

Cleaning & Restoration™

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Keeping the Wind in Your Sails

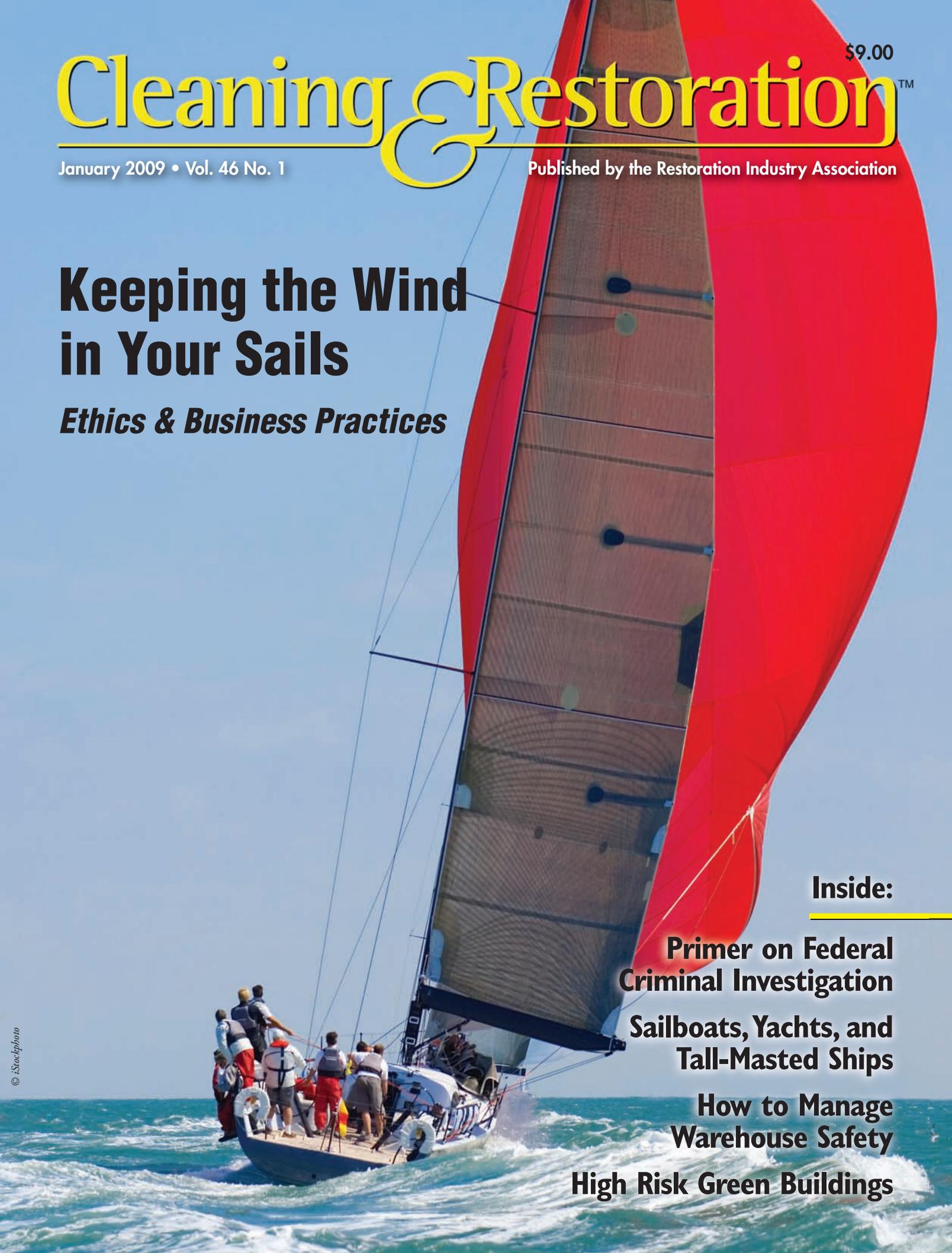
Ethics & Business Practices

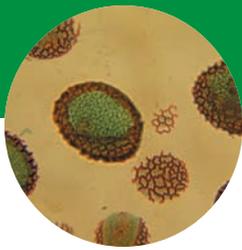
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By Michael A. Pinto, CSP, CMP

The Practical Implications of Cleaning for Health — Part 3

In the last two issues I presented some information regarding the concept of cleaning for health. This concept impacts all areas of our industry including cleaning, janitorial services, infection control, restoration and remediation. In some respects the broad implications of the idea of cleaning for health works against its adoption since it is difficult for individuals to focus on specific aspects that could have a positive impact on their businesses and clients.

This overarching connection that sometimes overwhelms the practical details was driven home as I watched a presentation at the recent RIA Fall Conference. During the remediation portion of the conference, Carl Grimes presented some fascinating information regarding the psychology of indoor air quality (IAQ) cases. He explained that disconnects often develop because cleaning and restoration contractors who are dealing with healthcare facility clients are not medical experts, and the medical experts are generally outside their area of expertise when they talk about building issues. Carl went on to offer some eye-opening statistics regarding the number of individuals in the U.S. with underlying medical issues who could be harmed by improper cleaning or restoration efforts. Conversely, the following populations could be assisted by industry practitioners who understand

concepts of cleaning for health and can apply them appropriately.

U.S. Risk Populations that Could Benefit from Cleaning for Health Practices

- Immune suppressed individuals – nine percent or 25,000,000 people (e.g., cancer patients, HIV infected individuals, transplant recipients, etc. with an estimated 50 percent living in their homes rather than in medical treatment facilities)
- Asthmatics – eight -15 percent of the population
- Individuals with substantial allergies – 12-30 percent of the population

In an effort to help turn some of this big picture information into practical implementations steps, I offer these suggestions gleaned from an entire career in the safety and health arena.

Building and Home Owners

1. Change furnace filters on a monthly basis. Move up to pleated filters instead of low resistance fiberglass filters.
2. Vacuum instead of sweep.
3. Use a HEPA-filtered vacuum.
4. Never mix chemicals in an effort to create a more effective cleaning product.
5. Do not use an air filtration or odor removal device that generates ozone.
6. Have carpets professionally extraction cleaned every year.

7. Have upholstered furniture professionally extraction cleaned every 5 years.



8. Use a trained and experienced mold remediation company for any problem where visible fungal growth is greater than 10 square feet. If there are at-risk occupants in the house (see list above) consider using a professional remediation contractor for any size mold problem.
9. Have your ducts professionally cleaned every decade — more frequently if the home experiences a fire or other form of contamination.
10. Consider the potential for water leaks when remodeling underground spaces such as basements. Use materials that do not support fungal growth, such as metal studs, fiberglass faced gypsum board, fiberglass ceiling tiles, and fungal inhibiting paint.
11. Treat every water intrusion incident with the same speed and seriousness as if it were a fire.

Cleaning and Custodial Companies

1. Clean the building as a whole, not as unrelated components. Cleaning and

- maintenance in one area of the building can impact other areas.
2. Adopt a system of cleaning based on type of hazard rather than specific area of a building. For example, cleaning tools such as mops should not be used in bathrooms and then in a kitchen.
 3. Take advantage of the universal color code that has been adopted for cleaning equipment and supplies to prevent cross contamination:
 - Red: high risk (toilets, bathroom floors, biohazard)
 - Yellow: specialty (labs, general restroom, locker rooms)
 - Green: kitchen and food service
 - Blue: general (halls, offices, guest rooms, classrooms)
 4. Switch to microfiber mops rather than string or sponge mops to save money and labor and reduce the amount of cleaning chemicals needed.
 5. Replace cleaning sponges with disposable or washable cloths.
 6. Change cleaning cloths and flat mops after each restroom cleaning.
 7. Learn about no-touch bathroom cleaning systems and encourage clients to design their facilities for such systems in new construction and remodeling. Spray cleaning foams and steam systems are the two most popular no-touch cleaning systems utilized for restrooms.
 8. Use HEPA-filtered or multi-filtered vacuums that capture particles down to one micron in size. Change filters and bags often and clean the inside and outside of the vacuum when servicing the filters.

9. Substitute microfiber wiping cloths for feather or lamb dusters.
10. If moving toward green all-purpose commercial cleaning products, select those certified by independent, third-party certifiers such as EcoLogo and Green Seal.
11. Provide detailed training and frequent re-training to all cleaning personnel along with adequate supervision. The best equipment, chemicals and systems are useless if applied incorrectly.
12. Follow label directions for chemical use. For biocides, the EPA information on the label supersedes the OSHA information on the MSDS.

Builders, Commercial Building Owners and Maintenance Managers

1. Call in professional restoration or remediation contractors for every flooding, sewage backflow, fire or mold project no matter how small. It is critical to correct such problems properly and quickly to minimize health threats to the occupants. Evaluate and engage a competent company with an emergency service agreement before an incident occurs to control costs and quality.
2. If there is an outbreak of infectious disease, rather than over-reacting with disinfectants throughout the structure, target specific high-risk touch points and focus on eliminating the spread of disease rather than trying to kill every micro-organism in the building.
3. When building or renovating, do not install paper-faced products — not even green board or other

products advertised as water-resistant in areas likely to have water exposure such as bathrooms and basement walls.

4. Remove and replace water-stained ceiling tiles immediately upon identification. Identify and correct the source of the water intrusion to prevent damage to other tiles and materials.
5. Utilize new building wraps (such as Dupont's Typar), which act as an air and moisture barrier and allow water vapor to migrate out of the wall cavity to the outside.
6. Match a moisture releasing wall and roof wrap with a ventilating self-draining rain screen (such as Home Slicker) installed under the exterior siding and roofing.
7. Insulate wall cavities and attics with products that are designed to reduce fungal growth.
8. Do not block air entry or exit paths in attics and ensure that there is enough ventilation to accommodate the size of the space.
9. Dry down and clean construction materials that get wet or moldy during the building process.
10. Install bathroom and kitchen fans that exhaust directly to the outside. Never vent them into an attic.
11. During initial construction or renovation, equip all public restrooms with no-touch equipment such as toilets, water faucets, soap and towel dispensers.
12. Clean humidifier elements, AC coils and condensate pans on an annual basis.
13. Focus on prevention as well as response. Limit the amount of

pollutants entering the building, particularly through entranceways, by the use of walk-off mats or sticky mats at construction entry points as well as proper filtration of outdoor air.

14. Treat all occupant complaints seriously, especially those related to indoor air quality.

Restoration and Remediation Contractors

1. Understand that there is a standard of care that guides your actions. Even with specific government regulations, the standard of care is not defined by a single document. You have a continuing duty to your clients to keep up with changes in the industry standard.
2. Isolate any visible fungal contamination during water loss or other restoration projects.
3. Do not utilize air moving equipment such as fans or dryers in areas where fungal contamination has been identified or is suspected.
4. Do not use bleach to address fungal or bacterial issues.
5. Set up isolation barriers and HEPA-filtered negative pressure engineering controls for any size fungal or bacterial contamination project in occupied areas of a building. Remember, you are a professional, not a do-it-yourself weekend warrior.
6. Always have a clear scope of work and an endpoint that all interested parties (*i.e.*, building owner, insurance company, consultant, etc.) agree upon before you start work.
7. Be informed before utilizing new products and technologies.

Manufacturers and sales representatives tend to emphasize the positives and hide the negatives. Make sure the item or process is acceptable under the existing standard of care.

8. Maintain remediation equipment in top-notch condition. How can you be trusted to clean someone's home or building if you cannot keep your own equipment clean?
9. Clean surfaces using the "HEPA sandwich" approach. (HEPA vacuum, wet clean or damp wipe, finish with a second HEPA vacuuming after the surface is dry.)

Indoor Environmental Consultants and IAQ Investigators

1. Look at the big picture and consider the concept of synergy (*i.e.*, how a number of little actions or conditions can add up to bigger than anticipated problems) during every investigation.
2. Focus on protecting the health of individuals. Remember that people are more important than property and profits.
3. Do not collect a sample until you have a specific question that the sample results can answer and comparison criteria that you can use to evaluate the results.
4. Begin all complaint investigations with the assumption that the impacted individual(s) are correct; even if you cannot smell the odor or sense the problem that the occupant explains.
5. Look for the cause of the problem, don't simply address the symptoms. For example, all fungal contamination problems have a moisture source that

must be identified and corrected in order to prevent recurrence.

6. Document your findings properly and explain your conclusions using evidence from collected data and reference materials in a logical chain so that the lay person can see the connections.

Medical Practitioners

1. Consider the environment of care both at the treatment center and the patient's residence and workplace. Encourage at-risk patients to have their homes evaluated for environmental hazards before they are released back into that environment for recuperation.
2. Conduct regular testing (annually and after any water intrusion or construction activities) to verify that the medical facilities have a *normal* fungal and bacterial ecology. Use testing to ensure that actual treatment areas have a *cleaner than normal* fungal and bacterial ecology.
3. Have the medical facility duct system cleaned on a regular basis by trained and experienced professionals who follow NADCA guidelines and understand the intricacies of commercial HVAC systems. Duct systems in treatment areas should be cleaned every one to two years, while systems in patient care areas every five years and general areas every decade.
4. Pay special attention to the selection/use/rotation of chemicals for sanitization and infection control.
5. Install finish surfaces and equipment during remodeling projects with built-in anti-microbial properties

such as copper impregnated metal rather than stainless steel and pour-in-place counter surfaces that incorporate nano-particles.

6. Consider purchasing water resistant electronics for shared equipment (*i.e.*, keyboards, mice, etc.) so that they can be properly disinfected on a daily basis.
7. Screen all patients for methicillin-resistant *Staphylococcus aureus* (MRSA) upon initial treatment or admittance. Segregate patients with positive MRSA tests from other patients to minimize the spread of antibiotic-resistant infections.
8. Encourage frequent hand washing through staff training and the provision of cleaning/sanitizing supplies. ■

Michael A. Pinto, CSP, CMP, currently serves as chief executive officer of Wonder Makers Environmental, Inc. Pinto has authored three books including Fungal Contamination: A Comprehensive Guide for Remediation, over 120 technical articles, as well as 18 commercial training programs. He can be reached at map@wondermakers.com.

Author's Note:

Although these are called my ideas, they have been extracted from countless books, technical articles, presentations, classes, discussions, and project experiences. I owe a tremendous debt of gratitude to all the professionals who have shared their ideas with me and hope that these suggestions generate even more ideas. Feel free to contact me through Cleaning & Restoration magazine or directly at Wonder Makers (map@wondermakers.com or 269-382-4154) if you have any other suggestions or comments. I will act as a conduit for the best ideas and update the list in a future issue. Together we can help move Cleaning for Health from concept to everyday reality.