

# The Brave New World of EVS

## By George Clarke, CEO, UMF Corporation

When a Cincinnati hospital hit a *Clostridium difficile* (*C. difficile*) rate of 25.27 per 10,000 patients several years ago, hospital officials swung into action with a number of changes that eventually cut the rate of infection in half over six months.

The changes included standardizing care, adopting stricter antibiotic controls and incorporating new environmental hygiene, or room-cleaning, protocols.

“But in all honesty, the changes made to our environmental cleaning practices had the most significant impact of all the changes we made,” said Jenny Martin, manager of quality administration at Jewish Hospital-Mercy Health, in a published report.<sup>1</sup>

Newer research published just this month finds that a dedicated daily cleaning crew that adequately cleans and disinfects rooms contaminated by *C. difficile* using a standardized process can be more effective than other disinfection interventions.<sup>2</sup>

For those who, wisely, are rethinking environmental hygiene’s role in preventing *C. difficile* and other healthcare-associated infections (HAIs), know this: When it comes to patient safety, the trained Environmental Services (EVS) Hygiene Specialist® can make a world of difference.

And what a world it is.

### New World, Newer Challenges

It has been more than 10 years since R. Monina Klevens, DDS, MPH, et al., published a paper titled “*Estimating Health Care-Associated Infections and Deaths in U.S. Hospitals, 2002.*”<sup>3</sup> The purpose of that study was to *estimate* the number of HAIs and associated deaths in U.S. hospitals. Prior to this report, there existed no single source of nationally represented data on HAIs.

This outdated, decade-old research has become the go-to document of leading researchers, government agencies and microbiologists when talking about the severity of HAIs. Certainly, we continue to confront the old but still prevalent issues such as *C. difficile*. In fact, it was just last year that the Centers for Disease Control and Prevention advised that *C. difficile*-related deaths (14,000 a year) have reached “historically high levels,” and that it extends patient stays by approximately six days.<sup>4</sup>

Today we live in a world that also hosts numerous multidrug resistant organisms (MRDOs) that are well established and many more that are emerging. These new challenges were never imagined, nor could they be accounted for, in the Klevens research of 10 years ago:

- At this very moment, researchers are searching feverishly for new prevention

---

<sup>1</sup> [“How to Prevent C. Diff: Rethinking cleaning’s role in preventing C. diff and other hospital acquired infections,”](#) Healthcare Facilities Today, March 27, 2013

<sup>2</sup> [“Dedicated Cleaning Staff Shown to Reduce C. difficile Contamination in Hospital Rooms,”](#) Infection Control and Hospital Epidemiology

<sup>3</sup> [“Estimating health care-associated infections and deaths in U.S. hospitals, 2002,”](#) U.S National Library of Medicine National Institutes

<sup>4</sup> [“Stopping C. difficile infections,”](#) CDC VitalSigns™, March 2012

and treatment strategies for infections caused by the quickly emerging, multidrug resistant *Acinetobacter baumannii*<sup>5</sup>

- Between 2003 and 2008, infections caused by Methicillin-resistant *Staphylococcus Aureus* (MRSA) doubled at American teaching hospitals<sup>6</sup>
- Last year, it was discovered that people living near large concentrations of farm animals are at increased risk for carrying livestock-associated MRSA, even if they have had no direct contact with animals<sup>7</sup>
- Community-associated strains of MRSA are now finding their way into nursing homes<sup>8</sup>
- A new strain of norovirus is spreading rapidly in the United States, causing an increasing number of outbreaks – the CDC says norovirus now causes 21 million illnesses a year, with 70,000 cases requiring hospitalization and approximately 800 ending in death<sup>9</sup>
- A report published in March found that the proportion of *Klebsiella pneumoniae* (KPC) cases resistant to carbapenems increased from 0.1% in 2001 to 4.5% in 2010<sup>10</sup>.

To put this all into perspective, the death toll in the United States, as reported by the CDC, resulting from the 2009 H1N1 pandemic, totaled 12,000. This is but a fraction of the deaths caused by HAIs every year – especially when you combine the low estimates of Klevens and the new emerging superbugs.

And to compound all of this, it was also in March that the CDC sounded the alarm on the spread of the deadly, untreatable carbapenem-resistant Enterobacteriaceae (CRE) like KPC, prompting one infectious disease physician to call the superbug, “the biggest threat to patient safety in the hospital that we have.”<sup>11</sup> This same physician commented that it doesn’t seem like anything is slowing the spread of CRE.

But others, in response, rounded up the usual solutions: hand hygiene and antibiotic stewardship.

### **Overcoming the Single-Initiative Mindset**

“We must act now in this small window of opportunity to fight the rise of antibiotic-resistant superbugs through antibiotic stewardship and hand hygiene,” posted one observer, on LinkedIn and Facebook<sup>12</sup>, in response to the CDC’s call to action over the spread of CRE.

To which another follower objected, “Continued references to ‘hand hygiene’ as the front line of safety in the battle against HAIs is like expecting ‘Duck and Cover’ to save

---

<sup>5</sup> [“Emerging therapies for multidrug resistant \*Acinetobacter baumannii\*.”](#) Trends in Microbiology, March 2013

<sup>6</sup> [“MRSA Cases in Academic Hospitals Double in 5 Years: Study.”](#) University of Chicago Press, July 2012

<sup>7</sup> [“Livestock Density as Risk Factor for Livestock-associated Methicillin-Resistant \*Staphylococcus aureus\*.”](#) Emerging Infectious Diseases, CDC, November 2012

<sup>8</sup> [“High Prevalence of Drug-Resistant MRSA Found in Nursing Homes.”](#) The Society for Healthcare Epidemiology of America, February 2013

<sup>9</sup> [“New Strain of Norovirus.”](#) CDC, January 2013

<sup>10</sup> [“Hospitals Battle Surge in Superbugs.”](#) Infectious Disease Special Edition, April 2013

<sup>11</sup> [“CDC sounds alarm on deadly, untreatable superbugs.”](#) USA Today, March 2013

<sup>12</sup> SHEA on Facebook (March 7), LinkedIn (March 8)

you from a nuclear attack<sup>13</sup>.”

While it’s true, there have been some notable hand-hygiene programs of late showing dramatically improved compliance rates<sup>14</sup>, there have been as many reports to the contrary, especially when it comes to doctors not washing their hands after patient contact<sup>15</sup>. The fact is it’s simply unrealistic to view hand hygiene programs (see photo at end of story) as the best solution to reducing the number of HAIs, regardless of the pathogen.

Furthermore, the superbugs we’re battling today are the deadly consequence of a *lack* of antibiotic stewardship over the past 20 years.<sup>16</sup> What is the point of emphasizing antibiotic stewardship in the fight against CRE – *an organism that is essentially resistant to all available antibiotics?*

This is not to discount hand hygiene and antibiotic stewardship outright. But as single-initiative programs, they will never achieve the results caregivers, hospitalists, infection preventionists and patients hope for.

The only program that has any chance of success in confronting the old but still prevalent issues, such as *C. difficile* and MRSA, and the new quickly spreading HAI challenges such as CRE, is an enterprise-wide multimodal intervention program – a program that is supported and heralded from the hospital C-suite down to the basement, including effective environmental hygiene.

A multimodal approach for reducing and/or preventing HAIs must include: a dedicated infection prevention team; risk assessment; active surveillance; isolation precautions; adequate personal protective equipment; environmental hygiene best practices supported by best-in-class products, education, and training, combined with antibiotic stewardship and an effective hand-hygiene program.

And it is within this multimodal scenario that it should become clear to even the casual observer that the members of every EVS staff compose the true *first line of defense* in providing a safe patient environment and reducing HAIs.

### **“Excuse Me, Has This Room Been Properly Processed?”**

A study published at the end of last year noted that patients at-risk for HAIs often shy away from asking healthcare workers, “Have you washed your hands?”<sup>17</sup>

The lead author of the study said more should be done to empower patients to feel comfortable asking this important question. “This should be a focus of hand-hygiene interventions,” he said.

Arguably, the more critical question is whether patients have a good understanding of the importance of environmental hygiene – that environmental hygiene should be the prerequisite to hand hygiene, that a color-coded wiper is an infection prevention tool.

Proper hand-washing and medical checklists have little effect if patients are cared for and operated on in environments contaminated with infectious disease agents.

This is where environmental hygiene – or processing, comes into play.

---

<sup>13</sup> Jerret Condon, Managing Partner, IC Solutions LLC, on LinkedIn (March 14)

<sup>14</sup> [“20 Ohio Hospitals’ Hand Hygiene Compliance Rate Nearly Tripled.”](#) Becker’s Clinical Quality & Infection Control,” January 2013

<sup>15</sup> [“Hand Washing Not a Priority for Docs.”](#) Spotlight on Prevention, November 2009

<sup>16</sup> [“Study shows overuse of antibiotics.”](#) USA Today, April 10, 2013

<sup>17</sup> [“Patients Shy Away from Asking Healthcare Workers to Wash Hands.”](#) SHEA, November 2012

Traditionally, this has been healthcare's lowest-tech activity, carried out by staff seen as those guys in the basement, at the bottom step of hospital hierarchy.

Fortunately, this perception is changing, though it needs to change faster to keep up with the pace of the spread of infectious diseases.

Today, in the best healthcare settings, C-suites are beginning to realize the contribution EVS can make not only in the lives of patients, but also in a hospital's reputation and its financial health.

It is within these settings that the EVS staff member, from a C-suite and clinical perspective, has been recognized as that first line of defense in combating HAIs. He or she has participated in a program comprised of training components that include learning best practices for effective infection prevention, in-service education and effective hygiene management in patient rooms and all other areas of the hospital. These programs reinforce the significance of combining environmental and hand-hygiene initiatives. They also underscore why infection prevention needs to be an organizational priority.

It is because of programs like these that more hospitals are beginning to see decreases in infection rates similar to – and even more dramatic than – that of Jewish Hospital-Mercy Health. And, because of the programs, these same hospitals are also seeing significant improvement in their national percentile ranking for patient satisfaction (HCAHPS) scores.

Indeed, in those hospitals where EVS is being given a larger role in preventing infections, it is a brave new world – one that is providing a safe patient environment.



Hospitals are now adding labels to alcohol-based sanitizer dispensers advising hospitalists that the product is not effective against *C. diff* (ironically, it's also not effective against Norovirus).