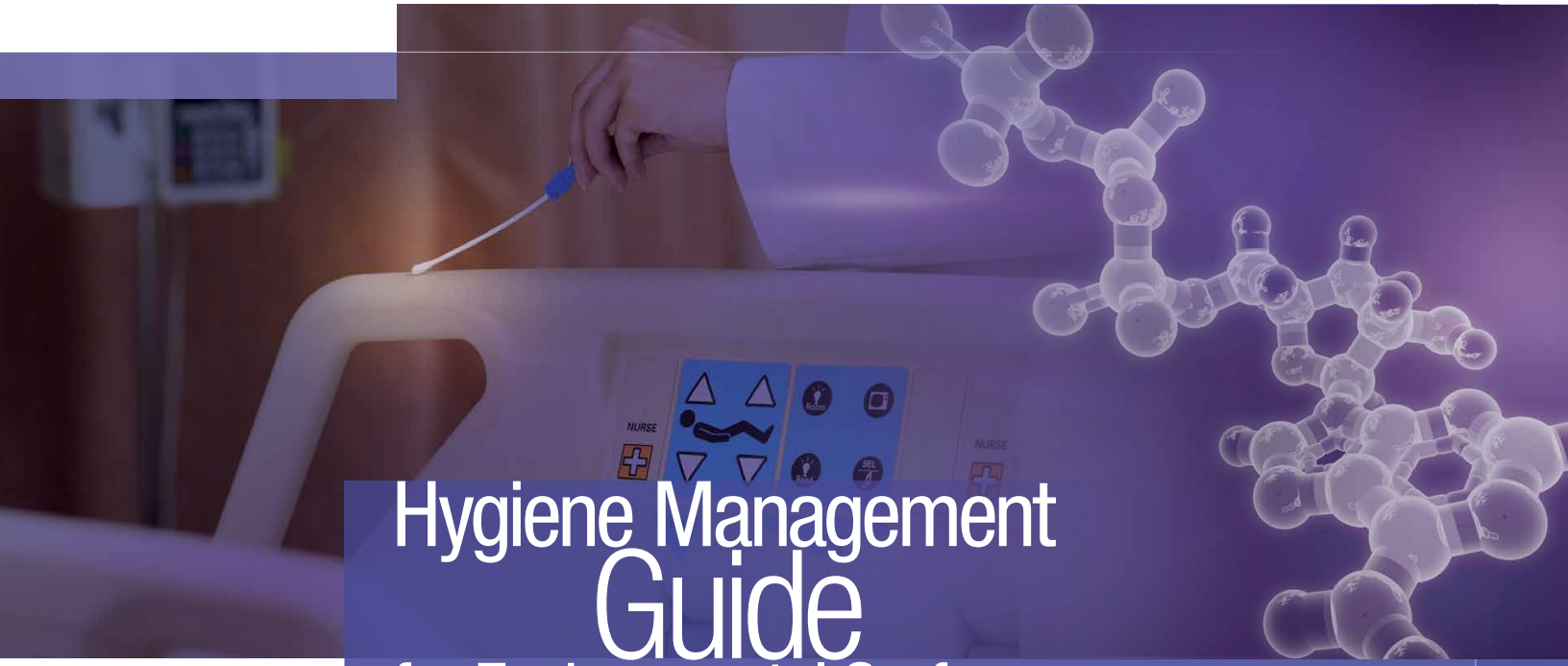
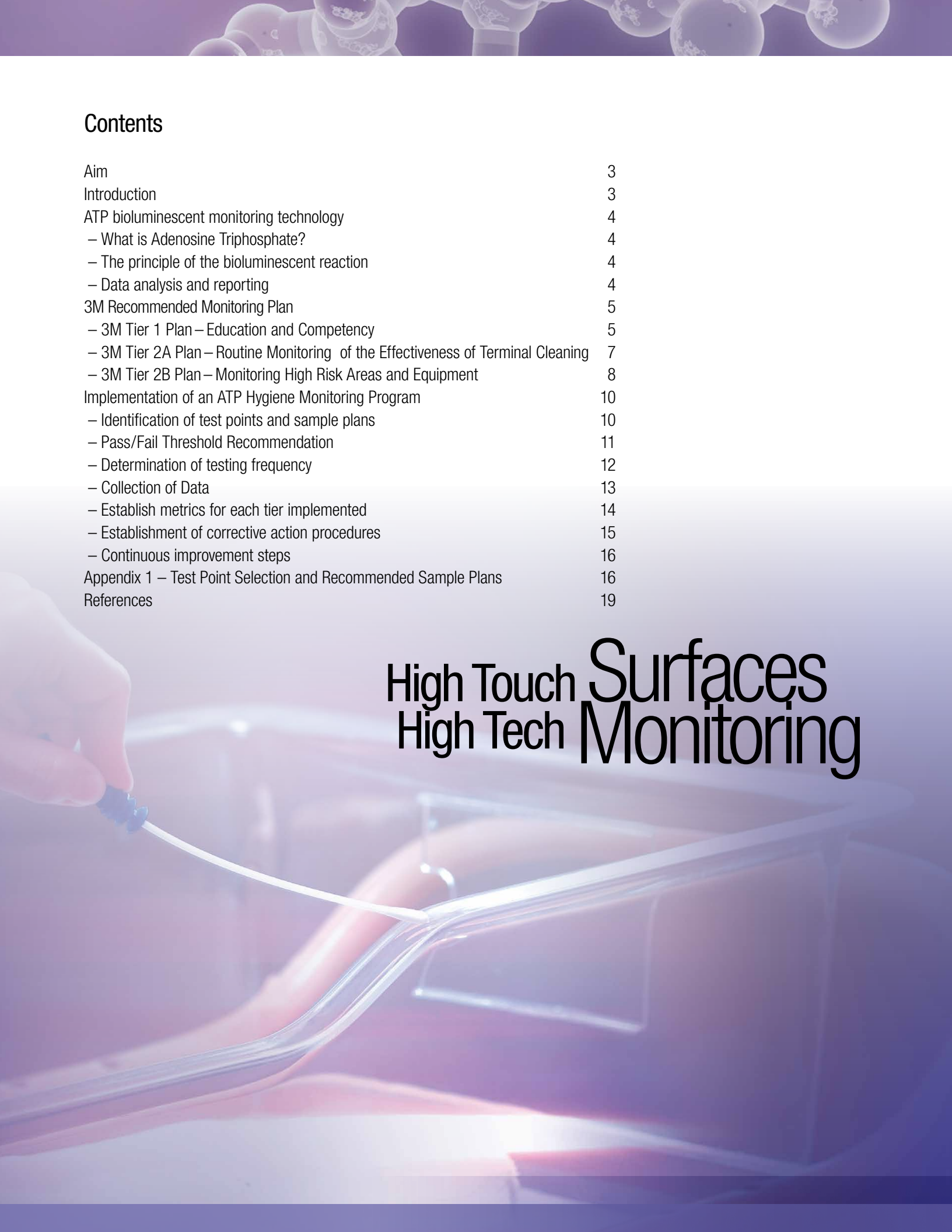
3M™ Clean-Trace™
Hygiene Management System



Hygiene Management Guide for Environmental Surfaces

Contents



Aim

The Hygiene Management Guide for Environmental Surfaces is a document outlining the steps necessary to set up and implement an effective ATP hygiene monitoring program within a healthcare environment.

Introduction

One of the greatest infection risks to a patient entering a healthcare facility is acquiring a pathogen from a prior room occupant who was infected or colonized with a multi-drug resistant organism (MDRO).[1] The factors that contribute to this risk are many, some of which are listed below.

- Patients are the largest contributors to pathogens present in the near-patient environment.[1]
- Compliance to established cleaning protocols can be as low as 50%, leaving behind contaminated surfaces for the next room occupant.[2,3]
- Hospital rooms and equipment may be complex in design and difficult to clean.
- Pathogens that are not removed or killed during cleaning and disinfection persist on environmental surfaces for weeks to months.[5]
- Contaminated environmental surfaces are an important source for transmission of healthcare-associated pathogens such as *Clostridium difficile*, methicillin-resistant *Staphylococcus aureus* (MRSA), and vancomycin-resistant enterococci (VRE).[4]
- Healthcare workers can contaminate their hands by touching contaminated surfaces and then transfer pathogens to their patients via touch.[4,5]

These factors emphasize the importance of environmental cleaning for reducing the spread of infections.[4,7,8] There is ample evidence that shows enhanced cleaning of environmental surfaces can lower the infection rates from environmental pathogens.[8,9] Because there is an “evolving mandate” that environmental hygiene in healthcare settings be objectively analyzed and optimized, environmental monitoring tools have been developed to assess the effectiveness of cleaning procedures.[3,10]

ATP bioluminescence monitoring technology

The maintenance of a clean environment is an important factor in reducing the risk of cross contamination. Unmonitored, organic residues can build up to high levels on surfaces if adequate cleaning procedures are not adopted. Surfaces, although appearing visibly clean, can still harbor significantly high levels of contamination. This contamination can provide an ideal environment for the proliferation of microorganisms. In addition, it can provide a resistant barrier against both cleaning and sanitizing agents.

What is Adenosine Triphosphate (ATP)?

ATP is the molecule that provides energy for cellular metabolism and is present in all living cells. Consequently, it is present in any organic residue, e.g. body fluids, skin cells and microorganisms, making ATP an excellent marker for organic contamination or contamination from a biological source.

The principle of bioluminescence reaction

The 3M™ Clean-Trace™ Hygiene Management System is based on the measurement of levels of ATP present on an environmental surface. A 3M™ Clean-Trace™ ATP Surface Test is used to swab a selected test point. The test is then activated and the swab is brought into contact with the test enzyme solution (luciferin-luciferase). The enzyme reacts with any ATP residue present on the swab bud. A product of this reaction is the generation of light by the enzyme solution. The Clean-Trace ATP Surface Test is then placed in the 3M™ Clean-Trace™ NGi Luminometer. This measures the light generated by the enzyme solution and produces a result expressed in Relative Light Units (RLUs). The greater the level of ATP present on the swab, the greater the amount of light generated by the test and consequently, the higher the RLU level produced. The test can be performed in less than 30 seconds, providing a real-time result that indicates the cleanliness of the surface tested. This provides an opportunity to take any corrective action required such as re-cleaning and re-testing the surface.

Data analysis and reporting

Rapid results allow for corrective action to be taken at the time of testing. Review and trend analysis of collected data is an important part of maintaining and improving hygiene standards on an ongoing basis. To provide a mechanism for reviewing ATP results, the Clean-Trace System includes the 3M™ Clean-Trace™ Online Software, a tool for the capture and auto-analysis of results and auto-generation and delivery of reports. Tracking results over time helps to indicate the effectiveness of cleaning procedures as well as detect any developing adverse trends. The Clean-Trace Online Software provides a range of reports, graphs and hygiene maps to allow easy interpretation and review of results. These can be shared with key hygiene stakeholders at all levels thereby increasing awareness of the state of cleanliness.

3M Recommended Monitoring Plan

The Centers for Disease Control and Prevention (CDC) has encouraged hospitals to develop an environmental cleaning and monitoring program to optimize the cleaning of high touch surfaces at terminal cleaning, as well as ensure quality control and improvement.[6,7,10] Approaches for optimizing and analyzing the status of environmental hygiene in areas of concern include training/competency evaluation programs and tracking and trending of objective, routine monitoring results as well as risk-based approaches for targeting the most important elements of environmental cleaning and monitoring.[2,6,7,10,11,12]

What follows in the remainder of this document is the description of a comprehensive monitoring plan that combines recommendations put forth in several pertinent CDC documents and guidelines together with best practices gleaned from successful practitioners of environmental hygiene monitoring. This plan uses a tiered format allowing for the choice of an approach that best fits the immediate needs of your institution while providing a clear path for growing a comprehensive environmental monitoring program.

3M Tier 1 Plan – Education and Competency

It has been shown that positive, supportive educational interventions and regular competency evaluations directed at the Environmental Services (EVS) staff can result in improved decontamination of environmental surfaces.[2,3,10,12] Such interventions should include efforts to monitor cleaning and disinfection practices and provide feedback to the EVS staff. The CDC Guidance on MDROs in healthcare settings states the following:

> V.B.8.b. Intensify and reinforce training of environmental staff who work in areas targeted for intensified MDRO control and monitor adherence to environmental cleaning policies. Some facilities may choose to assign dedicated staff to targeted patient care areas to enhance consistency of proper environmental cleaning and disinfection services. Category IB[7]

The more positive training experiences provided for the EVS staff, the more likely they will exhibit the discipline to do the job right and achieve the consistent results needed to maintain good environmental hygiene.

Tier 1 of the 3M Recommended Monitoring Plan focuses on the training and competency of EVS staff, similar to the CDC *Options for Evaluating Environmental Cleaning Toolkit* Level 1 program.[10] There are a number of variables that can affect how well a surface is cleaned. The surface itself, the disinfectant or cleaner that is used, the cleaning protocol followed, and the EVS staff are all known variables in the process. Based on continuing research at 3M, the factor showing the largest variability impacting cleaning effectiveness are the individual EVS staff members (i.e. worker-to-worker variability). Therefore, ensuring proper training and on-going competency is the first step in any quality control program. The following steps provide a framework around which a training or competency evaluation program can be built.

1. Identify EVS staff members (and other staff responsible for cleaning equipment) for whom training is required.
2. Identify the surfaces that will be used during training. Five high touch surfaces that encompass the range of surfaces and equipment present in your facility are recommended. (See Appendix 1 for a list of suggested surfaces)
3. Conduct training within a patient room **prior** to the terminal cleaning.
4. Swab 5 high touch surfaces using 3M™ Clean-Trace™ ATP Surface Tests to measure the ATP levels prior to cleaning the surfaces. Initially, surfaces should have enough organic material to be able to show a difference in RLUs after cleaning.
5. Have the EVS staff member clean the 5 surfaces identified following your facilities policies and procedures.
6. Using new Clean-Trace ATP Surface Tests, sample the same 5 high touch surfaces to measure the ATP levels post-cleaning.
7. Repeat sampling of 5 surfaces (before & after cleaning) in an additional 3 rooms to complete the initial testing.
8. Monitor the effectiveness of training over time. 3M recommends that monitoring occur during initial training with follow up at 1 week, 1 month and 3 months for a total of 4 training intervals.
9. Staff should be able to achieve a pass (≤250 RLUs) on 16 out of the 20 touch points (80%Pass). If necessary conduct additional training to improve performance levels.
10. It is recommended that audits be performed at a minimum of every 3 months, increasing to every month as your quality program develops over time.

The Clean-Trace Online Software will enable documentation and trending of both individual and combined staff competency and training results. Several report types are available that can be customized to fit a variety of documentation requirements.

3M Tier 1 Plan – Summary

Education and Training + Competency Audit = Total Swabs per Year

EDUCATION AND TRAINING

# EVS Staff	x	5 Touch Points	x	4 Rooms	x	2 Swabs (Before/ After)	x	4 Training Intervals (Initial, 1 week, 1 month and 3 months)	=	Total # Swabs

COMPETENCY AUDIT

# EVS Staff	x	5 Touch Points	x	4 Rooms	x	2 Swabs (Before/ After)	x	Audit Interval Quarterly (4X/year) **or** Monthly (12X/year)	=	Total # Swabs

EXAMPLE:

Education & Training: 10 EVS Staff x 5 Touch Points x 4 Rooms x 2 Swabs (Before & After Cleaning) x 4 (Training Intervals) = **1600 Swabs**

Competency Audit: 10 EVS Staff x 5 Touch Points x 4 Rooms x 2 Swabs x 4 (Quarterly) = **1600 Swabs**

3200 Swabs/Year Total

Tier 2A – Routine Monitoring of the Effectiveness of Terminal Room Cleaning

It is helpful to learn from the successes of colleagues when implementing an environmental monitoring program. Led by Michael Phillips M.D., the "Clean Team" at NYU Langone Medical Center in New York City significantly decreased their *Clostridium Difficile* rates by employing a creative education program combined with teamwork in implementing an enhanced environmental cleaning program. A critical part of their success was monitoring the efficacy of their cleaning procedures using the Clean-Trace System. Dr. Phillips emphasizes the importance of monitoring cleaning performance as the next step. "We are focused on the daily disinfection of frequently touched surfaces within the patient room." Phillips explains that "On high-intensity units, this disinfection is conducted twice daily. It is important to assess cleaning and disinfection efficacy." Phillips further states that, "This data is collected systematically and reported back to our environmental service colleagues – similar to surveillance for surgical site infections or central line associated bacteremia. This type of surveillance is just as important, in our assessment."[11]

Similar to the CDC *Options for Evaluating Environmental Cleaning Toolkit* Level II program, Tier 2A of the 3M Recommended Monitoring Plan focuses on scheduled and objective assessments of terminal room cleaning effectiveness. Using the 3M™ Clean-Trace™ Hygiene Management System to develop your monitoring program provides quantitative and objective data to monitor cleaning performance and supports creating a comprehensive quality improvement program.

To maximize your ability to detect changes in cleaning performance, knowing that worker-to-worker variability is a key factor, it is recommended that one (1) room per every 20 discharges (5% of rooms) be monitored by collecting five (5) samples per room. This sample size provides the statistical power sufficient to detect a 10% change in cleaning performance. This approach is also recommended in the CDC *Options for Evaluating Environmental Cleaning Toolkit*.[10]

The Clean-Trace Online Software helps you track your progress by generating different report types that make it possible to carry out process improvements in a timely manner.

When determining which rooms to sample, it is recommended that the rooms chosen represent the cleaning efforts of all EVS staff members. This ensures adequate representation of the worker-to-worker variability within your institution. You can also apply this approach to terminally cleaned Operating Rooms.

3M Tier 2A Plan – Summary

Routine Monitoring

EXAMPLE:

A facility with 40 discharges will use 10 swabs per day.

2 rooms/day **x** 5 touch points **=** 10 swabs per day

3M Tier 2B Plan – Monitoring High-Risk Areas and Equipment

All areas within the hospital are not created equal in regards to the amount and level of daily and terminal cleaning. Based on the potential for transmission of infection via environmental surfaces, a monitoring strategy should be created for different areas of the hospital. This is typically determined by a risk assessment. As with any risk assessment process, high risk areas should be monitored, results recorded and the data used to drive process improvements, thus ensuring high standards of infection prevention practice.

The Tier 2B plan has all the same elements as the Tier 2A plan with the addition of monitoring high risk areas and equipment. These high risks areas and surfaces should be monitored more frequently (every discharge or daily, as appropriate) as part of a risk-based approach to your monitoring program.

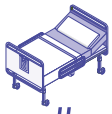
This will help you to identify adverse trends and developing problems in a timely fashion.

It is recommended that all contact isolation rooms, transplant patient rooms, ICUs and hemodialysis units are considered when deciding which high risk areas to include in your monitoring program. For example, if your facility has a high rate of *Clostridium difficile* infection, then all *C. difficile* isolation rooms would be the targeted high-risk area to include in Tier 2B of the 3M Recommended Monitoring Plan. Inclusion of mobile equipment, such as IV stands and mobile blood pressure units, in your monitoring program is also recommended.

3M Tier 2B Plan – Summary

Routine Monitoring + High Risk Monitoring + Mobile Equipment = Total # Swabs/Day

ROUTINE AUDIT



\# Rooms/Day (1 room per every 20 discharges) **x** 5 Touch Points **=** # Swabs/Day

HIGH RISK AREAS

\# High Risk Rooms/Day (e.g. all *C. difficile* rooms) **x** 5 Touch Points **=** # Swabs/Day

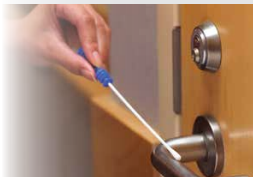
MOBILE EQUIPMENT

\# Mobile Equipment **x** 1 Touch Point **=** # Swabs/Day

EXAMPLE:

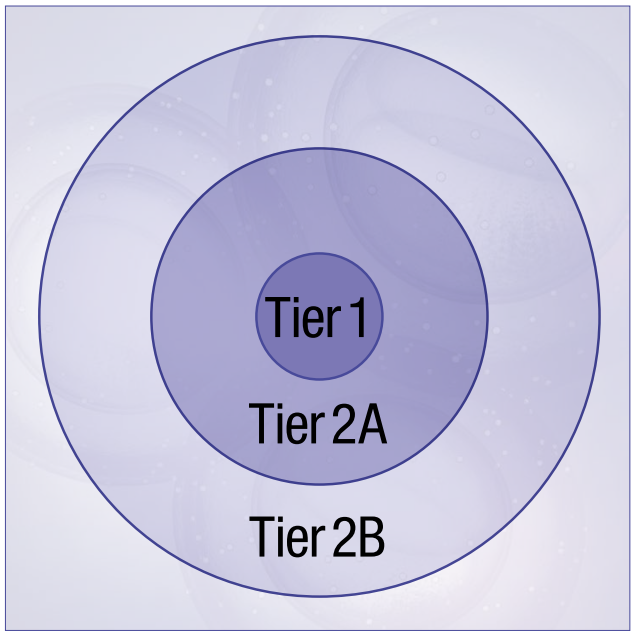
A facility has 40 discharges with 3 high risk rooms/day and 8 mobile pieces of equipment.

Routine Audit:	2 Rooms/Day **x** 5 Touch Points	**= 10 Swabs**
High Risk Areas:	3 High Risk Rooms/Day **x** 5 Touch Points	**= 15 Swabs**
Mobile Equipment:	8 Pieces of Mobile Equipment **x** 1 Touch Point	**= 8 Swabs**
		33 Swabs/Day Total



Putting it all together

An ideal monitoring plan includes the implementation of all three tiers. The 3M Recommended Monitoring Plan provides flexibility so that all or part of the different tiers can be customized to create a monitoring program that meets the needs of your facility.



An Objective Approach

Implementation of an ATP hygiene monitoring system

The successful implementation of an ATP hygiene monitoring program requires consideration of the following topics:

1. Identification of test points and sample plans
2. Pass/Fail threshold recommendation
3. Determination of testing frequency
4. Collection of data
5. Establish metrics for each tier implemented
6. Establishment of corrective action procedures
7. Continuous improvement steps

These topics are discussed in the remaining pages of this document.

1. Identification of test points and sample plans

Selection of surfaces and areas to be monitored should focus on where poor environmental hygiene represents a high risk of cross-contamination. In addition, test points should be selected with the goal of providing realistic feedback on the hygienic status of the test area and be reflective of overall environmental cleanliness.

A sample plan for a particular area is comprised of a list of test points. Consideration of the level of risk needs to be taken into account when selecting test points i.e. high dependency and intensive care units where patients are more susceptible to risk of infection.

The list below provides some points to be considered when choosing testing points for inclusion in a sample plan.

- The test point provides representative feedback and data for current cleaning procedures.
- The test point should represent a surface at high risk of cross contamination to patients and hospital staff. These test points include those surfaces in close proximity to the patient, e.g. overbed table or bed rails.
- Test points should include those surfaces routinely used in the care of patients and subject to a high level of handling, e.g. buttons and handles on equipment and patient contact surfaces.
- Test points should be chosen from areas where there is likely to be a high level of organic build up resulting in high levels of contamination. Build up of high levels of organic residue is usually a consequence of a high level of contact or movement as well as “people” traffic in an area, e.g. buttons, door plates/handles, light switches.
- Test points should encompass surfaces that are difficult to clean, e.g. textured surfaces, irregular surfaces, surfaces difficult to reach.
- Test points located on equipment that is routinely cleaned immediately after use e.g. commodes.

Example test points and sample plans are included in Appendix 1 at the end of this document.

2. Pass/Fail Threshold Recommendation

The recommended Pass/Fail values are derived from best practice standards. These levels are based on published clinical data and are also used in successful ATP monitoring programs.[2,12,14]

The recommended Pass and Fail ranges are as follows:

Pass	≤250 RLU
Fail	≥251 RLU

3. Determination of testing frequency

In order to obtain valid feedback, sufficient data sets must be collected. This is especially important in the early implementation stages if a true understanding of current cleaning capability is to be achieved. Moreover, sufficient data is required to allow accurate trending of data on an ongoing basis and to provide key stakeholders with enough result based evidence to make any changes or decisions regarding existing cleaning practices.

The determination of the frequency of testing should take into consideration several different factors which may include gathering enough data to make a statistically valid determination of cleaning performance, risk assessment and consideration of available resources. It is important that a valid frequency of testing be used that allows adaptation of continual improvement practices.

Tier 2A of the 3M Recommended Monitoring Plan focuses on terminally cleaned rooms. Because the number of terminally cleaned rooms is determined by the number of patient discharges, it is reasonable to base the frequency of testing on patient discharge rate.

The CDC *Options for Evaluating Environmental Cleaning Toolkit* recommends a testing frequency of 5% of rooms per evaluation cycle unless there is deterioration in practice.[10] The 3M Tier 2A Plan recommends testing 1 room per every 20 discharges (5%).

Areas identified as high risk should be monitored ***after every terminal clean.*** This will minimize the risk incurred by either a vulnerable patient population (e.g. transplant patients) or a room with higher probability of cross-contamination (e.g. contact isolation rooms). Increased frequency of monitoring is also recommended during situations where high endemic rates of multidrug resistant organisms (MDROs) are present as well as during outbreak situations.

4. Collection of Data

When collecting monitoring data, it is suggested that results be carefully recorded as evidence of the process of implementation. It is recommended that the 3M™ Clean-Trace™ Online Software be used for this purpose.

Data is collected from the identified test points as listed in a sample plan for a specific area. In order to accurately determine the level of cleaning efficacy being achieved, sufficient quantities of results need to be collected. It is recommended that the number of data points collected be sufficient so that a 10–20% change in cleaning performance can be detected.[10] This measure of performance is described in the *Options for Evaluating Environmental Cleaning Toolkit* as a TDC score (%Pass). This score is calculated as the # of objects cleaned / total # of objects evaluated x 100.[10] Translated for use with the 3M™ Clean-Trace™ Hygiene Management System, cleaning efficacy is assessed by calculating the percent of surfaces cleaned that achieve a Pass threshold value of ≤ 250 RLU. The Clean-Trace Online Software will automatically calculate a %Pass (TDC score) value for a defined set of data.

A sample size that provides the statistical power to detect a 10% change in cleaning performance (%Pass) is 300 test points. To maximize the ability to detect changes in cleaning performance, it is recommended that results from 300 test points be obtained by sampling five (5) test points per room in sixty (60) terminally cleaned rooms. Data collection should be an ongoing process to provide feedback on the level of cleaning efficiacy.

Results should be collected over a sufficient time period to take into account any variation in the environment as a consequence of patient turnover or worker-to-worker variability. This will help in understanding changes that may impact cleaning procedures.

It should be noted that individual test points and areas may exhibit different ranges of RLU values reflective of varying levels of cleaning efficacy. For example, intensive care units may show noticeably lower RLU levels as a consequence of stricter cleaning protocols when compared to general patient areas. Similarly, individual test points may also show a wide range of RLU values. This type of variation results from multiple factors:

- The nature of the surface being tested. For example, stainless steel surfaces are easier to clean than other surfaces and may routinely achieve lower RLU results than other surface types
- The age of the surface. Older surfaces may be more damaged, scratched or marked, presenting a greater surface area and opportunity for the build-up of organic contamination and formation of biofilm making the cleaning process more difficult
- Ease of access to the surface for cleaning
- Cleaning method employed

5. Establish metrics for each tier implemented

Metrics are standards of measurements by which the efficiency of your cleaning process, efficacy of training programs as well as progress on a quality improvement plan can be quantitatively assessed. Metrics should reflect the objectives of your monitoring program and will evolve and change as, over time, you implement the various tiers of the 3M Recommended Monitoring Plan. Careful consideration should be given to your choice of metrics as they form the basis for continual improvement processes.

Metrics should be established for each tier of the program implemented. The Clean-Trace™ Online Software can be used to automatically record, track and trend the metrics established for each tier of the program implemented at your facility. See below for suggestions for appropriate metrics.

In general, for all three Tiers, it is recommended that 80% of test points show RLU values ≤ 250 (80% Pass).[10]

3M Tier 1 Plan Metrics – Education and Competency

Staff Training/Competency
- % of staff that has passed or failed training allows assessment of training efficacy
- % Pass/Fail for each test point allows for pinpointing of trouble spots

Individual Staff training record
- % Pass/Fail for training protocols allows documentation of staff performance
- % Pass/Fail for each test point allows for pinpointing of trouble spots

3M Tier 2A Plan Metrics – Routine Monitoring of the Effectiveness of Terminal Cleaning

Cleaning effectiveness
- % Pass/Fail for each level of your monitoring plan (Hospital, Unit, Room) allows tracking and trending of cleaning effectiveness
- % Pass/Fail for each test point allows identification of highest failing test points so you can focus your process improvement efforts

3M Tier 2B Plan Metrics – Monitoring High Risk Areas and Equipment

Follow the recommended metrics for the 3M Tier 2A Plan and apply to high risk areas (e.g. Contact Isolation Rooms)

Cleaning Effectiveness – Mobile Equipment
- % Pass/Fail for each piece of mobile equipment allows for tracking and trending of cleaning effectiveness

6. Establishment of corrective action procedures

A corrective action procedure is the process of intervention designed to address any any identified non-conformance. In the case of ATP monitoring, this is related to those actions taken in response to monitoring results (%Pass). The course of action will need to be determined at the unit level and will be related to the level of risk.

In cases where a re-clean and retest approach does not address the problem of continued high RLU values, the following steps in the cleaning process should be evaluated for proper adherence to established policies and procedures.

Training

- EVS staff are properly trained and are following established cleaning protocols

Proper use of cleaning chemicals

- Check that the following parameters are in line with manufacturers' recommendations for use:
  - Water Quality
  - Temperature
  - Use of appropriate chemistry for the situation being addressed, e.g. use of bleach to address *Clostridium difficile*
  - Proper Concentrations/Dilution Ratios are being used
  - Recommended Contact time/Dwell time is being observed
- Equipment is clean, e.g. buckets and sinks used to mix cleaning solutions are visibly clean
- Appropriate mechanical activity/friction is being applied
- Soil Load/Types of soils
  - Presence of textured surfaces might contain biofilm and require repeated cleaning with increased mechanical activity to reduce RLU levels
  - Heavy soil levels might require several cleaning passes before reaching acceptable RLU levels

7. Continuous improvement steps

Following initial implementation and corrective action procedures, ongoing review of data should take place to understand whether the process of routine monitoring and corrective action has led to reduced levels of organic contamination either at the test point or unit level.

The percentage of test points with an RLU value ≤ 250 RLU (%Pass) can be used to assess progress when implementing a continuous improvement plan. Successful implementation of improvement initiatives should result in an increase in the % of test points showing RLU values ≤ 250 (increase in %Pass). A reasonable goal would be to have 80% of test points showing ≤ 250 RLU.[10] For those high risk areas a higher %Pass (90-100%) should be considered.

Regular, consistent data review is critical to the success of any continuous improvement plan. Data should be reviewed, on an a routine basis, to detect changes in cleaning performance. 3M recommends that a data review take place every 300 samples. As you track performance, a decrease of 10% or greater should trigger an intervention. Daily review of cleaning performance data is also recommended for spotting those issues that are short-term in nature but also impact overall cleaning performance.

The 3M™ Clean-Trace™ Online Software reports have seven different formats to choose from so that continuous improvement results can be tracked and trended.

The continuous improvement process underpins the ATP hygiene monitoring system and allows the user to review and maintain improved standards of cleanliness in the clinical environment.

Appendix 1 – Test Point Selection and Recommended Sample Plans

Below are lists of example test points that may be considered when setting up a sample plan. The test points selected will ultimately be the choice of the user, and should reflect those areas that are considered as representative information on the efficiency of cleaning procedures carried out. Generally test points will be comprised of three different types:

1. **Direct or close points of patient contact –** those areas where there is a higher direct risk of cross contamination to patients and healthcare workers
2. **Equipment –** equipment that is commonly used and comes into direct contact with patients and staff. This may be equipment that is shared and moved around the hospital or equipment that is dedicated to specific patients
3. **General environmental test points –** general environmental test points that are not in close proximity to patients but will provide feedback on the general efficacy of cleaning and may present a risk of cross contamination

Test Point/High-Risk Area/Equipment Lists

These are not exhaustive lists, but serve as a starting point for developing sample plans.

Test Points: Direct or close points of patient contact

- ❑ Bed rails / controls*
- ❑ Call box / button*
- ❑ Tray table*
- ❑ Bedside table handle*
- ❑ Telephone*
- ❑ Patient T.V. remote
- ❑ Patient hoists
- ❑ IV pole (grab area)*
- ❑ Bedside chair*
- ❑ Bedside cabinet / locker
- ❑ 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*
- ❑ Toliet top surface
- ❑ Toliet underside surface
- ❑ Toilet bedpan cleaner*
- ❑ Mattresses

Test Points: Equipment

- ❑ IV pump control*
- ❑ IV Drip Stand shafts
- ❑ On-Off buttons Syringe drivers
- ❑ On-Off buttons Feed pumps
- ❑ On-Off buttons Infusions pumps
- ❑ On-Off buttons Suction pumps
- ❑ Multi-module monitor controls*
- ❑ Multi-module monitor touch screen*
- ❑ Multi-module monitor cabinets*
- ❑ PC keyboard
- ❑ Ventilator control panel*
- ❑ Ventilator mute buttons
- ❑ Blood pressure cuffs
- ❑ Pulse oxymeter
- ❑ Procedural equipment trays

Test Points: General Environmental

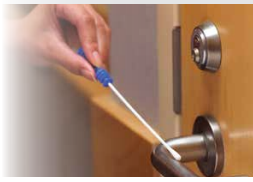
- ❑ Patient and Bathroom Door Knobs
- ❑ Bathroom floors
- ❑ Trash lids
- ❑ Drug fridge handles
- ❑ Floor areas near patient beds
- ❑ Floor areas under furniture
- ❑ Floor areas under patient bed
- ❑ Flush handle staff toilets
- ❑ Internal and external door handles to side wards
- ❑ Internal and external door handles to staff rooms
- ❑ Internal and external door plates to side wards
- ❑ Patient bed curtains – must be non-porous material
- ❑ Nurses station work surface
- ❑ Staff Tap handles wash basins
- ❑ Storage cupboards handles
- ❑ Kitchen refrigerator handle
- ❑ Kitchen work surface

High Risk Areas

- ❑ Intensive Care Units
- ❑ Transplant Units
- ❑ Contact Isolation Rooms
- ❑ Hemodialysis

Mobile Equipment

- ❑ Mobile IV Stands
- ❑ Mobile Blood Pressure Units
- ❑ Cardiac Arrest/Crash Carts
- ❑ Mobile Medical Imaging
- ❑ Drug Cart
- ❑ Warming Cabinets
- ❑ Anesthesia Cart
- ❑ Case Carts
- ❑ MRI Equipment
- ❑ Medication Carts
- ❑ Isolation Carts
- ❑ Medical Computer Carts



* test point recommendations from the CDC *Environmental Checklist for Monitoring Terminal Cleaning* a part of the CDC *Options for Evaluating Environmental Cleaning Toolkit*

3M Recommended Sample Plans

Tier 1 – Education and Competency

It is recommended that the Sample Plan for Tier 2A be used for assessment of training efficacy and competency testing.

Patient Room Sample Plan

1. Overbed Table
2. Patient Room Door Knob (interior)
3. Bathroom toilet flusher handle
4. Remote control/Nurse Call Button
5. Side Bed Rails

Tier 2A – Routine Monitoring of the Effectiveness of Terminal Cleaning

Patient Room Sample Plan

1. Overbed Table
2. Patient Room Door Knob (interior)
3. Bathroom toilet flusher handle
4. Remote control/Nurse Call Button
5. Side Bed Rails

Operating Room Sample Plan

1. Overhead Light
2. Main OR door push plate
3. Anesthesia cart – O2/Suction Knobs
4. Main OR light switch
5. OR Table Surface
6. Nurse computer
7. OR phone
8. Bed Control
9. IV stand – Control Panel
10. Storage cabinet handles/knobs

Tier 2B – High risk areas and equipment

Sample Plan

1. Overbed Table
2. Patient Room Door Knob (interior)
3. Bathroom toilet flusher handle
4. Remote control/Nurse Call Button
5. Side Bed Rails
6. Telephone
7. IV stand – Control Panel
8. Mobile Blood Pressure Cuff
9. Bathroom Grab Bars
10. Patient Toilet Seat

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