical
- Retested many times
- Gap Analysis
- Observed processes with OR Staff
- Observed processes with ES Staff
- Interviewed OB staff on processes
- Tested cleaners and disinfectants
 - Vinegar Bleach Wipes
 - Dawn Super Sani Wipes
 - Enzymatic Wipes

Lessons Learned



- Develop a policy for staff to regularly test disinfectant
- ATP monitoring showed a biofilm that fluorescent marker would not have
- Both cleaning and disinfecting are important to prevent biofilm
- Replace equipment when integrity is compromised and surfaces are no longer cleanable