

Infection Prevention Workforce and Education

January 25, 2017

PACCARB Presentation



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Who is SHEA?

Mission: Promote the prevention of healthcare-associated infections (HAI) and antibiotic resistance and advance the fields of healthcare epidemiology and antibiotic stewardship.

2,000 members are leaders in infection prevention, sharing a common interest in improving patient outcomes.

SHEA

- Advances the field of healthcare epidemiology and antibiotic stewardship
- Translates research into clinical practice
- Develops smart policy
- Prioritizes the research agenda

Together, we are working to build a safer, healthier future for all.

Essential Activities of Infection Prevention/Healthcare Epidemiology Programs

- Surveillance
- Performance improvement to reduce HAIs
- Acute event response, including outbreak investigation and high consequence infections
- Education and training of healthcare personnel and patients
- Reporting of HAIs

INFECTION CONTROL & HOSPITAL EPIDEMIOLOGY | APRIL 2014, VOL. 39, NO. 4

SHEA WHITE PAPER

Guidance for Infection Prevention and Healthcare Epidemiology Programs: Healthcare Epidemiologist Skills and Competencies

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BACKGROUND

Since its inception in the 1960s, the specialty of infection prevention and control has grown considerably. The field took shape in the 1970s following the landmark study on the Efficacy of Nosocomial Infection Control (ENIC) project and grew in importance with the emergence of complex safety and multidisciplinary programs in the 1990s.^{1,2} In the 1990s and into the 2000s, the focus on hospital-acquired infection (HAI) prevention grew, as the field played a larger role in regulatory, patient safety, and quality improvement issues. In the present day, infection control data are frequently available to the public, and impact hospital finances and healthcare insurance reimbursements.

BASIC CONSIDERATIONS

A key leader in any infection prevention/healthcare epidemiology program is the healthcare epidemiologist (HCE). The role of the HCE has also emerged and grown considerably over the past several years. The HCE historically often had limited formal epidemiologic training and was frequently not paid for his or her efforts. Today, the field has become a critical component of the routine function of healthcare institutions, and the HCE has multiple diverse responsibilities that include regulatory review, patient safety, quality improvement, clinical practice and education, administration and public reporting of infection, and infection process data. To effectively serve in these various roles, the HCE requires formal support to protect time and effort and to support training activities and professional development. The skills and competencies needed to be an effective HCE are considerable. This guidance document highlights the roles, resources, skills, and training opportunities for a HCE and is a first article focusing on core aspects of any

infection prevention/healthcare epidemiology program. The other 2 patient articles focus on (1) infrastructure requirements for infection prevention/healthcare epidemiology programs and (2) the core competencies necessary for directing a hospital-wide multidisciplinary program.

The HCE is strongly preferred to be a physician, as a physician's insight into the clinical practice of medicine and the nuances of patient care are critical with regard to development and implementation of infection prevention processes in the clinical hospital setting. This clinical perspective gives the HCE credibility with key influential clinical and administrative stakeholders and will facilitate implementation of changes in healthcare worker process and behavior.

PURPOSE

Although there is a formal certification program for infection preventionists with demonstrated benefits,³ formal accreditation for HCE does not currently exist. In fact there is no clear and comprehensive formal description available detailing the various skills necessary for the current day HCE to be successful, nor is there a list of the training resources that are currently available. With this article, we aim (1) to describe the various risks and skill sets required for an HCE in the United States to be successful; (2) to describe the formal and informal training resources available to learn about these roles and obtain the necessary skills; and (3) to identify gaps in training opportunities and skills acquisition. This article details the following HCE roles: epidemiologist, subject matter expert, quality and performance improvement leader, regulatory/public health liaison, healthcare administrator, clinical education, and continuous assessment evaluator and researcher. Each section of

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Received December 24, 2013; accepted November 20, 2014; electronically published January 20, 2014.

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Healthcare Epidemiologist

- Key leader of infection prevention/healthcare epidemiology programs
 - Physician
 - Diverse responsibilities
 - Program advocacy
 - External stakeholder relations
 - Training and professional development

Healthcare Epidemiologist

Competencies

- Epidemiology
- Subject matter expert for internal and external stakeholders
- Quality and performance improvement leader
- Healthcare administrator
- Outcome assessment evaluator and researcher
- Regulatory and public health liaison
- Clinician educator/teacher
- Antibiotic stewardship

Knowledge gaps for practitioners of infection prevention/healthcare epidemiology and stewardship

- Leadership skills
- Implementation science
- Behavior science
- Management of interventions
- Non-acute care settings



SHEA as a Leader

Experience in training and the continued development of the healthcare epidemiologist workforce

- Course development, implementation, dissemination
- Publications
 - Journals, textbooks, expert guidance, white papers
- Conferences
- Mentorship
- Special focus for those practicing in the community setting
- Diversity of faculty and authors/researchers outside the traditional healthcare epidemiology field (e.g., behavioral scientists, environmental experts)
- Collaboration with CDC and other professional societies and entities to provide basic to advanced training opportunities



Healthcare Workforce

- Healthcare epidemiology/infection prevention has the highest impact when evidence-based practices become part of the healthcare culture
 - Appropriate and relevant training for all healthcare personnel in all healthcare settings
 - Challenges: Time, methods of delivery and principles of adult education, reinforcement, gaps in knowledge and science
- Interdependence among variety of practitioners
- Healthcare epidemiologist workforce shortage across the continuum of care

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