

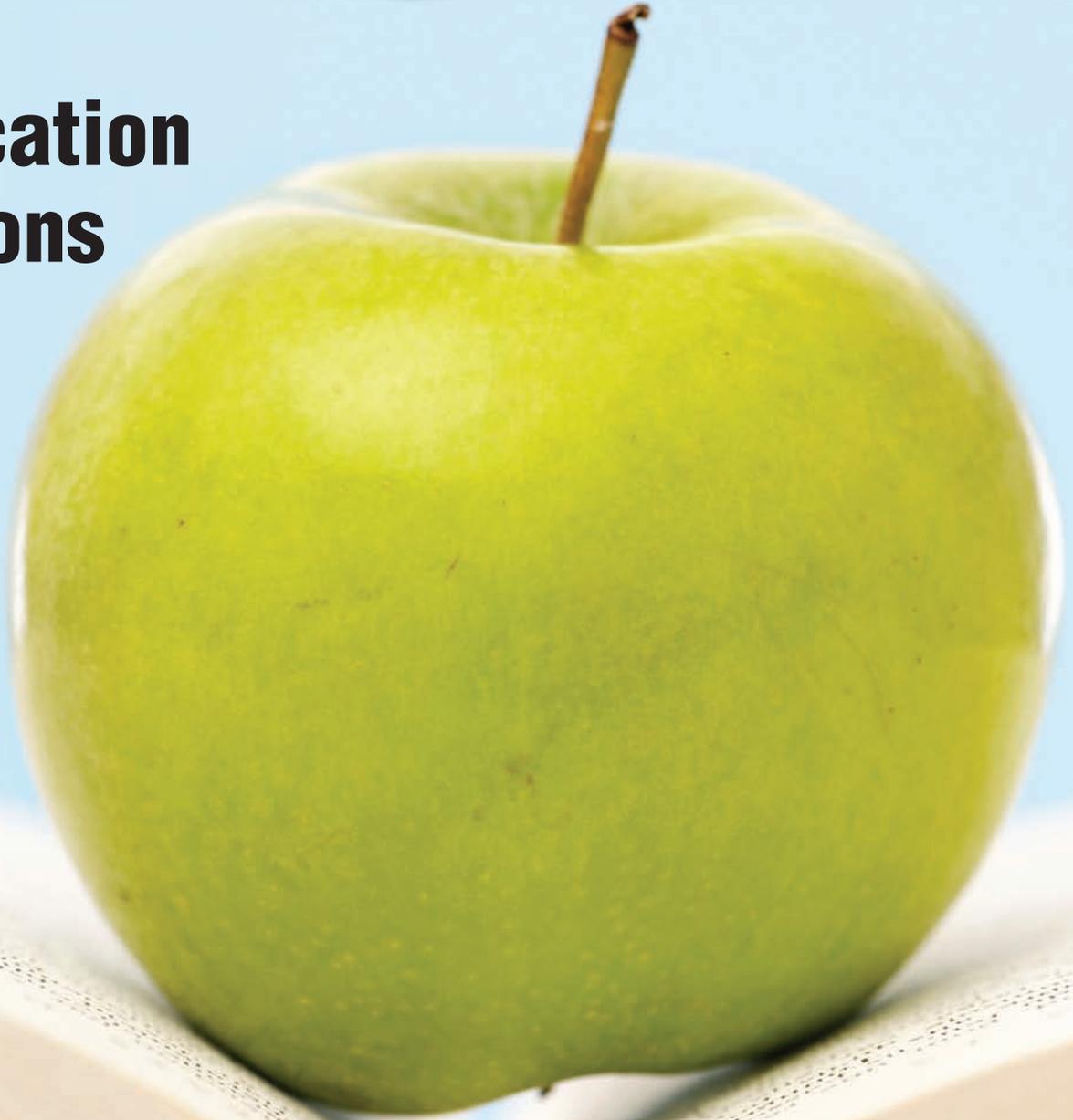
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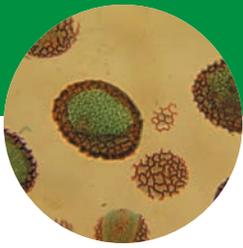


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Inside Palm Springs

eLearning Options

**Hidden Risks
of Green Buildings**



By Michael A. Pinto, CSP, CMP

Cleaning for Health — Part 2: Societal Pressures Accelerate the Demand for Cleaning

Last month I introduced the concept of cleaning for health by providing an historical description of the main elements of this emerging trend. However, the practical difficulty for contractors trying to survive in a competitive world is how to best determine which trends will be long lived and have a major impact on operations. Proper prognostication of such trends allows professionals to be aware early enough to shape its development in a positive fashion, and to focus time and educational efforts to remain industry leaders.

So how do we evaluate trends in the industry to determine which ones are truly important? Perhaps the best approach is to evaluate such opportunities in the light of broad societal patterns. An evaluation that shows that a particular movement in the cleaning and restoration industry is an outgrowth of a number of changing aspects of the culture has a good likelihood of developing into a sustaining trend. Let's consider the concept of cleaning for health in the light of 11 major forces present today.

1. Information Age

There is no longer any doubt that we are in the midst of an historical revolution with regard to the availability and sharing of information. Data on the most arcane of subjects can be accessed in moments. Dissemination is no longer controlled by

an educated upper class or filtered by traditional media entities such as newspaper writers or television reporters. Although access to information in the industrial world is now unparalleled, people still have to be motivated to find and use the available information.

This information age will have a growing impact on the trend of cleaning for health. Individuals are motivated to seek answers when their personal health or comfort is jeopardized. With the wide array of positive influences that cleaning for health can have, from the selection of greener cleaning methods for those who are chemically sensitized to dust mitigation techniques for the severely allergic, being able to get answers to real problems will fuel efforts at greater cleaning efficiencies.

2. Scientific Research

Hand in hand with information is the production of additional data through research. Nor is research strictly confined to professional scientists. Investigation of methods to improve the effectiveness and efficiency of cleaning procedures is being undertaken by a host of industry organizations and individual contractors.

Groups such as the Science Advisory Council of the Cleaning Industry Research Institute (SAC/CIRI) are serving a dual purpose by conducting original research and acting as a forum to integrate a myriad of small case studies into an understandable whole.

Time and time again this research has demonstrated the value of implementing procedures associated with cleaning for health. One

study completed in 2002 that was published in the *Journal of Infection Control* registered startling improvements at one New York City daycare center. The primary changes involved the use of HEPA vacuums and damp microfiber cloths in place of sweeping and dry dusting. It also included twice yearly carpet and furniture extraction cleaning. That study documented:

- Number of illnesses reduced 24 percent
- Antibiotic usage decreased 24 percent
- Doctor visits down by 34 percent
- Absenteeism reduced 46 percent

3. Public Awareness

The idea of cleaning for health has started to move beyond the medical community to the public at large. For years, allergists have been advising their patients about utilizing different house-keeping techniques to reduce the number of allergens in their homes. This concept of doctors advocating specific cleaning techniques has now migrated to other



medical specialties. In particular, oncologists (cancer specialists) have begun to encourage patients to improve their home environment with specialized cleaning in order to improve the outcome of chemotherapy and other cancer treatments that impact the immune system.

Public awareness of proper cleaning for health considerations is also magnified every time an outbreak of infectious disease such as influenza (norovirus) or antibiotic-resistant bacteria makes the news.

4. Aging of Overall Population

The graying of America is a demographic consideration that bodes well for the development of cleaning for health as a long-term trend. With the baby boomers moving into retirement, a large bubble of the population is reaching the age where health concerns become more prominent. This segment of the population is also well educated and generally has enough disposable income to implement the simple changes that are often prescribed as part of a cleaning for health regimen, such as purchasing HEPA filtered vacuums, using antimicrobials, and hiring professionals to regularly clean carpet and upholstery.

5. Health Consciousness

It is not just the aging portion of the population who are health conscious. The continuing battle to control healthcare costs while providing ever more effective medical services is leading to continued

interest in prevention as a key component of health care. Cleaning for health is right in the middle of this movement,

particularly as more research confirms the synergism between various contaminants.

For example, researchers were hard pressed for many years to explain the connection reported by many occupants between mold-contaminated environments and a bewildering array of health symptoms like excessive fatigue,

memory loss, and increased tumor production. The allergens or mycotoxins associated with inhalation of spores from such environments just did not appear to be great enough to explain the symptoms that were documented both anecdotally and within a number of well-controlled studies of damp environments. Recent scientific findings now link many of these symptoms to exposure to a combination of mold and bacteria. Of course, proper cleaning techniques are often effective at controlling both of these microscopic contaminants.

6. Environmental Consciousness

Whether it ultimately proves to be caused by humans or a natural cycle, discussions about global warming have raised environmental consciousness to new heights in the western world. These regularly discussed concerns about our environment have a trickle down effect on many of the components of cleaning for health. In particular, the industry's moving toward green chemicals (*i.e.*, products that reduce non-renewable

components while improving safety for both user and occupant) is a benefit of the push towards enhanced environmental stewardship.

7. Gen-X and Next Gen Employees

Quite a bit has been written about the different approach to work that Next Gen and Gen-X employees exhibit. Although we must be careful not to stereotype entire generations of workers, certain overall realities are becoming evident. For many employees who were raised in an era of accelerated change, the prospect of alterations in major life circumstances, including change of employment, is not the same frightening prospect that it was for past generations. While some employers may mistakenly see them as employees who have less loyalty to their workplace, the reality is that the employees are loyal to organizations who meet their needs, and they are willing to change in order to find such an organization. Increasingly, one of the needs of Gen-X and Next Gen workers is a safe and healthful workplace. Many younger employees are unwilling to sacrifice their health and comfort for a job. As such, cleaning for health in the workplace will gain additional momentum along with ancillary services such as indoor air quality investigations and mold remediation.

8. Potential Liability

Building owners who fail to keep up with the trends in regards to enhanced cleaning are at risk beyond just losing good employees. Building problems that have resulted in verifiable cases of building related illness (BRI) or less specific sick building syndrome (SBS) carry with them the potential for legal

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liability. America is the world's leader in class action lawsuits and building owners who fail to appreciate the collective power of a group of injured or ill occupants put both their reputations and their fortunes at risk. A property that earns a reputation as an unhealthful location can lead to reduced profit for years, if not decades.

9. Economy and Slow Home Sales

Turmoil in the financial marketplace based on the collapse of the housing market may signal a retrenchment of real estate prices for a number of years. Such a market can be an advantage for individuals offering cleaning for health services since homeowners who are not able to upgrade by selling and moving may instead choose to improve their existing housing stock through remodeling and cleaning. The difficult real estate market is also a boon for cleaning service providers as a buyers market makes it more important for sellers to present their properties in the best possible light. Residences that are supported by documentation that they have been inspected for environmental problems and cleaned for maximum occupant health are in a better position to sell.

10. Energy Efficiency

Although prices have moderated somewhat, the spike in energy costs during the first part of 2008 reminded everyone of the importance of energy efficiency. But the push for such efficiency has its drawbacks, particularly in the building industry. Generally, structures are built to last between 40 to 100 years. The introduction of new building materials, both structural and finish, that appear to have major benefits when installed may cause unintended consequences over time.

One of the best examples of this is the use of Engineered Insulation Finish Systems (EIFS) in residential construction. This combination of Styrofoam insulation and stucco-style coating was originally designed for installation on the outside of masonry structures. When it became popular for residential construction it was applied to an exterior sheathing of plywood or OSB. Unfortunately, these sheathing materials were not resistant to the moisture that inevitably emerged through the stucco coating. Many homes constructed without an appropriate drainage plane behind the insulation are now rotting from the inside out. Another unexpected and serious consequence of installing EIFS on residential structures is that some insurance companies may not provide fire insurance coverage due to the lack of adequate fire-resistance inherent in the materials.

Of course, there is a health component to such situations as well. Trapped water on cellulose building materials will create mold. Even if the mold is inside the wall system some of the spores and odors will migrate to the inside of the building. While the primary fix for such a problem is removal and replacement of damaged materials in a fashion that prevents additional water intrusion, interior cleaning and air scrubbing can often buy needed time for the occupants so that they can deal with the problem in a more reasonable fashion.

11. Introduction of New Building Materials

Energy efficiency pressures, as well as a growing competition for wood if technological improvements show that cellulose materials can be a useful base

for alternative fuels, will likely accelerate the introduction of new building materials into both commercial and residential structures. While progress in the area of new building materials is good, it can take several years (sometimes even decades) to determine how well these products perform in real conditions compared to laboratory simulations. It is also clear that even the best building materials must be installed properly to function at their maximum potential. This is especially problematic when materials with different expansion and contraction properties are butted together and must be sealed or flashed appropriately to keep water out.

If past history is any guide, such construction details for new products are often misunderstood. This means that the potential for long-term leakage into buildings will likely continue with the attendant health problems that have been documented by the Institute for Occupational Medicine (IOM) and other international groups.

Cleaning for Health — An Industry Trend for the Future

These societal changes, and many more that we do not have space to detail, all point towards cleaning for health growing in importance over the next two decades. Although there will certainly be times of faster growth and times of more modest advance, the trend line for contractors that master and promote such skills will be moving upward for a long time to come. ■

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.