



PUTTING THE `ABLE` IN CLEANABLE

IPAC-CSO EDUCATION DAY

APRIL 12, 2018

PRESENTED BY

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I have no conflict of interest to declare.

DECLARATION

The goal of this presentation is to highlight practical challenges in achieving best practice cleaning standards in a health care setting. It is not intended to endorse or denounce any particular cleaning or disinfection product or method.



WARNING

RECOMMENDATIONS FOR SURFACES

Public
Health
Ontario

Santé
publique
Ontario

- PIDAC (2012/2018)
 - **EASE OF MAINTENANCE AND REPAIR**
 - DURABLE, EASY TO MAINTAIN/REPAIR
 - FABRIC TEARS, SCRATCHES OR CHIPPED SURFACES ALLOWS FOR ENTRY/ACCUMULATION OF ORGANISMS
 - ITEM CANNOT BE PROPERLY CLEANED

RECOMMENDATIONS FOR SURFACES

Public
Health
Ontario

Santé
publique
Ontario

- PIDAC (2012/2018)
 - EASE OF MAINTENANCE AND REPAIR
 - **CLEANABLE**
 - FLUID RESISTANT, NON-POROUS
 - ABLE TO WITHSTAND REPEATED CLEANING
 - COMPATIBLE WITH HOSPITAL-GRADE DISINFECTANTS

RECOMMENDATIONS FOR SURFACES

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- PIDAC (2012/2018)
 - EASE OF MAINTENANCE AND REPAIR
 - CLEANABLE
 - **RESISTANT TO MICROBIAL GROWTH**
 - METALS, HARD PLASTICS
 - MATERIALS THAT DO NOT HOLD MOISTURE
 - AVOID WET ORGANIC SUBSTRATES (WOOD)

RECOMMENDATIONS FOR SURFACES

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- PIDAC (2012/2018)
 - EASE OF MAINTENANCE AND REPAIR
 - CLEANABLE
 - RESISTANT TO MICROBIAL GROWTH
 - **NONPOROUS**
 - POROUS UPHOLSTERED FURNITURE SHOULD NOT BE USED IN PATIENT CARE AREAS

RECOMMENDATIONS FOR SURFACES

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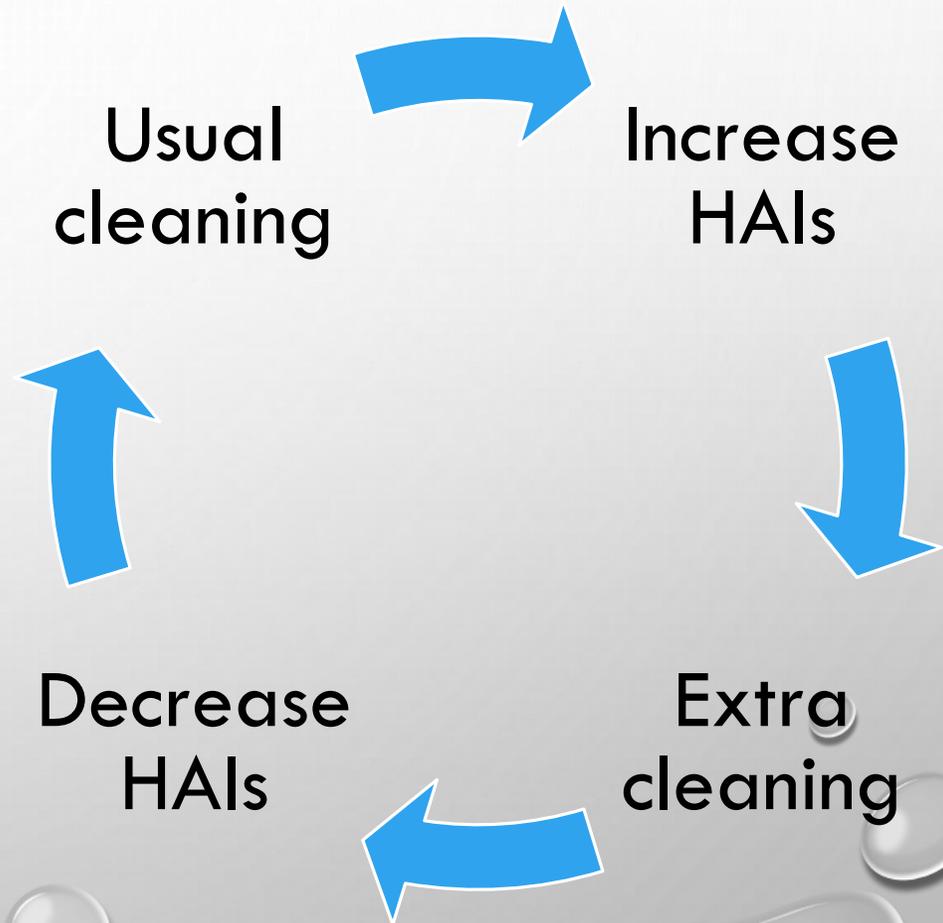
- PIDAC (2012/2018)
 - EASE OF MAINTENANCE AND REPAIR
 - CLEANABLE
 - RESISTANT TO MICROBIAL GROWTH
 - NONPOROUS
 - **SEAMLESS**
 - SEAMS CAN HARBOUR BACTERIA & ARE DIFFICULT TO CLEAN

**“If you can't clean it,
don't buy it”**

PIDAC,2018

THE CYCLE

- FLUCTUATING HOSPITAL-ACQUIRED RATES OF MRSA, VRE, AND *C. DIFF*
 - CLEANING WOULD BE STEPPED UP, IN ADDITION TO OTHER MEASURES, IN IMMEDIATE RESPONSE TO HAI CONCERNS
 - RESULTED IN SHORTER-TERM IMPROVEMENT





ON THE HUNT FOR ENVIRONMENTAL RESERVOIRS

- CAN PERSIST FOR EXTENDED PERIODS OF TIME
- INCREASE LIKELIHOOD OF TRANSMISSION



**How well are we
really able to clean
items that do not
meet PIDAC best
practice
recommendations?**

UNIVERSITY
of **GUELPH**



GUELPH
GENERAL HOSPITAL

ON THE HUNT FOR ENVIRONMENTAL RESERVOIRS



62 specimens were sent

- 4 controls (2 MRSA, 2 *C. diff*)
- Cloths were randomly bagged as controls to monitor for inadvertent contamination of supply during specimen collection
- 29 for MRSA
- 29 for *C. diff*

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SIDEBAR

The chair was immediately removed from service. Its now resting in pieces.



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RESULTS

- 3 SPECIMENS POSITIVE FOR MRSA
 - CORK BOARD IN A PATIENT ROOM
 - WOODEN HANDLED CHAIR IN A KNOWN MRSA ROOM
 - BEDRIDDEN PATIENT
 - CHAIR APPROX. 1 METRE FROM THE END OF THE PATIENT'S BED
 - FABRIC CHAIR IN NURSING STATION CONFERENCE ROOM



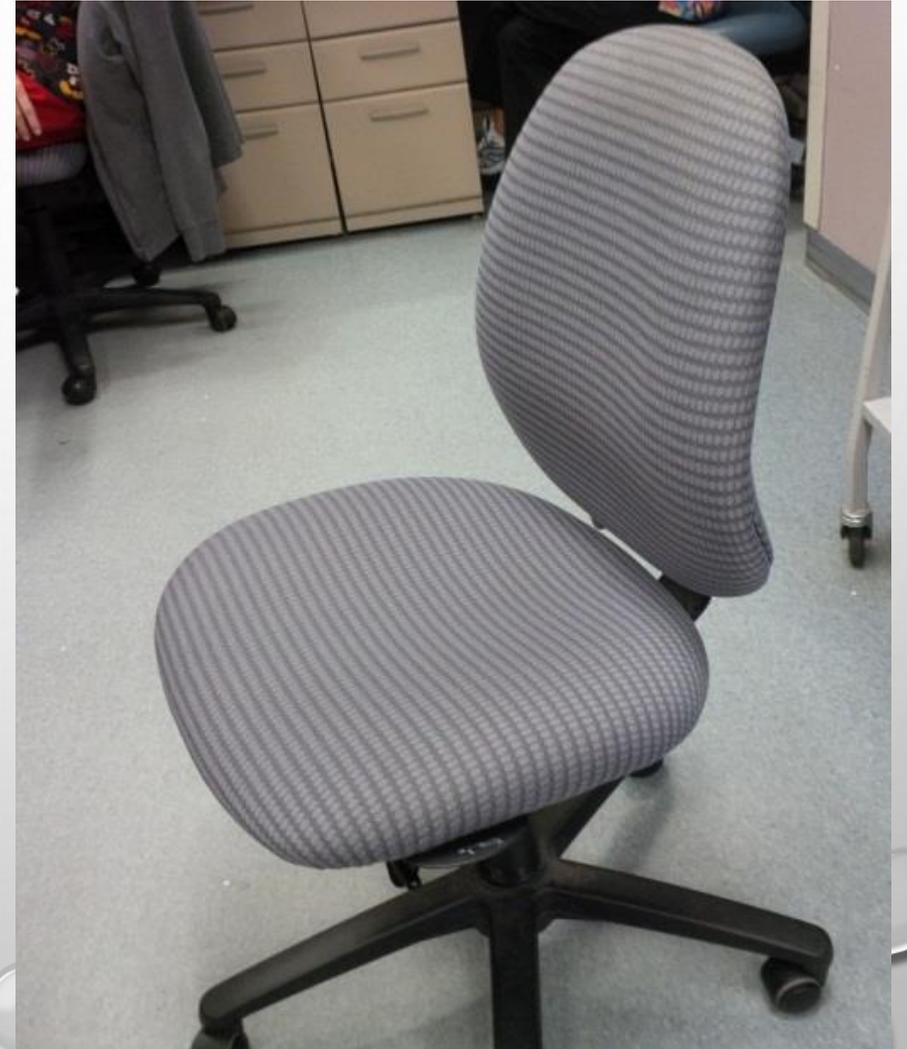
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RESULTS

- 3 SPECIMENS POSITIVE FOR *C. DIFF*
 - RIBOTYPES 020, 027, 014
 - SAME FABRIC CHAIR IN NURSING STATION CONFERENCE ROOM
 - WOODEN TABLE IN PAEDIATRICS
 - PHYSIO TRANSFER BOARD



RESULTS

- ON THE *C. DIFF* PLATES:
 - 2/29 SPECIMENS WERE POSITIVE FOR ANAEROBIC SPORE-FORMING BACTERIA
 - BOTH FROM WOODEN ROCKING CHAIRS
 - PAEDS
 - FAMILY BIRTHING UNIT



RESULTS

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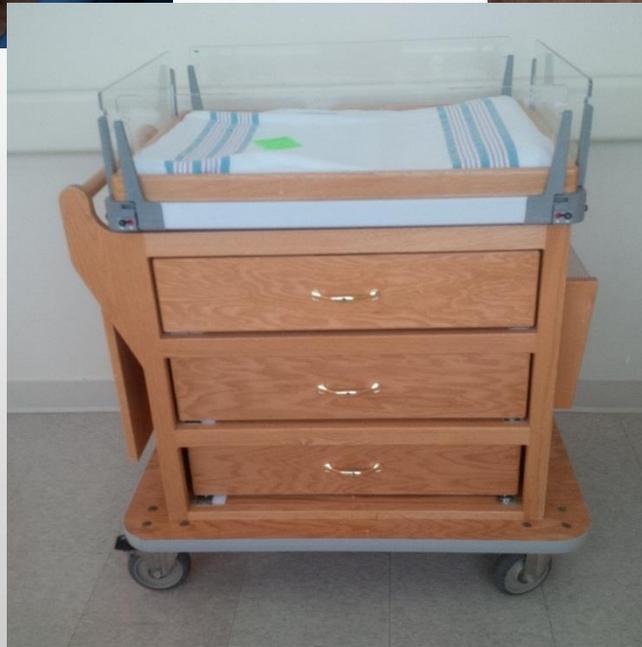
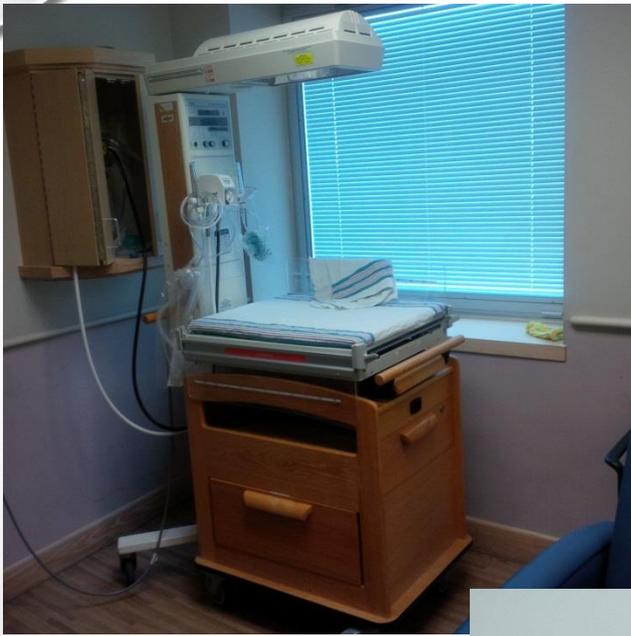




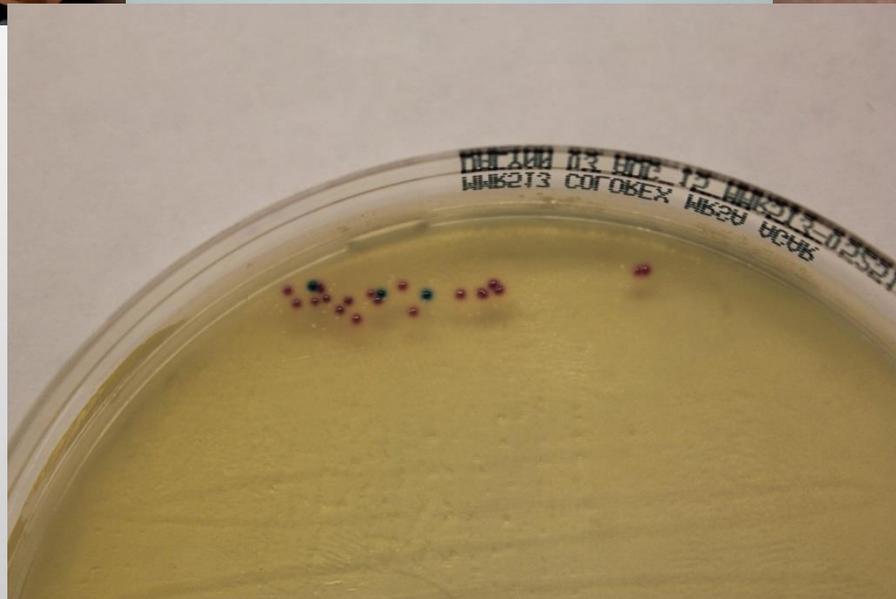
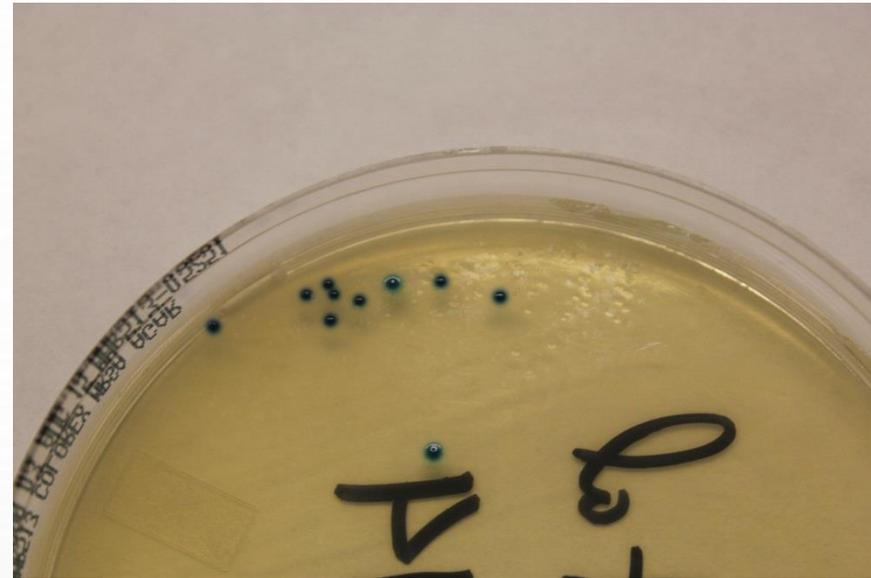
RESULTS

- ON THE MRSA PLATES:
 - 25/29 SPECIMENS WERE POSITIVE FOR OTHER ORGANISMS
 - AS MANY AS 5 COLONY TYPES FROM ONE SPECIMEN
 - FABRIC DESK CHAIR FROM HALLWAY
 - DOCUMENTATION STATION
 - VINYL DESK CHAIR AT NURSES' STATION





Bacillus/Enterococcus sp.



Bacillus/Enterococcus sp.



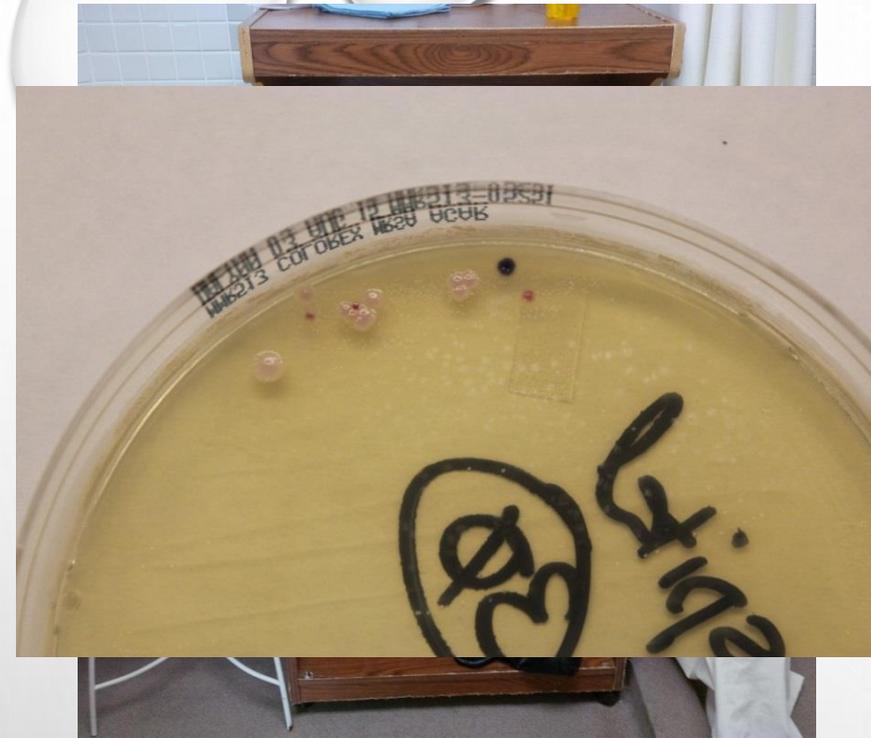
Bacillus/Enterococcus sp.,
Coag-neg. Staph, + ?



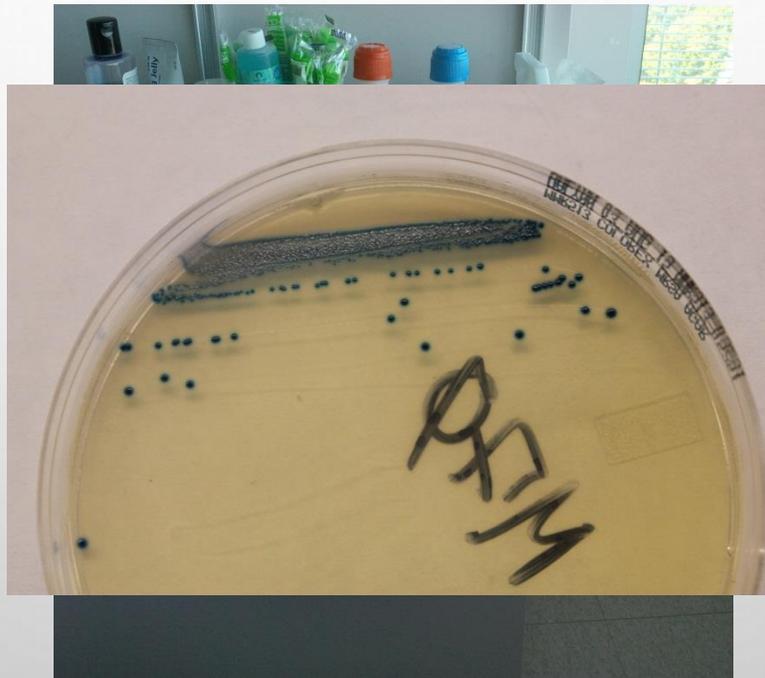
Bacillus/Enterococcus sp.



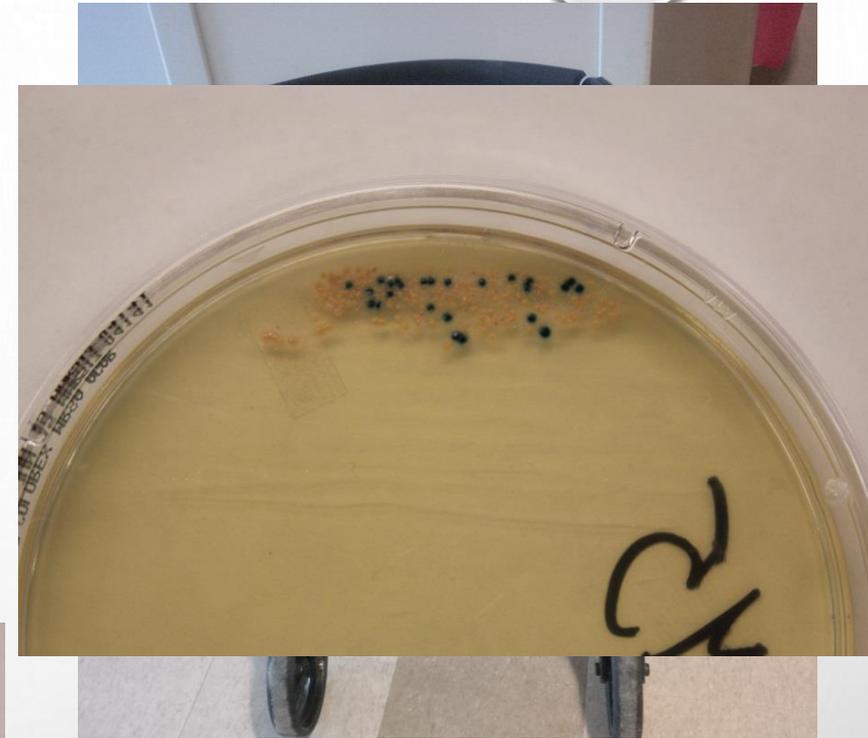
Micrococcus sp.,
Bacillus/Enterococcus sp.



Bacillus/Enterococcus sp.,
Coag-neg. Staph, + ?



Bacillus/Enterococcus sp.



Micrococcus sp.,
Bacillus/Enterococcus sp.



ELECTRONICS

ELECTRONICS

- MINIMALLY INVASIVE (HYBRID) VASCULAR OR
 - BANK OF 4 LCD SCREENS THAT SITS WITHIN ABOUT ½ METRE OF THE PATIENT
- LCD SCREENS WERE SHOWING SIGNS OF DAMAGE
 - RISK TO PATIENT SAFETY FROM LACK OF ACUITY IN VISUALIZING ANATOMICAL IMAGES
 - RISK TO PATIENT SAFETY FROM NOT PROPERLY DISINFECTING SCREENS

The image features a light gray gradient background with several realistic water droplets of various sizes scattered in the corners. The droplets have highlights and shadows, giving them a three-dimensional appearance. The text is centered in the middle of the frame.

“CLEAN ONLY WITH STERILE WATER”

“CLE



TER”

USING TECHNOLOGY TO HIGHLIGHT THE ISSUE IN CLEANING TECHNOLOGY



- ATP MONITOR REVIEW

- MEASURES “ADENOSINE TRIPHOSPHATE (ATP) BIOLUMINESCENCE”

- MEASURED USING AN ENZYME REACTION WHICH OCCURS NATURALLY IN THE TAIL OF FIREFLIES (“FIREFLY TECHNOLOGY”)
 - LUMINOMETER MEASURES THE AMOUNT OF LIGHT PRODUCED
 - AMOUNT OF LIGHT IS PROPORTIONAL TO THE AMOUNT OF ATP PRESENT

USING TECHNOLOGY TO HIGHLIGHT THE ISSUE IN CLEANING TECHNOLOGY

Hybrid OR		
Bank of 4 LCD screens		
Top left	2041	
Top right	425	
Bottom left	469	
Bottom right	14135	
PACS monitor right	312	
PACS monitor left	39	
Table Controls (screen)	549	

USING TECHNOLOGY TO HIGHLIGHT THE ISSUE IN CLEANING TECHNOLOGY

Hybrid OR		
Bank of 4 LCD screens		
Top left	2041	
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Toilet seat (public washroom)	176	

USING TECHNOLOGY TO HIGHLIGHT THE ISSUE IN CLEANING TECHNOLOGY

Hybrid OR		
Bank of 4 LCD screens		
Top left	2041	38
Top right	425	13
Bottom left	469	0
Bottom right	14135	*554
PACS monitor right	312	0
PACS monitor left	39	0
Table Controls (screen)	549	**3210
Toilet seat (public washroom)	176	

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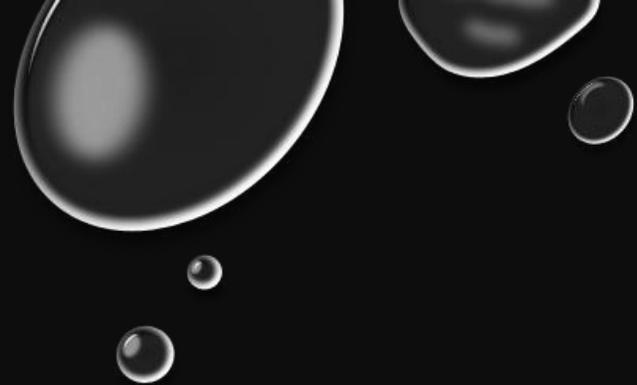
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ONCE WE GET
ITEMS/EQUIPMENT
THAT CAN BE
CLEANED, WHAT DO
WE CLEAN THEM
WITH?





**FOLLOW THE
MANUFACTURERS'
INSTRUCTIONS!**



PUTTING THE ABLE IN CLEANABLE CHALLENGES

INAPPROPRIATE CLEANING INSTRUCTIONS:

- “INCOMPATIBLE WITH MOST HOSPITAL-GRADE DISINFECTANTS”
 - PIECE OF EQUIPMENT TO BE USED IN THE OR!
- SPRAY ALCOHOL (????)
- CONCENTRATION OF BLEACH NOT COMMERCIALY AVAILABLE AS PREPARED WIPE
- SOLUTIONS RANGING FROM PHENOLICS TO STERILE WATER FOR THE SAME PIECE OF EQUIPMENT BUT NOTHING PRACTICAL
- USE LCD WIPE ONLY (ELECTRONIC TOUCH SCREENS)

PUTTING THE **ABLE** IN **CLEANABLE** CHALLENGES

- PRACTICAL ISSUES WITH MULTIPLE BRANDS OF DISINFECTANT WIPES/CLEANING PRODUCTS
 - STORAGE
 - AVAILABILITY/CONVENIENCE
 - CORRECT USE/APPLICATION
- NO GUARANTEES THAT THE CORRECT PRODUCT WILL BE USED ON A PARTICULAR PIECE OF EQUIPMENT

PUTTING THE **ABLE** IN CLEANABLE

- CHECK WITH EQUIPMENT MANUFACTURER
 - HAS THE CLEANING PRODUCT(S) YOUR ORGANIZATION USES BEEN TESTED ON THEIR EQUIPMENT?
- WORK WITH CLEANING PRODUCT COMPANY
 - MAY BE ABLE TO APPROACH MANUFACTURER TO DO TESTING
 - MAY HAVE ALREADY TESTED THEIR CLEANING PRODUCT ON THE SAME OR SIMILAR SURFACE MATERIAL AS THE EQUIPMENT BEING PURCHASED



PUTTING THE **ABLE** IN **CLEANABLE**

- REQUIRES COLLABORATION AND TEAMWORK BETWEEN STAKEHOLDERS TO ENSURE THAT WE PROVIDE SAFE, **CLEANABLE** HEALTHCARE
- WE'RE IN THIS TOGETHER!



Questions?