

Infection Prevention 2018: Refocusing on standard precautions and other non-pathogen-specific initiatives to prevent nosocomial transmission of bacterial pathogens in the acute healthcare settings - Francesca J Torriani - University of California

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Prevention of Healthcare related Infections has been the focus of Infection Prevention and Quality Initiatives for more than two decades, and multidrug resistant organisms are responsible for many of these infections, further messing up their diagnosis. In addition to strengthening antimicrobial stewardship practices, and improving adherence to standard precautions (including hand hygiene), contact precautions for patients colonized or infected with multidrug resistant organisms have been advised and broadly adopted to prohibit horizontal transmission in the acute care healthcare setting. However, the data firming these recommendations derives predominantly from epidemic rather than endemic settings, where the burden of transmission as well as the transmission rate is by definition high. Guidelines underscore the cruciality of a basic multipronged step that includes education around epidemiologically important organisms, hand hygiene, contact precautions, environmental cleaning and antimicrobial stewardship. Additional measures recommended in the outbreak setting, such as active screening for MDR GNR, MRSA and VRE, alerts for previous positives with pre-emptive CP, and cohorting of patients and staff, etc have also been presented on occasion. The presenter will discuss the strengths and weaknesses of these steps when used alone or in conjunction, and will argue that the focus on the primacy of contact precautions in acute care settings is misplaced for most MDR organisms. Alternative focus and practices will be presented. The occurrence and undesirable complications from health care-associated infections (HAIs) have been well recognized in the literature for the last several decades. The occurrence of HAIs continues to rise at a dramatic rate. HAIs originally referred to those infections related with admission in an acute-care hospital (formerly called a nosocomial infection), but the term now applies to infections acquired in the continuum of settings where persons get health care (e.g., long-term care, home care, ambulatory care). These unanticipated infections happen during the course of health care treatment and result in significant patient illnesses and deaths (morbidity and mortality); prolong the duration of hospital stays; and necessitate additional diagnostic and therapeutic interventions, which generate added costs to those already incurred by the patient's underlying disease. HAIs are considered an undesirable outcome, and as

some are preventable, they are considered an indicator of the quality of patient care, an adverse event, and a patient's safety issue.

the most frequent types of adverse events affecting hospitalized patients are bad drug events, nosocomial infections, and surgical complexities.^{1, 2} From these and other studies, the Institute of Medicine reported that adverse events affect approximately 2 million patients each year in the United States, resulting in 90,000 deaths and an estimated \$4.5–5.7 billion per year in additional costs for patient care.³ Recent modification in medical management settings have shifted more medical diagnosis and services to outpatient settings; fewer patients are accepted into hospitals. The disappointing fact is that the average duration of inpatient admissions has declined while the frequency of HAIs has increased.^{4, 5} The true incidence of HAIs is likely to be underestimated as hospital stays may be shorter than the incubation period of the infecting microorganism (a developing infection), and symptoms may not come up until days after patient gets discharged. For example, between 12 percent and 84 percent of surgical site infections are detected after patients are released from the hospital, and most become evident within 21 days after the surgical operation.^{6, 7} Patients receiving follow up care or routine care after a hospitalization may seek care in a non acute care facility. The reporting systems are not as well networked as those in acute care facilities, and reporting mechanisms are not directly connected back to the acute care setting to document the suspected origin of some infections.

HAI surveillance has monitored continuous trends of infection in health care facilities.⁸ With the application of published evidence-based infection control strategies, a decreasing trend in certain intensive care unit (ICU) health care-associated infections has been reported through national infection control surveillance⁹ over the last 10 years, although there has also been an alarming increase of microorganism isolates with antimicrobial resistance. These modifying trends can be affected by factors such as increasing inpatient acuity of illness, inadequate nurse-patient staffing ratios, unavailability of system resources, and other demands that have challenged health care providers to continuously apply evidence-based recommendations to maximize prevention efforts. Despite these demands on health care workers and resources, reducing preventable HAIs remains an imperative mission and is a contagious opportunity to improve and broaden patient safety.