

2006 APIC Presidential Address
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- How many of you **began** working in the infection prevention and control field after the year 2000? Please raise your hands
- How many began in the 1990s?
- How many began working as an ICP in the 1980s and remember what it was like in the pre-AIDS era?
- How many of you were working as an ICP when APIC was founded in 1972?

The infection prevention and control field has changed much in the 32 years since APIC was founded. I'd like to discuss Infection Control and the ICP: Where Have We Been & Where Are We Going?

The subtitle of this presentation is "What's in a Name?" You'll soon see why....

Where have we been?

I'll go back to the 1800s... to Florence Nightingale and Ignaz Semmelweis.

Florence Nightingale is best remembered as a pioneer in the nursing profession and as the leader of the movement to improve hygiene and sanitation practices in military hospitals. What many do not realize, however, is that Florence Nightingale was also a mathematician, and an innovator in the collection, tabulation, display and use of data. She was one of the first to use descriptive statistics and epidemiology to improve health care outcomes. She conducted surveillance of wound infections and deaths in soldiers who were injured in the Crimean War. Using her data, she was able to show how many deaths were occurring and could be linked to unsanitary conditions. Based on her findings, she called for improvements in hospital cleanliness. Once these improvements were implemented, the death rates in the soldiers dramatically declined.

Ignaz Semmelweis is often called the father of handwashing and infection control. In the mid-1880s he was the physician in charge of the maternity department at the Vienna Lying-in Hospital. He noticed that women who delivered their babies in his hospital had a 13 % mortality rate and those who delivered at a nearby hospital had a 2% mortality rate¹. The women at his hospital were delivered by medical students and physicians who also performed autopsies. The women at the nearby hospital were delivered by midwives who did not conduct autopsies. After a close friend of Semmelweis cut himself with a scalpel and died of infection, Semmelweis concluded that childbed fever, or puerperal fever, could be transmitted from person to person by something that came from cadavers. He ordered his medical students to wash their hands with chlorinated lime before examining patients. He measured the mortality rates in the maternity patients and used his data to demonstrate that the maternal death rate was reduced from 12% to 1% after the requirement to wash hands was implemented.

Moving up to the 1960s....

In the 1960s the American Hospital Association's Advisory Committee on Infections within Hospitals published the first edition of *Infection Control in the Hospital*. These manuals were used by many ICPs to establish infection control programs in US hospitals.

- How many of you remember the AHA manual?

In the 1960s, the Centers for Disease Control [note the name- this is before the CDC added "and prevention" to its name] recommended surveillance programs in hospitals for nosocomial infections (NI)

Methicillin resistant Staph aureus, or MRSA, was first reported in the 1960s.

In the 1970s....

The Association for Practitioners in Infection Control was incorporated in 1972 and its logo was the chain of infection shown here.

Claire Coppage taught the CDC Course 1200G, Surveillance, Prevention, and Control of Nosocomial Infections.

- How many here have one of these certificates?

By 1970, environmental culturing programs became the major focus of many infection control programs. ICPs cultured sinks in patients' rooms, meat cutters in the Dietary department, and whirlpool baths in Physical Therapy. However, we didn't know what to do with the results of these cultures because there weren't, and still aren't, criteria for the numbers and types of organisms on these surfaces. In response to the growing emphasis on monitoring the environment, in 1970 the CDC released a NNIS Study report called "Microbial environmental surveillance in the hospital" that stated that sampling should complement surveillance, not be an end in itself and should be guided by epidemiological needs. However many IC programs continued to culture environmental surfaces for many years.

In the 1970s, the Joint Commission on Accreditation of Hospitals, which is now the Joint Commission on Accreditation of Healthcare Organizations, published standards that required a hospital to have an infection control program in order to be accredited by the Joint Commission.

In the 1970s we used typewriters & read paper medical records.

In 1976 Legionnaire's disease was recognized following an outbreak of respiratory illness in Legionnaires who attended a convention in Philadelphia.

In the 1980s....

AIDS and human immunodeficiency virus were first recognized.

Not much was known about the occurrence of nosocomial infections in the early 1980s and many ICPs conducted whole house surveillance and used the data collected to study the incidence of hospital-acquired infections.

Many ICPs obtained computer access to hospital data

Paper medical records...still being used

Typewriters were being replaced by personal computers

In the 1990s....

In 1994, APIC became the Association for Professionals in Infection Control and Epidemiology

Environmental awareness was renewed:

When outbreaks of Aspergillosis were associated with construction activities and outbreaks of Legionellosis were associated with hospital water supplies.

Vancomycin intermediate and vancomycin resistant Staph aureus were first recognized.

It became widely accepted in the infection prevention and control field that we should target our surveillance activities to monitor specific infections in specific populations and use this data to identify risk factors for infection so we can implement specific control measures.

Many studies demonstrated that infection surveillance data can be used for performance improvement when you focus your activities. Remember that Semmelweis did targeted surveillance and implemented a specific control measure in 1847. He then used before-and-after data to show that the incidence of maternal death following childbirth declined after handwashing was required before delivering a baby.

By the 1990s, ICP access to hospitalized patients' data hospital through computer networks became routine

However, Paper medical records were still the norm.

A personal computer became required

And Email and the Internet revolutionized the way we work!

In the early 2000s....

Data was now being used routinely for performance improvement activities used to reduce the incidence of infections.

We're still using paper medical records although President Bush and others are calling for electronic medial records.

- In the new millennium, how many of us are still using a typewriter?

The song "It's a small world after all" took on new meaning when SARS occurred in Hong Kong and rapidly spread to Canada via an airplane.

We set up programs for emerging infectious disease surveillance:

Both in our facilities and in our communities

And National and international surveillance networks were set up or strengthened

In 2001, we had the anthrax Bioterrorism incident which led many health departments to implement syndromic surveillance for respiratory and gastrointestinal illness.

Where are we now?

There are many factors affecting infection prevention and control programs. There are internal factors that affect our patients and our organization, such as the types of services we provide, and external factors affecting the whole healthcare environment in which we work, such as merging infectious disease and regulatory requirements.

Here are just a few of the Factors Affecting Infection Prevention and Control Programs:

- The Shift from inpatient care to outpatient care
- Decreased patient length of stay
- Increased use of invasive devices and procedures in non-acute care settings
- Pressure from consumer organizations, patients, the media, regulators and insurers to reduce the occurrence of healthcare associated infections
- Use of data to demonstrate the effectiveness and quality of healthcare
- Call for mandatory and public reporting of data on healthcare-associated infections worldwide, not just in the US
- Use of technology, including computers, database programs and electronic and automated surveillance programs, to lessen the burden of data collection and management
- The Use of data to measure noninfectious events, such as antimicrobial prophylaxis prior to surgery and immunization in healthcare personnel
- Emerging infectious diseases, such as avian influenza
- Bioterrorism
- Our involvement in Emergency planning and management partly as a result of the SRAS outbreak and the anthrax incident
- The use of E-mail and internet to rapidly transfer information

So...in 2006....

We find that Computers, E-mail and the Internet are an essential tool for our work and that we can computerize a lot of our surveillance activities

In 2006....

- Health care outcomes, worldwide, are being scrutinized by consumers, insurance payers, patients, legislators, and regulators
- There's a worldwide demand to reduce the incidence of healthcare-associated infections
- The infection prevention and control field is global: the International Federation of Infection Control, whose members are organizations involved in infection surveillance, prevention and control, has over 65 members from all over the world (APIC is a member)
- We see Patient safety and quality initiatives formed worldwide. An example is the World Health Organization's World Alliance for Patient Safety that was launched in 2004.

A core element of the Alliance is the 2005-2006 WHO Global Patient Safety Challenge. The topic chosen for the first Global Patient Challenge is healthcare-associated infection. Here's the poster for the challenge dealing with hand hygiene:

Clean Hands Are Safer Hands. If you're not familiar with the WHO campaigns, see the patient safety section of the WHO website noted here:

www.who.int/patientsafety/en/

so in 2006....we're going Back to the Future

- we have the threat of an influenza pandemic which could potentially repeat the worldwide deaths due to influenza that were seen in 1918
- The specter of antimicrobial resistance has us thinking about infection prevention and control methods that were used in the pre-antibiotic era, such as masks and quarantine
- This has led to a Re-emphasis on basic hygiene and infection prevention and control practices, such as Handwashing (which we now call hand hygiene because the term hand hygiene encompasses the use of alcohol hand sanitizers)

Where are we going?

In 2004 APIC held a Futures Summit to look at the future of infection prevention and control programs

At this summit, Dr. Denise Cardo, Director of the CDC's Division of Healthcare Quality Promotion said:

“We must de-emphasize benchmarking. Being better than a bad benchmark is not the same as being good.”

Pause

This leads us to APIC Strategic Plan, APIC Vision 2012. Goal # 1 of APIC 2012 is: Emphasize prevention and promote zero tolerance for healthcare-associated infections and other adverse events. Zero tolerance is not a number—it's a culture in which healthcare providers strive to prevent as many healthcare-associated infections as possible. We may never eliminate every infection, and many cannot be prevented, but ICPs should accept nothing less than the very lowest rates of infection.

How Will We Get There? To 2012

We must shift the focus.....from infection control to infection prevention and control.

This conference is named:

Turning the Tide to Infection Prevention in the 21st Century

The sessions at this conference have been planned with APIC Vision 2012 in mind. The title of the conference, Turning the Tide to Infection Prevention in the 21st Century, emphasizes the word prevention.

In a few minutes, we'll hear the Keynote address

Global Health Diplomacy: Infection Prevention Imperatives

Delivered by The Honorable Thomas G. (Tommy) Thompson, Former Secretary of Health and Human Services of the US Department of Health

Later today, we'll hear sessions on:

- Public Health Emergencies: Supporting the Coping Strategies of Healthcare Workers
- Mandatory Influenza Immunization for Healthcare Providers
- Hong Kong's Response to Emerging Infectious Disease – A New Millennium
- Challenges for Infection Prevention Programs in the 21st Century

Later in the week, there are sessions on

- Infection Prevention from the Patient's Perspective--What Can the ICP Do?
 - How many of us think about our patients' perception of the care that we provide?
- Developing Partnerships to Create Organizational Transformation in the reduction of HAIs
- We had a Long-term Care Symposium on Saturday to help our learn about HAIS in the LTC setting and provide them with an opportunity to network with each other
- We'll have sessions on MRSA, C. difficile, and the problems that antimicrobial resistance causes for infection prevention and control
- We'll have a session on the Economics of Infection Prevention
- And several sessions on the impact of regulations on our programs

One of APIC's strategies in APIC Vision 2012 is to define the ICP of the future.

If we're going to do that, we have to decide what to call ourselves.

This brings us to the subtitle of this address: What's in a Name?

In the US, we've been called

Infection Control Practitioner

And then APIC and others used the term Infection Control Professional

If we want to emphasize prevention, should we change our title? Should it be Infection Prevention and Control Professional?

The APIC board of directors has had a bit of fun thinking about this and debating the various titles.

So now let's have a bit of fun this week, keeping in mind that this is an exercise to get us to think about and discuss the evolving role of the ICP. We're going to use this exercise to promote creative thinking rather than engraving anything in stone at this point.

This week, it's your turn.....to cast your vote.

We've come up with several ideas for a title for the ICP and we've set up computers in the APIC Resource Center for everyone here to cast your vote. Will it be for:

- Infection Control and Prevention Professional
- Infection Prevention and Control Professional
- Infection Prevention and Control Specialist
- Infection Preventionist
- Other?

Do any of you have a title that you like better? You can also write that in.

So..... this has given us the opportunity to look at where we've been, where we are now, and where we want to be in the future.

So, remember to put on your creativity hat and cast your vote for a new title for the ICP.

References

1. Risse, G.B., Semmelweis, Ignaz Philipp. *Dictionary of Scientific Biography* (C.C. Giles, ed.). New York: Charles Scribner's Sons, 1970-1980.