Infection Preventionists:
Healthcare's Guardians at the Gate Need Help

Hospitals are supposed to keep patients safe. Yet despite all the advances of modern medicine, many are having a hard time protecting patients from a deadly risk that's becoming more dangerous every year — healthcare-associated infections (HAIs). According to a CDC survey, about **1 in 25** hospital patients has at least one HAI and about **75,000** hospital patients with HAIs die each year during their hospitalizations.[1] That's more than twice as many people who die each year in automobile accidents.

HAIs, also known as nosocomial infections, are a serious threat not only to patients but also to healthcare providers' reputations and finances. The average cost of treating an HAI patient is $15,000,[2] and these infections can contribute to other complications, increase readmissions and put hospitals at greater risk for multimillion-dollar malpractice awards. The total HAI costs incurred by the U.S. healthcare system exceed $30 billion annually.[3]

What makes the current situation especially dire is that infections are becoming much more prevalent and deadly to older and sicker hospital patients with vulnerable and weakened immune systems. The CDC also reports that 2 million Americans are infected each year with antibiotic-resistant microorganisms, which world health leaders have described as "nightmare bacteria" that "pose a catastrophic threat" to people in every country in the world.[4]

The Centers for Medicare and Medicaid Services (CMS) is moving swiftly to address what the CDC has called a "public health crisis" by encouraging hospitals to improve their infection control and prevention practices through penalties and incentives. Its actions have included:

- Lowering its 2016 payments by 1 percent for 758 hospitals with high rates of potentially avoidable infections and complications as part of its Hospital-Acquired Conditions Reduction Program.[5]

- Adding two infection measures – SSI (Surgical Site Infection, Colon Surgery & Abdominal Hysterectomy) and CAUTI (Catheter-Associated Urinary Tract Infection) – to its Hospital Value-Based Purchasing (VBP) Program, which enables hospitals to earn payment incentives based on their performance.[6]

- Penalizing hospitals (starting in 2017) for patients who contract MRSA (methicillin-resistant staphylococcus aureus) infections during their stay – a move that could cost many institutions millions of dollars in Medicare revenue. MRSA costs about $10 billion a year to treat in the U.S., averaging about $60,000 per patient.[7]

Yet despite all the attention given recently to "nightmare bacteria" and rising costs and mortality rates, hospitals have been slow to respond. According to a 2015 Consumer Reports investigation into HAIs, **only 6 percent of 3,000 hospitals examined scored well for controlling two of the most serious and prevalent infection-causing bacteria** — C. diff (clostridium difficile) and MRSA (methicillin-resistant staphylococcus aureus).[8] Further

exacerbating the problem is a high demand for infection preventionists.

This white paper examines a key player at the front lines of hospitals' never-ending battles against HAIs –Infection Preventionists (IPs). It briefly explains their varied roles, responsibilities and new challenges, the difficulty in recruiting these highly sought-after experts, and why and how hospitals should be doing more to help overworked and understaffed IPs be successful. Lastly, it covers new technologies and IP support services that can be integrated into hospitals' infection control practices.

Who are Infection Preventionists?

A typical IP is an experienced licensed registered nurse with a long history of working in hospitals and a passion for infection prevention. About 20% of IPs have doctorates in epidemiology, and 50% hold a Certification in Infection Prevention or Control (CIC) from the Association for Professionals in Infection Control and Epidemiology (APIC). About 75% of IPs who do not yet have a CIC plan on becoming certified.
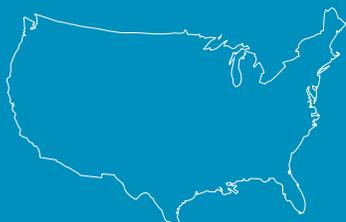
Every year, an estimated **722,000** people in the U.S. **develop infections** during a hospital stay.

More than 15,000 IPs are members of APIC, and most are affiliated with acute care health facilities. An increasing number practice in ambulatory and outpatient services where they direct programs that protect patients and personnel from HAIs.[9]

Too Many Hats ...

Broadly speaking, the primary role of IPs is to **prevent**, **investigate** and **manage** the spread of infections within healthcare settings. Although each facility will have its own policies and procedures regarding what's expected of IPs, their duties typically include:

- **Surveillance and Intervention:** IPs collect, analyze and investigate health data in order to track infection trends, plan and implement appropriate interventions, measure success, and develop and submit reports to public health agencies.

- **Patient Assessment:** IPs monitor and report signs, symptoms, and changes in condition and initiate isolation precautions as indicated.

- **Prevention Practices:** IPs teach and promote scientifically-based infection prevention practices and collaborate with other healthcare personnel to ensure compliance. These practices include:

  — Isolating sources of infections and limiting their transmission.

  — Monitoring staff compliance with basic infection control practices such as hand washing and the use of personal protective equipment such as gloves and gowns.

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— Monitoring, reviewing and reporting antibiotic usage and relevant information regarding antibiotic resistant microorganisms.

- **Education and Training:** IPs constantly educate the staff, patients, families and the public on limiting the spread of infectious diseases and train healthcare personnel on best practices in infection control.

- **Policies and Procedures:** IPs must revise and update these to maintain compliance with current recommendations from the CDC (NHSN), OSHA, The Joint Commission and other federal, state, and local health agencies.

In addition, many IPs have other responsibilities, including employee and environmental health, emergency preparedness, quality control, oversight of the sterile processing department and reporting of communicable diseases.

... Not Enough Support

About 40 years ago, the CDC conducted its Study on the Efficacy of Nosocomial Infection Control project (SENIC), which surveyed 338 U.S. hospitals to examine the effectiveness of their nosocomial infection surveillance and control programs. SENIC found that hospitals reduced their nosocomial infection rates by approximately 32% if their infection surveillance and control program included four components.

- Appropriate emphasis on surveillance activities and vigorouscontrol efforts

- At least one full-time infection-control practitioner per 250 beds

- A trained hospital epidemiologist

- Feedback of surgical wound infection (SWI) rates to practicing surgeons[10]

Two decades later, APIC and the Society for Healthcare Epidemiology of America (SHEA) updated and expanded recommendations for effective infection prevention and control programs that emphasized the importance of:

- Managing critical data and information

- Developing and recommending policies and procedures

- Intervening directly to prevent infections

The Cost of Infection

Total Annual Costs of HAIs in America: **$30 billion**

Cost per infection:
(most common infections)

Catheter Associated Urinary Tract Infections (CAUTI)
$896

C. difficle
$11,285

Surgical Site Infection (SSI)
$20,785

Ventilator-Associated Pneumonia (VAP)
$40,244

Central-Line Associated Bloodstream Infection (CLABSI)
$45,814

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- Educating and training healthcare workers, patients, and non-medical caregivers

- Having sufficient resources[11]

As their responsibilities expand into new areas, IPs also must make certain their facilities are prepared to identify and respond to scary, headline-making new viruses such as Ebola and Zika. But while the IP profession continues to evolve amidst the emergence of ever-more lethal and resistant infections, many hospitals have not kept pace with the need for appropriate staffing and resources. Remember, four decades ago, when an IP's life was much simpler,
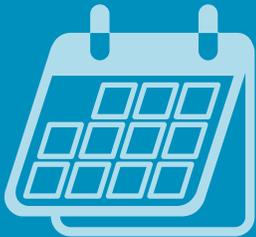
> "According to the CDC, preventing infections and improving antibiotic prescribing could save 37,000 lives from drug-resistant infections over 5 years."[15]

APIC recommended one full-time IP for every 250 beds. Yet in today's much more complicated health care settings, a survey by the Certification Board of Infection Control and Epidemiology found that more than half of acute care facilities only have one (or fewer) full-time equivalent IPs.[12] Simply put, most IPs do not have enough hours in the day to keep up with their workload. Moreover, the additional responsibilities take them away from what they were trained to do and further from working at the top of their license.

Technology Solutions Ease the Burden

An IP spends more than five hours a day collecting, mining and reporting infection data. In fact, as a result of an exponentially increasing demand for publicly reported infection data and reimbursement policies that penalize or incentivize payments based on these rates, many healthcare executives are forcing IPs to focus on data management. The latest APIC IP Core Competency Model reflects this shift by designating technical proficiency as one of its four key domains for professional development.[13]

To maximize efficiencies and provide real-time data to help IPs detect and control infectious diseases, APIC has encouraged healthcare facilities to invest in infection tracking and monitoring technology.[14] Various infection surveillance software and other automated electronic tools are now available to assist IPs in:

- Identifying and validating potential HAIs in real time

- Expediting analysis of large numbers of medical records to identify infection clusters and outbreaks of high-risk pathogens

- Spotting trends that indicate the need to improve infection control practices

- Eliminating errors associated with manual infection surveillance

Infection surveillance software and applications improve data accuracy and reliability. Many also integrate data from multiple source systems to further simplify and expedite reporting, one of an IP's most time-consuming responsibilities. Most importantly, these technology tools, which can include customized alerts, can speed up interventions to keep patients safer and prevent the spread of infections.

IPs in the Cloud: A Solution to the Shortage of Qualified IPs

Although technology can help IPs in many ways, it's only a tool, not a solution. The most effective infection control programs function like a well-oiled team with the IP quarterbacking a strong and vigilant ground game on hospital floors. According to APIC, healthcare workers should be trained on safety protocols and essential infection control practices to ensure that infection control guidelines are followed precisely 100 percent of the time.[16]

Too often, however, hospitals fall short in their day-to-day infection practices. For example, a recent study found that fewer than one in five ambulatory care nurses reported compliance in all nine standard precautions for infection prevention.[17] A primary cause of such problems is the fact that, even with better technology, IPs don't have the time or personnel resources to handle all their expanded responsibilities. When this happens, the floor "ground game" suffers and patients are put at greater risk for infections.

> "As a result of exponentially increasing mandates for public reporting of infections, IPs in many facilities are primarily data managers."[19]

Though CNOs and other hospital executives recognize the increasing importance of improving infection control, many face budget constraints and are reluctant to add FTEs to their IP staffs, or even worse – they're unable to find qualified candidates. So what's the solution? How can hospitals give their IPs the time and support to do what they do best – work with healthcare providers and patients to prevent and manage infections on the hospital floor? For many, the answer is using trained remote employees coupled with a technology solution.

For example, the Q-Centrix suite of infection control services features IP specialists who function as an extension of hospitals' staffs. On average, they have more than 10 years' experience in infection control and 75% are certified by APIC. Using data supplied by hospitals and/or their technology partners, these IP professionals review and analyze positive cultures for evidence of HAIs. Results are formatted and reported based on the hospital's specific requirements, including submission to NHSN.

One study found that IPs spent more than 5 hours each day collecting and reporting hospital infection data to federal health agencies.[18] Relying on a remote, experienced extension of the hospital's in-house infection

**Do You Want to Give Your IPs More Time
to Do What's Best for Your Patients and Hospital?
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prevention team to handle these responsibilities gives them the freedom to be more effective change agents, working at the top of their licenses, instilling better infection prevention and control practices throughout the hospital.

Everyone is aware of some of the key things hospitals must do to prevent infections: Follow infection control protocol, reduce overuse of antibiotics, accurately monitor and report infections. As the industry leader in quality data abstraction and clinical surveillance services, Q-Centrix provides infection control protocols that will help your IP team do more with less.

Our superb team of IP specialists can free up your IP team to spend more time on the floor preventing infections. Our flexible and dependable services complement your other IP technology solutions and come with no long-term obligations. Talk to us to learn more about how Q-Centrix can customize a service to fit your needs and protect your patients from the growing threat of HAIs.

[1] http://www.cdc.gov/HAI/surveillance/

[2] http://www.fiercehealthcare.com/story/hais-undermine-hospital-finances-reputation-along-patient-health/2015-12-13

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[8] http://www.prnewswire.com/news-releases/consumer-reports-investigation-reveals-how-hospitals-can-make-patients-sick-300120142.html

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[18] http://www.apic.org/For-Media/News-Releases/Article?id=f500f211-90a5-4531-9c0d-ec2167833827

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